AN ACTION PLAN TO ENHANCE A SUSTAINABLE CULTURE OF SAFETY TO IMPROVE PATIENT OUTCOMES

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DECLARATION

I declare that **AN ACTION PLAN TO ENHANCE A SUSTAINABLE CULTURE OF SAFETY TO IMPROVE PATIENT OUTCOMES** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

01/05/2019

Helena Elizabeth Maria (Linda) Haskins Date:

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ABSTRACT

Sustainability is a complex system of interaction between a hospital, individual, community, and environmental factors that is required to work in harmony to keep a patient healthy. With the complexities that exist within healthcare, the nurse leader is required to ensure that the care environment, processes and the safety behaviours required from nurses to provide safe healthcare is in place and sustained to contribute to the enhancement of patient safety, whilst in the care of the diverse nursing workforce. The aim of the study is to develop an action plan to sustain best safety culture practices for improved patient outcomes in hospitals with a culturally diverse nursing workforce.

Methodology: A multiple method design was utilised to study the safety culture and positive work environment (hospital climate) that exists among culturally diverse nurses and how it is managed by the nurse managers in order to identify and describe actions that can be included in an action plan to sustain best safety culture practices for improved patient outcomes. Purposeful and convenience sampling methods were used in the study. Two hospitals, with a very diverse nursing workforce were purposefully selected to participate in the study. Pretesting of the questionnaire and e-Delphi embedded assessment validation instrument were done by participants not part of sample groups. Phase 1: The Hospitals outcomes data for nursing admission assessment within 24-hours, falls and hospital acquired pressure ulcer incidences and hand hygiene rates were collected on a checklist. Phase 2: Two questionnaires (1)

nurses capturing: biographical data and culture, patient safety (nursing admission assessment within 24-hours, falls and HAPU and hand hygiene), and safety culture and positive work environment (hospital climate); (2) nurse managers capturing: biographical data and culture, patient safety (nursing admission assessment within 24-hours, falls and HAPU and hand hygiene), safety culture and Positive Work Environment (hospital climate) and just culture practices. Phase 3: the Draft e-Delphi action plan with embedded assessment validation instrument was developed. Phase 4: The panel experts selected to validate the e-Delphi draft action plan with embedded assessment validation instrument in pre-determined rounds.

Data analysis: Phase 1: The outcomes data was displayed in bar graphs and illustrated that (1) the nursing admission assessment within 24 hour period not been sustained over time for the medical, surgical, paediatric and critical care areas; (2) a hundred and sixty two fall incidence; (3) ninety six HAPU incidences and (4) hand hygiene rate of between 80-94% being reported. Phase 2: A participation rate of 46.33% by nurses and 73.91% by nurse managers were achieved. The data for the 2 questionnaires indicated the need to include 54 action statement to address the culture, patient safety, hospital climate (PWE), safety culture and just culture gaps identified. Phase 3: the e-Delphi draft action plan developed based on literature review and data from phase 1 and phase 2. Phase 4: 100% participation rate was achieved. Consensus was reached within two rounds that the 54 action statements are essential and important for patient safety and identified the responsible persons required enacting on action statement and timeframe required to complete action.

Recommendation: The ***Action Plan to enhance a sustainable Culture of Safety to improve patient outcomes*** were decided by panel experts. Plan to disseminate the plan among the CNO for implementation.

Keywords: Culture of Safety, Cultural Diversity, Patient Safety, Hospital Climate (positive work environment used interchangeably), Just Culture, Patient Outcomes, Sustainability

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ABBREVIATIONS

ANA	American Nursing Association
AHRQ	Agency Health Research Quality
CCU	Coronary Care unit
CDC	Centre Disease Control
CEO	Chief Executive Officer
CN	Charge Nurse
CNO	Chief Nursing Officer
CRN	Clinical Resource Nurse
DoH-AD	Department of Health Abu Dhabi
ED	Emergency Department
ESHMS	Environmental Safety and Health Management Systems
EMR	Electronic Medical Record
HAI	Hospital Associated Infections
HDU	High Dependency Unit
HH	Hand Hygiene
HRO	High Reliability Organisation
HAPU	Hospital Acquired Pressure Ulcers
HH	Hand Hygiene
ICU	Intensive Care Units
IHI	Institute Health Improvement
JCIA	Joint Commission International Accreditation
NAA	Nursing Admission Assessment
NDNQI	National Data Nurse Quality Indicators
NM	Nurse Manager
NPUAP	National Pressure Ulcer Advisory Panel
OR	Operating Room
Peads	Paediatric
PI	Process Improvement
PU	Pressure Ulcer
PWE	Positive Work Environment

RCA	Root Cause Analysis
SCN	Senior Charge Nurse
SMC	Senior Management Council
SN	Staff Nurse
WHO	World Health Organisation

CHAPTER 1
ORIENTATION TO THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Nurse leaders are faced with evolving complexities in hospital settings making it far more challenging to ensure that patient safety is sustained in a diverse healthcare workforce (Padgett, Gossett, Mayer, Chien & Turner, 2017:411-413). Although a culture of safety originated in high-reliability organisations (HRO), such as the aviation and nuclear energy industries, hospitals borrowed safety culture concepts from them (ECRI Institute, 2018:2; Vu & De Cieri, 2014:19; WHO, 2017:3-5). Because of the complexities that exist in hospitals, it is important for nurse leaders to ensure that the patient care environment adequately contributes to safety culture practices that enhance positive patient outcomes.

Hospitals in Abu Dhabi constantly address safety culture issues through the use of accreditation standards. These include the Joint Commission International Accreditation to ensure clear guidelines are in place to prevent the challenges that could potentially affect patient outcomes (JCIA, 6th Edition, 2016; Department of Health Abu Dhabi (DoH-AD), 2016). Hospitals have demonstrated that they achieve the safety standards required by the accreditation bodies (i.e. JCIA or Department of Health Abu Dhabi) during the survey, however, based on Internal Continuous Survey Readiness audits, safety standards are not sustained after the inspection by the Joint Commission International. It is thus necessary to identify why nurses do not sustain safety practices (Hospital Data, 2014).

It is important to determine the synergy that exists between the factors in the hospital climate and safety culture to identify how they impact on patient outcomes (Padgett, et al. 2017:411-413). It is the nurse managers' responsibility not only to manage safe and quality patient care, but also to ensure that their diverse nursing team sustains the best safety culture practices for improved patient outcomes (American Nursing Association (ANA), 2010:2; Health Research & Education Update, 2017:13).

Creating a safety culture in an institution is not based on a new set of rules; it is a philosophy that should be embraced by the entire healthcare team to prevent harm in the workplace (Golda, 2013:30). The concept of *patient safety culture* originated from research conducted on safety in 'risky' industries. Safety culture can be defined as "the product of individual and group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisations safety management" (Nazaruk, 2011:22).

According to Reason (1998:293), safety culture has evolved gradually in response to unit factors, past events, the character of leadership and the mood of the workforce. This author further postulates that it is hard to change the attitudes and beliefs of adults through direct persuasion; only through acting and doing, and shaped by hospital controls, can it lead to teams thinking and believing in safety (Reason, 1998:294). Reason's (1998) safety culture and subcultures is a theoretical framework that adds valuable insight in describing the patient safety culture of hospitals (Vu & De Cleri, 2014:56). According to Vu and De Cleri (2014:56), Reason identified five components that are required for a culture of safety, consisting of (1) Informed Culture, (2) Flexible Culture, (3) Reporting Culture, (4) Learning Culture, and a (5) Just Culture.

The United Arab Emirates (UAE) currently have approximately 1013 Emirati nurses who have conducted their studies through either the Institute of Nursing or through the Higher Colleges of Technology (personal information, UAE Nursing and Midwifery Council, 2012). Due to this low volume of trained Emirati nurses, the Emirates government authorities are obliged to recruit nurses from abroad in order to staff the various healthcare organisations within the UAE (El-Haddad, 2006:284). This policy contributes to the culture of a diverse nursing workforce.

The current nursing workforce in one particular hospital demonstrates cultural diversity as it consists of nurses from 33 different countries. The breakdown of these nurses' countries of origin are 76% Asian (Philippine, Indian and Pakistani), 3.1% Southern African, 3.4% are from Europe, Australia, New Zealand and the USA, and 16.4% are from Gulf States and African countries (Nursing staff database 2013 researcher hospital, UAE). The particular hospital where the researcher works serves a patient

population of approximately 150 different nationalities (Hospital Patient Experience Data, UAE 2014).

It is important for healthcare professionals to value cultural diversity as it is an essential aspect of living and working in a multicultural society. Cultural diversity in the context of this study refers to differences in nationalities, cultures, language, and the nursing educational backgrounds of the nursing workforce (Hofstede, 2011:3).

It is also necessary to highlight a few of the patient safety skills that often lead to negative patient outcomes due to nurses' non-compliance with safety practices, i.e. hand hygiene (HH) compliance, completing the nursing admission assessment (NAA) in the stipulated timeframe, conducting a fall risk assessments, and prevention of the hospital-acquired pressure ulcers (HAPU). Other factors that can have an impact on patient safety in an organisation are cultural diversity, time limitations, nurses' competencies and qualifications, the hospital climate and managers' 'just culture' practices, to name a few (Blegen, Goode, Vaughn & Spetz, 2013:92).

Another factor that could contribute negatively to patient safety is the climate factors in the nurses' work environment. The hospital climate can be defined as the "perceived and recurring patterns of behaviour, attitudes and feelings that characterise life in the organisation" and is considered a multidimensional construct, which comprises the nurses' evaluations of their work environment (Clarke 2010:554). According to Clarke (2010:554) and Hecker and Goldenhar (2014:3), the hospital climate exerts influence on the psychological and organisational processes and therefore affects individual and hospital performance and well-being. Hospitals should create a positive work climate that supports the safety culture values required for positive patient outcomes. This, in turn, should enlist essential, appropriate safety-related behaviours from the nurses, and ultimately sustain best safety culture practices (Clarke, 2010:554; Hecker & Goldenhar, 2014:3).

It is also advisable to consider how management practices and follows through on events, and how it affects nurses not sustaining practices through adequate risk assessment policies, education, and system redesigns for safety culture to be part of what drives them to excellence. 'Just culture' refers to a safe, supportive system of

shared accountability where hospitals are accountable for the systems they have designed and for responding to the behaviours of their staff in fair and just manner. Nurses, in turn, are accountable for the quality of their choices and for reporting both their errors and system weaknesses (Sculli & Hemphill, 2013:3).

It is essential that a safety culture should be sustained. In this context, sustainability can be defined as a complex system of interactions between many of the hospitals, individuals, communities, and environmental factors that are required to work in harmony to keep a patient healthy (Leonard & Frankel, 2012:4).

With the complexities that exist within healthcare, the nurse manager therefore needs to ensure that the care environment, processes and nurses' safety behaviours are in place and sustained to contribute to the enhancement of patient safety,while they are in the care of the diverse nursing workforce. It is thus critical that an action plan should be developed to enhance the safety culture in hospitals to ensure patient safety, positive patient outcomes, and to enhance every nurse's accountability towards patient safety (Stevens, 2011:9).

In this chapter, the following aspects will be addressed and reviewed: a background sketch of the problem, the problem statement, and the research question. The researcher highlights the purpose and significance of this research. In defining all the concepts, the researcher will start with a conceptual definition, and then continue to operationalise that definition. During the final part of this chapter, the researcher will illustrate the research design and methodology that was applied to demonstrate how this research study was conducted.

1.2 STATEMENT OF THE RESEARCH PROBLEM

Safety culture practices are frequently not sustained in hospitals (Hospital Data, 2013; Alsalam, Bowie & Morrison, 2018:2). Although various development, planning, and education projects regarding standards of care and safety practices have been provided to the majority of the nurses in one particular hospital, the nursing-sensitive performance indicators still reflect variance that has a negative impact on patient outcomes (Hospital Data, 2013). Patient fall rates have increased from 0.1 to 0.4%,

HAPU incidences have increased six to eight cases per month, HH compliance is at 85%, and the NAAs completed within the specified 24-hours is at 90% (Hospital Data 2013).

As mentioned, hospitals have demonstrated that they achieve the safety standards required by the accreditation bodies (i.e. JCIA or Health Authority Abu Dhabi – changed to Ministry of Health, 2018), yet data reflects that safety standards are not sustained after the inspection by the Joint Commission International (Hospital Data, 2014). With the complexities that exist within healthcare, the nurse manager is thus required to ensure that the care environment, processes and the nurses' safety behaviours are in line and sustained to contribute to the enhancement of patient safety.

1.3 RESEARCH AIM/PURPOSE

This multiple methods study aimed to develop an action plan to enhance the sustainability of a safety culture in hospitals. This action plan may facilitate a sustainable safety culture among the nursing team and contribute to improved patient outcomes.

1.4 RESEARCH OBJECTIVES

In order to achieve the aim of the study, the following objectives were applied:

1. Describe the patient safety outcomes from the various hospitals concerning hospital-acquired pressure ulcers (HAPU), fall risks, nursing admission assessments (NAAs), and hand hygiene (HH) practices.
2. Describe nursing teams' safety culture practices affecting patient safety.
3. Describe nursing teams' climate factors affecting patient safety.
4. Describe nurses' challenges regarding safety culture practices that influence patient safety.
5. Describe nurses' opportunities regarding safety culture practices that influence patient safety.

6. Explore the nurse managers' perceptions of how they are managing the behavioural choices of the nurses to ensure positive patient outcomes.
7. Develop and validate an action plan to facilitate a sustainable safety culture, to improve patient outcomes.

1.5 PARADIGM AND THEORETICAL FRAMEWORK

The research paradigm as described by Chilisa and Kawulich (2012:1) iterates the importance of the worldview and beliefs surrounding work environments and how problems are solved. Constructivism as meta-theory describes that the world view of everyone logically constructs something out of the world of experience through rational processes (Brandon & All, 2010:90). The researcher, through personal experience and believing in constructivism, believes that experiences pertaining to a positive work environment and a culture of safety contribute to patient safety and positive patient outcomes.

The foundations of the research study are the building blocks that assisted the researcher in demonstrating the theoretical framework that was applied and the research design and methodology which supported the study's theoretical framework and objectives.

Reason's Safety Culture Framework, with its subset of cultures, and Ekenedo's Behavioural Safety Framework (Reason, 2000:6; Golda, 2013:32-34), formed the theoretical background of this study (see Chapter 2 Sections 2.4.2 and 2.4.3). As described earlier, Reason's (2000:9) five components for a culture of safety consist of (1) Informed Culture, (2) Flexible Culture, (3) Reporting Culture, (4) Learning Culture and a (5) Just Culture. The Ekenedo model places a lot of emphasis on the nurse manager as key in managing behaviours for a safety culture to be sustained. These two theoretical frameworks assisted the researcher in determining how the hospitals compare to Reason's Safety Culture and subsets of cultures, and the human behaviour factor as a potential reason for not sustaining safe practices among the nursing team. The behavioural model from Ekenedo was then reviewed to see whether it could be applied to bridge the human factors affecting safety culture choices.

The researcher used a positivistic correlation view as she required an objective approach to study the influence that cultural diversity has on ensuring a safety culture among the diverse nursing team, as well as how nurse leaders manage their teams' behaviours (Pham, 2018:2; Rahi, 2017:2).

1.6 DEFINITIONS OF KEY CONCEPTS

The key concepts used in this study are defined as follows:

1.6.1 Best practices

In nursing, best practice refers to a methodology that, through experience and research, is used to describe the process of developing and following a standard way of performing nursing procedures for positive patient outcomes. It is used to sustain quality and is a way to benchmark own performances to other hospitals (Black, Balneaves, Garossino, Puyat & Qian, 2015:14).

1.6.2 Cultural diversity

In this study, cultural diversity is ascribed to differences in nationalities, cultures, language, and nursing educational backgrounds (Hofstede, 2011:3).

1.6.3 Hospital climate

A hospital is an organisation and can be defined as such. Hecker and Goldenhar (2014:3) define the hospital climate (also referred to as positive work environment) as the "perceived and recurring patterns of behaviour, attitudes and feelings that characterise life in the hospital". It can be considered a multidimensional construct, which comprises employees' evaluations of their work environment.

1.6.4 Nurse

The UAE Nursing and Midwifery Council defines a nurse as an individual who has completed a recognised basic educational programme in nursing, who is registered to

practice, and who have met qualification requirements set out by the council. It is a self-regulated healthcare professional who works autonomously with others within a determined scope of practice (UAE Nursing & Midwifery Scope of Practice, 2012:20).

1.6.5 Nurse manager

The nurse manager is a nurse who has acquired knowledge and skills in nursing with a unique set of attributes to manage, lead and inspire a nursing team to integrate changes required to provide quality patient care and ensure goal achievements (Brown, 2013:II-10 - 20).

1.6.6 Patient safety

Patient safety is the prevention of harm and adverse events to patients as a result of healthcare provision (Cole, Stevens-Adams & Wenner, 2013:35; Vincent, 2010:4).

1.6.7 Safety culture

According to Cole, et al. (2013:14) and Nazaruk (2011:22), safety culture can be defined as both individual and group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the healthcare team's commitment and proficiency to an organisation's safety management system.

1.6.8 Safety management system

A safety management system is a deliberate, clear and thorough methodology for overseeing safety risks. As with all administration frameworks, a safety administration framework accommodates objectively setting, arranging, and measuring performance (Health Research & Education Update, 2017:10; Besnard, Boissières, Danielou & Villena, 2018:17).

1.6.9 Sustainability

Sustainability can be defined as a complex system of interaction between many hospital, individual, community, and environmental factors that are required to work in harmony to keep a patient healthy (Roberts-Turner, Coleman, Guanci, Humbel & Walczak, 2014:1).

1.7 OPERATIONAL DEFINITIONS

The operational definitions used in this study, include:

1.7.1 Best practices

Best practice guidelines in the context of this study are all those guidelines currently available in the hospitals to direct and guide nurses to practice in such a way that patient safety is ensured. Positive patient outcomes are thereby safeguarded.

1.7.2 Culture diversity

Culture diversity in this study refers to the unique culture, nursing educational background and language of each nurse and nurse leader working in hospitals in the UAE.

1.7.3 Hospital climate

In this study's context, the hospital climate refers to the value factors perceived by the nurses whereby they feel supported in their work environment due to the actions of their nurse leaders. Examples of these factors are the fair distribution of patient acuity load, flexible duty schedules, adequate work-social life balance, the availability of equipment and consumables required for patient safety, and teamwork is mandated and supported among nurses and other healthcare professionals. The terms 'positive work environment' and 'hospital climate' are used interchangeably.

1.7.4 Nurse

In this study's context, the nurse refers to nurses – either staff or charge nurses – who, based on their qualifications, are registered to practice and provide direct patient care in the clinical setting they are assigned to and work within their specific scope of practice and job description (DoH-AD, 2016).

1.7.5 Nurse manager

In this study, the nurse manager or the Senior Charge Nurse is assigned to a specific unit to manage and lead patient care processes, and they inspire and motivate the nursing team to implement changes required for safe, quality care and goal achievement.

1.7.6 Patient safety

Patient safety relates to the prevention of any harm or adverse events to any patient, by following best practice guidelines in the provision of nursing care.

1.7.7 Safety culture

This represents the nursing team's commitment and teamwork to facilitate a safe care environment, whereby the individual nurse feels empowered to report incidents without fear of retribution from nurse leaders.

1.8 RESEARCH METHODOLOGY

Wood and Ross-Kerr (2011:114) describe the research design as the plan that describes how, where and when data are to be collected and analysed. The role of the research design is to ensure that the evidence obtained enable us to answer the initial question as unambiguously as possible.

1.8.1 Research approach and design

According to Rahi (2017:3) and Bilaua, Witta and Lill (2018:600), a **quantitative** study can be defined as the investigation of phenomena that lend themselves to precise measurement and quantification. **Qualitative** methods aim to understand some aspects of social life, and its methods (in general) generate words, rather than numbers, as data for analysis (Rahi, 2017:4; Bilaua, et al. 2018:600). These authors continue in saying that a **descriptive design** is the accurate portrayal of the characteristics of a situation, and that by **exploring** the situation, more information about the phenomena can be obtained (Rahi, 2017:4; Bilaua, et al. 2018:600).

The researcher opted for a multiple method design, where qualitative and quantitative methods were utilised. In the first two phases, the study was quantitative, exploratory and descriptive in nature to address the objectives set forth as illustrated in Table 1.1. In Phase 4, a qualitative descriptive approach was followed using the e-Delphi technique to validate the developed action plan to sustain a safety culture.

Table 1.1: Summary of the research objectives, design, data gathering techniques and sampling methods

Description	Objective	Design	Data gathering technique	Population and size	Sampling and size
Phase 1					
Current status of patient safety outcomes	1. Describe the patient safety outcomes from the various hospitals concerning HAPU, fall risk, NAAs, and HH practices	Quantitative	Monthly Audit Checklist (Appendix E)	Six Hospitals in Abu Dhabi	Two hospital groups purposefully selected
Phase 2					
Nursing teams' safety culture	2. Describe nursing teams' safety culture	Quantitative with a	Questionnaire (Appendix C & D)	1597 Nurses and 46 Nurse	Convenience sampling of 900 of the

Description	Objective	Design	Data gathering technique	Population and size	Sampling and size
practices and climate factors affecting patient safety and appropriately managing their behaviours	practices affecting patient safety. 3. Describe nursing teams' climate factors affecting patient safety. 4. Describe nursing teams' challenges regarding safety culture practices that influence patient safety. 5. Describe nursing teams' opportunities regarding safety culture practices that influence patient safety. 6. Explore the nurse managers' perceptions of how they are managing the behavioural choices of the nurses to ensure positive patient outcomes.	qualitative enhancement		Managers from the two selected hospitals	nurses (450 from each hospital) Convenience sampling of 46 of the nurse managers (23 from each hospital)
Phase 3					
Development of the draft action plan			Literature review and results Phases 1 and 2	The researcher	

Description	Objective	Design	Data gathering technique	Population and size	Sampling and size
Phase 4					
The Action Plan	7. Validate the Action Plan developed in Phase 3 to facilitate the sustainable safety culture, to improve patient outcomes	Qualitative	e-Delphi technique	Purposive	Nine volunteer nurse managers (five from one hospital and four from the other hospital) and Nine nurses (five from one hospital and four from the other hospital)

1.8.2 Setting and population of the study

There are six hospitals in Abu Dhabi that fall under the umbrella of SEHA. Two of these hospitals were purposefully selected to gather the data due to their proven diverse nursing workforce. Forty-six nurse managers and 1597 nurses from these purposefully selected hospitals formed the population of this study.

1.8.3 Sample and sampling method

Purposive sampling (Polit & Beck, 2012:279; Khaldi, 2017:19) was used to select the two hospitals that have a diverse nursing population.

Phase 1: In Phase 1, the monthly audit data of patient outcomes that relate to NAA, HH, fall risk and HAPU for the two selected hospitals, were included (Appendix E, Hospital A and Hospital B audit data for all nursing units for the year).

Phase 2: To ensure a confidence level of 95% and a 5% CI for the sample (see calculation in Table 1.1) the researcher required a total of 310 nurses out of the 1597 to participate to determine the nurses' perceptions on patient safety, as well as safety

culture and the hospital climate that enables them to work safely. Similarly, the researcher required 41 out of 46 nurse managers (SKMC Statistician, 2014) to participate in order to determine their perceptions on safety culture, positive work environment and factors affecting nurses' safety practices.

However, an all-inclusive, convenient sample was used as all nurses and nurse managers who were available on the date of data collection were requested to partake voluntarily and received the information letter (Appendix B) as well as the questionnaire (Appendix C & D). The questionnaires were distributed to the 900 nurses (600 Hospital A & 300 Hospital B) and 46 nurse managers (25 Hospital A and 21 Hospital B) who attended the session (Appendix C & D).

Phase 3: As illustrated in Table 1.1, Phase 3 describes the literature on action plan development and the utilisation of the data gathered in Phases 1 and 2 for the researcher's development of the draft action plan.

Phase 4: Purposive sampling as described by Polit and Beck (2012:276) and Cresswell (2014:204) was used to identify participants for the development and validation of the action plan through an e-Delphi method.

Purposive sampling was used to select nurses and nurse managers based on the researcher's judgement about which ones would be most appropriate based on their expertise and knowledge about safety culture. Ensuring a panel of clinical experts (Holloway, 2012:347) – with wound care and infection control training, experience with assessing patient documentation within the specified timeframe, conducting fall risk assessments, and adhering to a safe culture and climate – was vital in the selection process. The rule of thumb on the number of participants ranges from 15 to 30 (Creswell, 2014:204; Creamer, 2018:89), and for this study, nine nurses and nine nurse managers were selected from each of the two hospitals.

1.8.4 Data collection methods and procedures

Wood and Ross-Kerr (2011:171) state that the first decision the researcher must make in the data collection method is whether to use an existing versus a new data collection

instrument designed specifically for the study, and the information available about the variables to answer the study's question.

1.8.4.1 Data collection instruments

Phase 1:

An audit tool on an Excel spreadsheet from a corporate body was adjusted to capture the patient outcome data relating to NAA, HH, fall risk, and HAPU from the two selected hospitals (Appendix E).

Phase 2:

The questionnaire, with both closed and open-ended questions, was developed after a thorough literature review to study the patient outcome data, safety culture, culture and climate factors that could potentially affect patient safety outcomes. The questionnaire was used to gather data from the nurses (Appendix C).

A questionnaire (Appendix D), with both closed and open-ended questions, was also developed to explore climate factors, safety culture, culture and outcome data, and how the nurse managers manage the behavioural choices of their nurses.

Phase 3:

In Phase 3 literature on the action plan's development was explored to determine the format and layout of the draft action plan. The validation assessment instrument was developed based on the draft action plan and was embedded in the draft action plan for easy instruction and analysis. Open-ended questions were included in the validation assessment instrument to validate the draft action plan that addressed the cultural, patient safety, hospital climate (positive work environment) and safety culture principles required to sustain safety practices (Appendix L).

Phase 4:

In phase 4 the E-Delphi embedded validation assessment instrument was developed and built in SurveyMonkey™ and used as the tool to validate the action plan to enhance a sustainable culture of safety.

1.8.4.2 Data collection methods

Phase 1: Audit Tool Completion

Phase 1 of the study involved capturing the patient safety outcome data relevant to nursing-specific performance indicators; it addressed Objective 1 of this study. Those nursing indicators targeted were: completing the NAA within 24-hours; fall rates; HAPU incidence rate; and HH compliance rate. This data were required in order to determine how informed and involved the nurses and nurse managers are in safety culture sustainability.

The researcher provided a blank audit checklist and requested the selected hospitals to capture all the data from January 2016 to December 2016 (Appendix E).

Phase 2: Questionnaires to Nursing Team

In Phase 2 the researcher explored the nursing teams' cultural, patient safety, safety culture practices and climate factors affecting patient safety from the two different samples. A pre-test was conducted before data gathering commenced (see Chapter 4 Section 4.2.6).

The researcher planned meetings with the Chief Nursing Officer (CNO) for both sites to arrange the distribution of the questionnaire to the nurse managers and nurses on duty. The questionnaire, along with the information leaflet explaining the study's aims, were distributed during sessions in the different hospitals where the study was explained, and possible respondents were asked to volunteer to participate.

Although the researcher only required 310 nurses to participate based on 95% CI, a total number of 900 nurses (600 Hospital A and 300 Hospital B) attended the various sessions in the two selected hospitals (Appendix C). A total of 46 questionnaires were distributed to the nurse managers in the two study hospital (Appendix D).

As nurses and nurse managers work different shifts, the participants had a four-week timeframe to complete the questionnaire. Clearly labelled and sealed boxes were distributed in each unit for ease of returning the completed survey in the nurse manager's office. Each nurse manager was asked to oversee the integrity of the

sealed boxes for confidentiality and to encourage their nurses to participate in the study. After the four weeks, the sealed boxes were collected by the researcher who confirmed the integrity of the boxes.

Phase 4: E-Delphi validation assessment instrument

As discussed in Chapter 5 (Section 3.3.3), nine nurses and nine nurse managers were chosen from each hospital based on their expertise on wound care, infection control, competency and knowledge in physical, skin and falls risk assessments to validate the draft action plan. The e-Delphi validation assessment instrument was sent to the Delphi panellists, using customised emails via SurveyMonkey™ through their individual emails. A period of two weeks was provided for completing the e-Delphi questionnaire for each round.

1.8.6 Reliability and validity

1.8.6.1 Reliability

Reliability informs researchers about a data collection tool's dependability and consistency in measuring the same attribute. As data collection methods vary in quality, the researcher ensured that the data collection captured concepts that were relevant, accurate, truthful and sensitive (Wood & Ross-Kerr, 2011:209-219).

Phase 1

An existing audit checklist on an Excel spreadsheet was adjusted based on the nursing indicators this study targeted: completing the NAA within 24-hours; fall rate; HAPU incidence rate, and the HH compliance rate (Appendix E).

Phase 2

The questionnaire was developed after a thorough literature review was conducted. A pre-test with five graduate nurse interns and five clinical resource nurses was conducted to test the validity and reliability of the relevant questionnaires. Based on the feedback (see Chapter 3 feedback recommendations) the questionnaire was adjusted for the nursing team (Appendix C & D).

Phase 3

The researcher reviewed the literature on action plan development and a draft action plan was developed based on Phases 1 and 2.

Phase 4

The draft action plan developed from Phases 1 and 2 was used as the basis for the e-Delphi validation assessment instrument as this was an inseparable process. The reliability of the e-Delphi tool was enhanced by pre-testing the e-Delphi validation assessment instrument on five nurses and five clinical resource nurses who did not form part of the panel experts. The e-Delphi validation assessment instrument was changed and adapted based on the feedback and then forwarded to the panel experts. To ensure that there was 80% consensus among the panellists, two rounds of e-Delphi were conducted to validate the draft action plan. The response rate was 100% which is exceptional considering an acceptable response rate is 80% as described in the literature (Holloway, 2012:348; Creamer, 2018:89; Creswell, 2014:266).

1.8.6.2 Validity

Validity can be defined as the degree to which an instrument measures what it is supposed to measure (Wood & Ross-Kerr, 2011:209; Creswell, 2014:224). According to Wood and Ross-Kerr (2011:331) and Creswell (2014:204), the testing of the questionnaire's validity is not proved, but rather is supported by an accumulation of the evidence. There are three types of validity: self-evident measures (face, content validity), pragmatic measures (concurrent and predictive validity), and construct validity (Wood & Ross-Kerr, 2011:205-209). For the purpose of this study, face, content and predictive validity were applicable.

Phase 1: Checklist

The validity of the checklist was achieved as both hospitals used and collected the same data for a corporate body, using the same checklist. Criterion-related validity was ensured whereby the researcher sought to establish a relationship between the scores on an instrument and some external construct, through comparing data from Phase 1 (outcomes data) to that in Phase 2 (patient safety) questions.

Phase 2: Questionnaires

Face validity was applicable as the different tools were able to determine nurses' and nurse leaders' culture of safety and climate practices and the influence of cultural diversity on the safety culture compared with the hospital data on: completing the NAA within 24-hours; fall rates; HAPU incidence rate, and HH compliance rate. A pre-test of the questionnaire was conducted to determine whether the individuals who did not form part of the sample group had any difficulty in understanding and answering the questions. This ensured face validity.

Phase 3: Action Plan Development

In Phase 3, content validity was ensured with the adequacy of coverage of the content area that was measured through a thorough review of the literature. The researcher used the data from Phases 1 and 2 to establish the questions to be embedded in the validation assessment instrument. The Pennsylvania University action plan development model was used to describe seven steps to develop a validation assessment instrument. The tool was pre-tested before sending it to the panel experts.

Phase 4: E-Delphi embedded validation assessment instrument

The draft action plan with the embedded assessment instrument was tested by five nurses and five clinical resource nurses who did not form part of the e-Delphi panel group. This phase of the study thus included three steps: (i) Conceptual and construct validation; (ii) Face validation of the e-Delphi action plan with embedded validation assessment instrument; and (iii) Content validation of the assessment instrument (see Chapter 5 Section 5.3.5).

1.8.7 Data management and analysis

1.8.7.1 Data analysis

Phase 1:

Statistical procedures enable the researcher to organise, interpret and communicate numeric information (Wood & Ross-Kerr, 2011:249; Berman, 2017:9). These authors emphasise that descriptive statistics are used to synthesise and describe data, and that averages and percentages are examples of descriptive statistics. When the

researcher calculates index data from a population, they are called parameters. Most scientific questions are about parameters and researchers use statistical methods to estimate these parameters (Wood & Ross-Kerr, 2011:249). The checklist data were analysed and interpreted using Statistical Package for the Social Sciences (SPSS) 2010 and presented in bar graphs and pie charts (see Chapter 3 and Appendix F for further discussion).

Phase 2:

The help of a statistician was sought to assist in the data analysis. The SPSS 2010 was used to analyse the data of the questionnaires. The questions contained in the questionnaire comprised categorical answers leading to categorical variables which could be analysed in a specific way (Appendix G & H). The questionnaire content was organised into logical sections and the items were numbered in the 'official column', which served to facilitate the collation of data (Wood & Ross-Kerr, 2011:249; Berman, 2017:9). All the data obtained from the data collection instrument were displayed in the form of tables, graphs, and bar charts (see Chapter 4 and Appendix G & H for further discussion).

Phase 4:

Data were extracted from the SurveyMonkey™ Domain in an Excel spreadsheet. The information gathered from the e-Delphi validation assessment instrument in the different rounds was presented in tables and bar charts (Appendix M & O).

1.9 ETHICAL CONSIDERATIONS

Ethical issues are relevant to any kind of research. The research process creates tension between the aims of the research to make good generalisations for the good of others and the rights of participants to maintain privacy (Wood & Ross-Kerr, 2011:293; Creswell, 2014:132; Walliman, 2012:57). To ensure that ethical principles were applied in this mixed method study, the researcher had to address the principles of beneficence, non-maleficence, justice, human dignity, privacy, and confidentiality of information, as described by Polit and Beck (2012:151) (see Chapter 3, Section 3.3).

1.9.1 Institutional approval

The research proposal was approved by the Research Ethics Committee of the Department of Health Studies at UNISA (Appendix I). Approval from the Institutional Ethics Research Boards of the two hospitals (Appendix J & K) was also obtained before data gathering commenced.

1.9.2 Informed consent of respondents:

The information leaflet (Appendix B) was provided with all the relevant information regarding the aim of the study as well as the responsibilities of the participants if they chose to take part in the study, together with every questionnaire. Information regarding privacy, the confidentiality of the data, and withdrawal from the study without any harm were shared.

1.10 SIGNIFICANCE OF THE STUDY

The researcher believes that the significance of the action plan is that it will support the facilitation of a safety culture and climate in a culturally diverse nursing workforce to enhance patient outcomes in the future.

1.11 LAYOUT OF THE PROPOSED STUDY

The thesis is presented in seven chapters as indicated in Table 1.2.

Table 1.2: Chapter layout

Chapter	Content
1	Orientation to the study
2	Literature review (1) safety culture, (2) hospital climate, (3) patient safety outcomes and (4) managing 'just culture' based on Reason's and Ekenedo's Safety Culture Framework.

Chapter	Content
3	Phase 1: Research methodology, data gathering and interpretation of outcomes data
4	Phase 2: Research methodology, data gathering and interpretation of questionnaires
5	Phase 3: Literature review on action plan development as well as the development of the draft action plan and the validation assessment instrument
6	Phase 4: Research methodology, data gathering and validation of the action plan
7	Conclusions, limitations and recommendations

1.12 CONCLUSION

In this chapter, the background to the study was explained, the problem was stated, the research question and the objectives were formulated, and the research methodology was indicated. This study was conducted in a specific context based on patient safety and hospital climate, to determine its potential impact on the safety culture of the nurses and the 'just culture' practices of the nurse managers in managing the behavioural choices of their nursing team.

In Chapter 2, a review of the literature on safety culture, patient safety, hospital climate and 'just culture' practices based on Reason's and Ekenedo's Safety Culture Frameworks will be discussed.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

All over the world, there seems to be growing attention to patient safety. Many countries emphasise the culture of safety and review the nurse's work climate as it influences patient care safety and outcomes (ECRI Institute, 2018:15; van Noord, De Bruijne & Twisk, 2010:162; Al-Lawati, Dennis, Short & Abdulhadi, 2018:1; WHO, 2009). The world no longer has boundaries, and since native populations are becoming increasingly mobile, it has become necessary for healthcare facilities to adopt a more "globalised" approach in delivering safer patient care (Haskins, 2009:27). Nurse leaders, therefore, have to ensure safe patient care services, and they are also required to lead, assimilate and ensure that nurses from around the globe provide safe care (ANA official site, 2010; Vinagre & Marques, 2018:6).

In order to confirm what affects a sustainable safety culture, to ensure patient safety and positive outcomes, it was necessary to conduct a thorough literature review.

Literature was identified by searching Science Direct, Google Scholar, Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, Agency for Health Care Research (AHRQ), Institute Health Improvement (IHI) and Google's electronic databases. Search terms included (safety culture* or culture of safety*) and (safety climate* or positive practice environments) and (just culture practices) and (patient safety*) as well as (cultural diversity* or diversity and safety), (patient outcomes* in relation to: documentation* or electronic medical record* and hospital-acquired pressure ulcers * or HAPU, and falls*, and also hospital-acquired infections* or hand hygiene). The searches were limited to English studies published between 2006 and 2014.

Literature on the following aspects are discussed in this chapter:

- Reason's and Ekenedo's Safety Culture Framework and how it applies to healthcare practices as these also formed the theoretical framework of the study.

In order to do so, it necessitated the review of the safety culture definition, frameworks, models, perspectives of accreditation bodies, and safety practices in health care.

- The impact of safety culture on patient care, through a review of patient safety indicators relating to documentation practices, the prevention of HAPUs, the prevention of hospital-acquired infections through HH compliance, and applying appropriate strategies to prevent patients from falling.
- Those elements that might potentially influence the safety culture are highlighted in the literature. It thus requires exploration into the hospital climate to ascertain whether this might cause nurses to disregard safety practices.

Additionally, it requires an investigation and exploration on the manner in which the nurse manager ensures that nurses (in their application of 'just culture') practice in order to sustain safety culture practices over time.

2.2 SAFETY CULTURE

2.2.1 Definitions of safety culture

The literature on safety culture does not integrate various theories and concepts. Since definitions are listed in the literature, these provide an opportunity for researchers to apply and use the information in any field of study (Al-Lawati, et al. 2018:1). Safety culture is defined in various ways as a result of a number of serious events that occurred in the aviation and nuclear industries (Danielsson, 2018:16; Reiman, Pietikäne, Kahlbom & Rollenhagen, 2010:3). It is believed to be a multidimensional construct (Cooper, 2016:4; Guldenmund, 2000:27), and is therefore cited in the literature in many different ways.

Although not specifically developed for health care, it is important to mention the most commonly used definition of safety culture: "… safety culture is the product of individual and group values, attitudes, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organization's health and safety programmes. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance

of safety, and by confidence in the efficacy of preventive measure" (Law, 2011:7; Halligan & Zecevic, 2011:6; Chenhall, 2010:12; Hecker & Goldenhar, 2014:2; Agwu, 2012:73; Guldenmund, 2000:28; Pfaff, Hammer, Ernstmann, Kowalski & Ommen, 2009:494; Golda, 2013:29; Wallis & Dovey, 2011:36; Reiman, et.al. 2010:3).

The literature also describes a few definitions of safety culture specifically related to health care. Based on the literature, numerous authors highlight safety culture definitions in terms of measuring the different dimensions appropriate to clinical settings (Halligan & Zecevic, 2011:5; Guldenmund, 2010:27; JCIA Sentinel Events Alert, 2017; Zhang & Gao, 2012:3299).

In a diverse environmental context such as the UAE, safety culture requires observable behaviours and organisational processes, and the inclusion of nurses' perceptions of daily practices, attitudes, and beliefs (Health Research and Education Update 2017; Chenhall, 2010:17-18). It is difficult to transpose knowledge about creating cultures of safety from other industries to health care due to the differences in organisational and facility factors (Singer & Tucker, [Sa]:7).

As safety culture forms part of the larger organisational processes, healthcare leaders must review it in terms of the effect that the healthcare facility policy, behaviour and attitude will have on nurses' perceptions of the healthcare facilities and environmental safety features that impact on their overall safety performance (Health Research and Education Update 2017). The Agency for Health Care Research (AHRQ) also used the same elements in their definition as in the above-mentioned description, but adds that certain behavioural competencies are required as to the manner in which the healthcare team practices the safety management plan in their daily patient care activities.

Each of these definitions provides a unique contribution to sustaining a safety culture based on the different elements, and was therefore used concurrently in this research study.

2.2.2 Safety culture models

The literature illustrates that safety culture models refer to the underlying assumptions and backgrounds that guide the healthcare facility to perform or fail (Macchi, Pietikäinen, Reiman, Heikkilä & Ruuhilehto, 2011:15). It can be daunting for healthcare professionals to determine which safety models and frameworks to choose. It therefore requires an understanding of different safety culture frameworks and models to determine the most appropriate one for every clinical setting. An understanding of the origin of safety culture models was required to identify safety culture and the reasons behind its development.

Based on the literature review (looking first at models), Westrum's safety culture typology model describes how healthcare organisations process information to determine how mature or evolved the culture is on three distinct levels, namely: pathologic, bureaucratic and generative (Öhrn, 2012:22; Gotval, 2014:6; Bernard, 2018:2). Reason adapted Westrum typology of safety culture and added the proactive and generative levels. Many of the models developed over the last decade subsequently used Reason's and Westrum's typology of safety culture in developing safety culture for their respective industries and healthcare settings (Hecker & Goldenhar, 2014:4; Öhrn, 2012:22; Gotval, 2014:6; Nordin, 2015:15; Vu & De Cleri, 2014:56).

As the technology evolved and healthcare organisations became more complex, safety culture models became more refined and specific (Macchi, et al. 2011:15). Therefore, with the increased complexity of the practice setting, technology and shared environment, improved coordination of the practice setting is necessary, along with achieving safety and effectiveness (Macchi, et al. 2011:22). Healthcare organisations thus require a safety culture maturity matrix to assess and manage issues in the system. This assessment usually occurs in a number of phases, which in turn represent different levels of maturity.

The Safety Maturity Model was developed in 2001 to assist facilities in gaining a clear understanding of their own levels of safety culture based on compliance with key

safety dimensions (Macchi, et al. 2011:25; Law, Zimmerman, Baker & Smith, 2010:113; Guldenmund, 2010:51; Halligan & Zecevic, 2011:6).

2.2.3 Safety culture maturity levels

Healthcare organisations often have safety embedded in their values, and the distinct levels of the safety culture maturity model illustrate how healthcare organisations can rank their own performance. The different levels will indicate where in the maturity model these values are practised by the team or enforced by the healthcare leaders or nurse managers.

2.2.3.1 Pathological level

Safety culture can, therefore, be seen at the *pathological* level if safety problems occur due to unsafe practices by the healthcare team and by the perception that there is no need to focus on safety. This level focuses on the completion of tasks and on clinicians taking 'short cuts' during procedures, and performing practices in ways that nurse managers do not witness these unsafe practices (Macchi, et al. 2011: 25; Hudson, 2007:8-2; Law, et al. 2010:113; Bernard, 2018:2). At this level, the healthcare facility is not truly interested in safety and reactively discovers events that potentially place patients at risk of harm after an incident has already occurred. This level highlights healthcare facility nurse managers as power-driven individuals where safety information flows from the top-down when required, and there is low participation among the healthcare clinicians. Additionally, innovation is not supported by the nurse manager, and the nurses do not report system failures (Bernard, 2018:2; Law, et al. 2010:113). The next level of safety maturity is the reactive level.

2.2.3.2 Reactive level

In the *reactive* level, healthcare organisations react to patient safety incidents after it has occurred. This approach does not address all the root causes potentially affecting system errors; it merely solves the issue identified during the incident. These healthcare organisations are very rule-oriented, and although there is some sharing of safety information, it is often ignored by nurses. The team demonstrates modest

participation in safety activities, and innovation is seen as problems; it is not supported by the healthcare facilities at this level of the Safety Maturity Model (Bernard, 2018:2; Law, et al. 2010:113). The team is aligned to individual unit goals but does not share the broader healthcare team's values with regard to safety (Westrum, 2004:ii22). The next level of safety maturity is the calculative level.

2.2.3.3 Calculative level

On the *calculative* level, safety is driven by the healthcare facility's set management systems, with the emphasis on data collection. This level illustrates the healthcare organisation as mostly results-oriented, and it often uses quantitative risk assessments and explicit cost-benefit analyses to justify safety practices. The facility still employs minimal effort in engaging the nurses in safety aspects in practice settings. Safety information is actively sought by nursing teams, and innovation is applauded and welcomed by the facility (Bernard, 2018:2; Law, et al. 2010:113; Besnard, et al. 2018:17). An interesting development on this level is the healthcare team's alignment with the healthcare organisation's value for safety; thereby engaging teams to make safety changes (Westrum, 2004:ii22). The proactive level follows, with the healthcare facility demonstrating a higher level of safety culture maturity.

2.2.3.4 Proactive level

At the *proactive* level, the healthcare facility demonstrates a constant reflection on performance improvement of systems that could potentially harm patients. The healthcare team is driven by the challenge of finding the 'unexpected' in practice, and focuses on a bottom-up approach to safety improvement activities. This level represents a participative and informative approach among the healthcare team, and everyone takes responsibility for safety (Bernard, 2018:2; Besnard, et al. 2018:17; Law, et al. 2010:113). Ultimately, the final level of maturity is the generative level.

2.2.3.5 Generative level

The *generative* level truly reflects active participation at all levels in the healthcare facility, and safety is an inherent part of the daily patient care activities. Healthcare

facilities are characterised in proactive risk identification in the systems as a counterpart to complacency, and the healthcare team addresses both system and team issues that could affect safety (Law, et al. 2010:113; Bernard, 2018:2; Besnard, et al. 2018:17).

The brief description of safety maturity models provides researchers with a relevant understanding of how safety culture frameworks originated as well as how it can be applied in the healthcare facility.

2.2.4 Safety culture frameworks

Safety culture frameworks are described according to how physicians and nurses in healthcare organisations apply safety culture in clinical practice. It demonstrates the practice of individual nurses and the team, as well as organisational attitudes, norms and behaviours related to the safe provision of health care (Law, et al. 2010:113; Okuyama, Galvao & Tolentino Silva, 2018:1; Halligan & Zecevic, 2011:9; Foster & Hoult, 2013:60; Golda, 2013:30; Piers, Montijn & Balk, 2009:8).

From the brief description of safety maturity models and safety culture studies and concepts, it is clear that a 'desirable' safety culture does not just materialise fully formed within a healthcare facility. Depending on the size and complexity of the facility, it is likely that there are areas in which the safety culture is less developed than in others. Safety culture models were utilised to develop Reason's Safety Culture, the Manchester Patient Safety Framework, and Ekenedo's Safety Framework, among others.

2.2.4.1 Manchester Patient Safety Framework

The Manchester Patient Safety Framework (MaPSaF) is based on the established Safety Culture Maturity Model of Westrum and Reason. It was developed using a qualitative approach to define the dimensions for use in primary health care (Al-Lawati, et al. 2018:7; Müller, Hoffman, Albay, Schröber, Weppler, Gerlach & Güthlin, 2014:35). The aim of this framework is to fill the gaps that exist between the policymakers (governance) who advocate the importance of engaging the healthcare

clinician in safety decisions. This involvement in safety decisions facilitates an environment in which the nurses consistently implement safety culture as part of how they provide care (Al-Lawati, et al. 2018:7; Halligan & Zecevic, 2011:8; Wallis & Dovey, 2011:36).

2.2.4.2 Ekenedo's framework

The Ekenedo Framework is directed towards nurse leaders and their role in creating an environment for safety culture (Golda, 2013:32; French & Geller [Sa]:1; Singer & Tucker, [Sa]:7; WHO, 2009:13; Liang, Lin, Zhang & Su, 2018:2). Each nurse and nurse manager have their own attitudes, values, norms and beliefs with respect to risk and safety, which represent the unit's safety culture. An ideal safety culture is one in which the healthcare facility is able to sustain the maximum avoidance of clinical hazards, regardless of the nurse manager, or the climate factors in the nurses' environment (Vinagre & Marques, 2018:6).

The safety management system cannot achieve a safe work environment alone and emphasises the role of the human factor in accident causation and effective functioning of the safety management system (Golda, 2013:31; Besnard, et al. 2018:17). It relates to behavioural safety which is the way the nurses and nurse managers respond to a decision involving risk or safety (Golda, 2013:31).

a) Leadership

Leadership has a fundamental role to play in creating and sustaining a sound safety culture in a diverse cultural environment like the UAE. In using the Ekenedo Model of Behavioural Safety Culture, the nurse managers are required to apply these skills in their departments to sustain a sound safety culture (Golda, 2013:31; Besnard, et al. 2018:17).

A crucial responsibility is being aware of the nursing team's qualifications, the nurses' skills mix, and their competency levels to ensure safe care delivery (Blegen, et al. 2013:92; Besnard, et al. 2018:17). The nurse manager of a facility has the primary responsibility for identifying the need for and fostering cultural change, and for

sustaining a sound safety culture in the clinical areas (Golda, 2013:31; Sculi & Hemphill, 2013:3). It therefore requires the nurse managers to continuously assess the environment and systems for safety risks and immediately mitigating these risks through process reviews (UAE Environmental Health and Safety Management Strategy (EHSMS) official site, 2015). From incident report data, one of the primary causes of accidents is poor management control. Nurse managers thus play a significant role in embedding safety within the nurses and must never turn a blind eye to unsafe practices or conditions.

Nurse managers should understand their accountability and responsibility to correct any unsafe acts as they become aware, and they should have a process in place to identify unsafe conditions. The nurse manager must discuss safety with the nursing team daily Huddles (debriefs) and mitigate risks as they occur. They need to ensure that they conduct safety training and risk assessments in conjunction with their nurses and provide feedback on safety issues to the nursing team. Nurse managers need to make time to celebrate successes and praise nurses who practice safely (Golda, 2013:34; Sculli & Hemphill, 2013:3).

Assigning responsibility and accountability for safety is a critical leadership role. This requires that upper management take personal responsibility for bringing the vision to fulfilment. Emphasis on responsibility and accountability for safety behaviours needs to be cascaded throughout the facility with the aim of making safety a core value. This can be achieved by senior managers instilling safety behaviours in all healthcare providers and designing a safety vision (Golda, 2013:34; Bronkhorst, Tummer & Steijn, 2018:6).

b) Vision and policies

The facility vision should spell out SEHA (Corporate Operational Body) strategic objectives, standards and what tactics will be taken for the facility to reach its objectives and goals. In order for this to be internalised at the facility level, the Chief Executive Officer (CEO) must sell the vision and engage different levels of management to commit to this vision personally. Policies guide practices and there needs to be a system in place to ensure that nurses have access to it, 24/7. Nurse

managers are also required to ensure that nurses are aware of changes in policies through monthly staff meetings.

c) Role modelling

For nurse managers to commit to the facility's vision, they have to lead by example, highlighting an unsafe condition or practice and correcting it on the spot (without casting blame), and not allowing the "I'm too busy" phrase to impede the process. As nurse managers' rounding "with a purpose" was introduced, daily visits to their patient care areas are essential (Golda, 2013:34; Hurley, 2015:11). This will allow them to observe the nurses' attitudes towards safety and to identify essential flaws in the system that could potentially impede patient safety (Golda, 2013:33; Health Research Education Update, 2017). The nurse manager needs to use safety as a predictor when scheduling and assigning nurses to patient care in order for the team to feel supported and safe. In turn, this will lead to staff engagement in safety. Using nurses' satisfaction feedback from National Data Nursing Quality Indicator (NDNQI) will also provide valuable insight for the nurse manager to address how nurses perceive their nurse manager as a role model, the support they receive, and the safety climate of the unit (Hospital Data, NDNQI, 2015).

d) Managing behavioural choices affecting safety

Modifying individual behaviour can play a very significant role in establishing a safer workplace (Golda, 2013:33). Environmental safety changes often rely on nurses' behaviour (Golda, 2013:31) which include patients' assessment on admission, conducting fall and skin integrity screening to determine patient risks, and nurses' hand washing practices.

Managing the nurses' behaviour focuses on what nurses do, analyses why they do it, and then applies an evidence-based intervention strategy to improve their behaviour (Cunningham & Geller, 2011:1). It also defines that nurse managers should be aware of certain motivational strategies in clinical care settings. Such strategies should precede and encourage positive behaviour among nurses (Cunningham & Geller, 2011:3). This motivation can take many forms, such as visual cues or reminder

prompts that direct behaviour. The nurse manager should proactively measure nurses' performance successes, provide feedback on weekly safety inspections, and follow up on incident reports regarding safety issues (Golda, 2013:33; Cunningham & Geller, 2011:1).

A consequence is an event initiated by the nurse manager following a nurse's given behavioural choice; it increases the probability of the behaviour recurring (Cunningham & Geller, 2011:3). Consequences can take many forms, such as behavioural feedback, monetary rewards, or a nurse manager acknowledging and praising a job well done. It can thus be said that consequences motivate behaviour, as humans tend to act in response to the consequences we expect to receive (Cunningham & Geller, 2011:3). Policies on non-conformance with safety standards should clearly list consequences for nurses' actions.

To ensure behaviour management becomes the norm, daily nurse manager interventions are required to sustain safety practices (Cunningham & Geller, 2011:5). Several factors are critical for behavioural safety maintenance, which include: a) educating and training; b) involving nurses to customise and deliver the intervention process; c) developing facility structures to monitor the intervention process and outcome; d) providing ongoing social and organisational support and coaching; and e) generating 'self-rules' or self-management that nurses can use to motivate their own intervention-related behaviour (Cunningham & Geller, 2011:5; Golda, 2013:30).

e) Behaviour-based safety training

In his 1953 theory, Skinner discussed that nurses' behaviours could be conditioned through reinforcing acceptable safety behaviours (Golda, 2013:31). According to Skinner, theory reinforcement, either positive or negative, will strengthen the behaviour it follows.

There are three factors that influence a nurse's safety choices: the ability to recognise hazards and evaluate risk, the motivation to be safe, and the ability to focus while safely performing a task (Cunningham & Geller, 2011:5). Facilities need to offer a behaviour-based safety training programme, designed to influence nurses' actions

towards safer outcomes to prevent incidents or errors before they even occur. Implementing a behaviour-based safety programme is the most comprehensive way for healthcare facilities to promote safety, eliminate hazards and prevent injuries (Cunningham & Geller, 2011:5; Health Research and Education Update, 2017:16).

The Ekenedo Framework (see Figure 2.1) illustrates the manner in which the nurse manager's attitudes and behaviours about safety are applied in daily practice. These behaviours and attitudes form the foundation for nurses' safety behaviour, and the safe performance of the healthcare facility (Hecker & Goldenhar, 2014: 6).

It is therefore imperative to review how nurses' behaviour affects safety. It requires behaviour-based safety in practice (Alasamri, Chrisp & Bowles, 2012:481; Golda, 2013:30; French & Geller, [Sa]: 5), which can be described as the way in which nurses respond to a decision involving risk or safety, and how nurses incorporate their response in delivering safe patient care (Golda, 2013:31). This requires that the nurse manager understands behavioural safety in order to determine why nurses' behavioural choices may negatively affect patient safety and outcomes.

To facilitate an environment where a nurse manager is able to identify behavioural safety choices, the provision of behaviour-based safety culture education and training is required. Such training will ultimately facilitate team engagement and involvement. Consistent follow-up, support and re-enforcement are crucial to keeping the nursing team aligned with the safety vision and values, and the facility's safety management system (Golda, 2013:35).

Regulatory and accreditation bodies mandate that facilities have competency-based programmes that enable nurses to practice safely in their speciality (DoH-AD, 2016; JCIA, 2014). Hospital policies require that all new nurses must receive hospital and unit orientation. In the hospital orientation, all policies relating to human resources, emergency operations plans and safety, infection control and confidentiality are addressed. In the nursing orientation, the programme must address core competencies such as documentation, patient assessments, equipment, intravenous cannulation, medication safety, and exams. Unit-based orientation must address specific unit safety initiatives, risks, and patient care competencies. EHSMS legislation

in the UAE stipulates that facilities must provide training on risk assessment (patient, nurse, and environment), emergency operations plans (managing disasters), manual handling and lifting, fire safety and infection control (EHSMS, Web Access).

As discussed, the Ekenedo Behavioural Safety Culture Model (see Figure 2.1) places leadership at all levels and at the centre of the framework. In the workplace, nurse managers are the drivers of safety culture by *enabling, modelling, inspiring* and *reinforcing* accepted safety practices which meet with the policies that stem from the facility's safety management system in three basic ways. First, by providing behaviour-based education and training that improves knowledge and skills necessary for safety practices. Appropriate patient safety knowledge and skills are simple requirements for behaviour and attitude change among nurses. Second, nurse managers need to demonstrate (role model) the appropriate safety practices, which in turn positively influences nurses' attitudes towards safety. Third, the nurse managers must ensure that they provide the required cues and contracts, that they reward practices of work safety, and exercise punishment that reinforces positive safety practices among the nursing team (Golda, 2013:35).

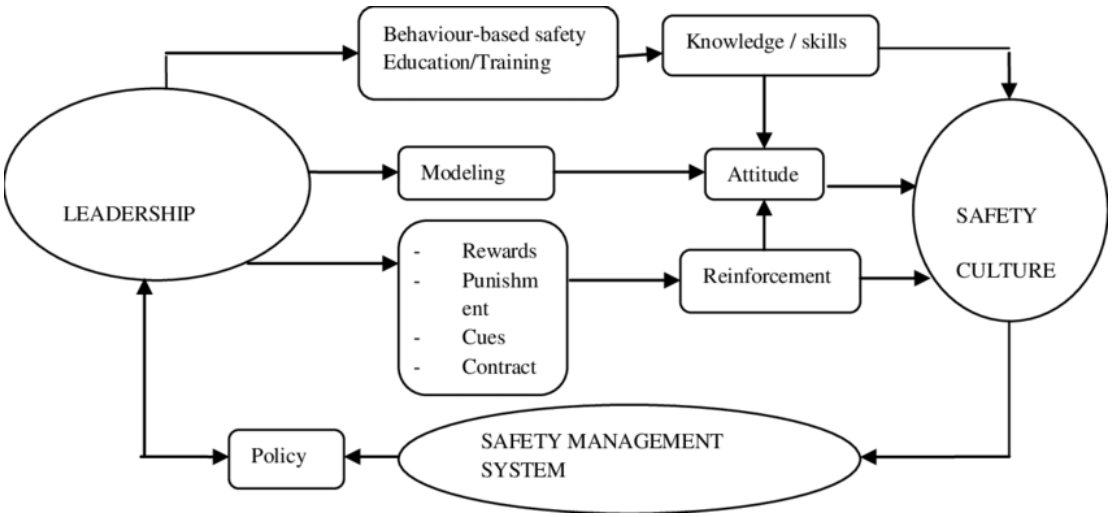


Figure 2.1: Ekenedo Safety Culture Framework (Golda, 2013)

The importance of utilising Ekenedo's Safety Culture Framework in addressing the behaviour of the nurse manager and the nursing team in terms of safety therefore plays a vital role in sustainable practices. It necessitates the use of Ekenedo's Safety

Culture Framework in collaboration with Reason's Safety Culture Framework, which is discussed next.

2.2.4.3 Reason's Safety Culture Framework

At the heart of safety culture, Reason (2000:7) describes the characteristics of his Safety Culture Framework which comprise five subcultures. The informed culture forms the foundation culture for all other subcultures to build upon (see Figure 2.2) (Vu & De Cleri, 2014:56).

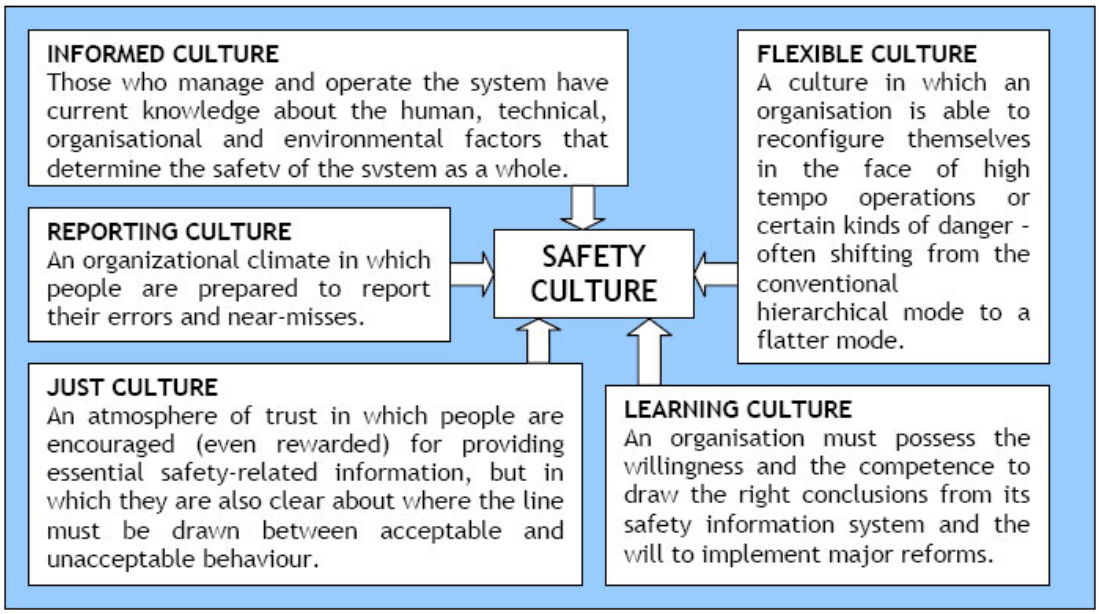


Figure 2.2: Reason Safety Culture Framework adapted Vu & De Cleri (2014)

a) Informed culture

In an *informed culture*, the healthcare organisation analyses data from audits, errors and reports, and then shares this information with their employees. This allows for the healthcare team to engage in and understand factors affecting safety (Vu & De Cleri, 2014:56; Golda, 2013:31; Reiling, 2012:434; Cooper, 2016:9; Nordin, 2015:16; Gotval, 2014:24). There is a need for committed healthcare teams who have an obligation to safety (Golda, 2013:37). Engaged and empowered healthcare teams facilitate an environment in which safety becomes everyone's responsibility (Vu & De Cleri, 2014:56; Cooper, 2016:9; Besnard, et al. 2018:27). Appropriate safety culture role

modelling by the nurse manager is thus necessary to foster accountability and responsibility among nurses in terms of safety (Golda, 2013:32).

Since healthcare facilities are considered highly reliable organisations, it requires an understanding of the concept and how it applies to this environment. The High Reliable Organisations (HRO) theory literature has stated that sustaining a safety culture has resulted from evidence-based practice over the last decade for complex systems, and needs to be incorporated in this study. This HRO theory provides the foundation to ensure that nurses are empowered to improve healthcare systems and understand that, like the nuclear industry, health care is just as complex. This empowerment enables the nurse to provide the right care and to ensure that the patient will benefit from safe, quality care (Besnard, et al. 2018:47 & 74; Hecker & Goldenhar, 2014:3; Singer & Tucker, [Sa]:7). To ensure that nurses are aware of safety issues and risks in the care environment, the 'stage' is set to strengthen the next subculture in Reason's framework.

b) Flexible culture

The *flexible culture* reflects the healthcare organisation's ability to adapt and change in emergent situations to ensure that an immediate decision can be taken to prevent harm to a patient (Agwu, 2012:74; Golda, 2013:31; Reiling, 2012:434; Nordin, 2015:16; Gotval, 2014:24). In this subculture, simpler organisational models are required than those of the conventional hierarchical models to ensure a sufficient flow of safety information (Health Research Update, 2017:5).

As mentioned in the informed culture, the HRO theory states that accidents occur because the "clinicians operating within the complex health care system are not sufficiently empowered to determine potential risks from their system issues" (Hecker & Goldenhar, 2014:74; Law, 2011:28; Besnard, et al. 2017:74). Mindfulness in HRO is thus important and should include a commitment to set values and actions needed to prevent harm to patients. Healthcare organisations must be flexible and should incorporate the HRO values in their clinical setting (Law, 2011:29; Besnard, et al. 2017:74; Hales & Chakravorty, 2016:2; Braun, Riehle, Donofrio, Hafiz & Loeb,

2012:9). In facilitating a flexible culture, these HRO values provide the leadership team with the framework to be applied in relation to the flexible subculture.

Nurse managers should enforce ‘sensitivity to operations’, which is crucial in maintaining constant awareness by the manager and nurses on the state of the safety systems and processes that affect patient care. This awareness by the nursing team is key to identifying risks and preventing them proactively (Besnard, et al. 2017:74). Additionally, the nurse manager should encourage and support the team to report errors and provide feedback on outcomes of investigations regarding errors that occurred in regular structured meetings (Besnard, et al. 2017:74; Golda, 2013:36; Braun, et al. 2012:9).

‘Reluctance to simplify interactions’ requires that nurse managers utilise quality tools to identify the causes of system issues and thereby avoid simple explanations of failures. This is essential in order to understand the true reasons why patients are placed at risk (Parker, Lawrie & Hudson, 2006:555). The nurse manager should communicate in different communication modalities to ensure that the diverse nursing team understands the message. It is vital that communication between and among a diverse healthcare team has a multidisciplinary approach to care delivery (Besnard, et al. 2017:74; Braun, et al. 2012:9).

‘Preoccupation with failure’ reflects on whether the healthcare organisation uses near-misses as learning opportunities to ensure a blame-free but ‘just culture’ by using an anonymous reporting system (Braun, et al. 2012:9). This kind of reporting is viewed as evidence of systems that should be improved to reduce potential harm to patients (Besnard, et al. 2017:74).

The ‘commitment to resilience’ value of HRO requires the nurse manager to become adept at predicting system issues and proactively addressing them to overcome failures (Golda, 2013:36; Braun, et al. 2012:9). Commitment to resilience in healthcare, according to Besnard, et al. (2018:74), will enable nurse management to support patients’ safety by ensuring the availability of adequate resources and staffing and creating a learning culture (as discussed below). Staffing shortages, on the other hand, is a global phenomenon and is vital in the mitigation of safety culture (Blegen,

et al. 2013:92; Ball, Murrels, Rafferty, Morrow & Griffiths, 2013:12). Thus, it is imperative for nurse managers to ensure that units are staffed adequately and based on acuity and patient needs. Nurse managers and nurses must be trained and prepared to respond correctly when system failures occur (Besnard, et al. 2017:74).

The last value of HRO 'difference to expertise' is about the openness and empowerment that exist, allowing the team to share errors or information, no matter what their rank or designation (Besnard, et al. 2017:74; Braun, et al. 2012:9). This is often difficult in bureaucratic environments. If the nurse manager is not willing to listen and respond to the insights of direct care providers (nurses) who know the way processes really work and what risks patients really face, a culture that requires this reliability cannot exist (Besnard, et al. 2017:74; Hecker & Goldenhar, 2014:3).

A flexible culture allows an understanding of what system defects exist. Addressing these defects appropriately thus ensures a reporting culture.

c) Reporting culture

An organisational climate in which nurses feel safe and are prepared to report their errors and near-misses represents its reporting culture (Sculli & Hemphill 2013:3; Golda, 2013:31; Reiling, 2012:434; Nordin, 2015:16; Gotval, 2014:24; Jones & O'Connor, 2016:133). Nurse empowerment in reporting incidents and near-misses is vital for the facility to determine potential risks in the systems and in staff behaviour (ECRI Institute 2018:3; Golda, 2013:36). To promote a culture in which healthcare facilities learn from their mistakes, facilities should re-evaluate exactly how their disciplinary system fits into the safety culture equation. A facility with a safety culture that is open and fair towards their staff when an incident occurs learns from its mistakes. Rather than blaming individuals, an investigation to find what went wrong in the systems is required in order for the facility to be effective (Golda, 2013:36). Another stance reveals that the managerial style of the nurse manager will affect nurses in reporting incidents (Liang, et al. 2018:2). There are also limitations and challenges in terms of the nursing team reporting incidents, and it is not a reliable measure for patient safety (Öhrn, 2012:17).

The other subculture from Reason's framework addresses the manner in which an organisation adapts to changes identified by events, and ensures that the facility is able to appropriately manage the system and behavioural choices encountered in clinical practice. The 'Just Culture' from Reason's framework incorporates this aspect.

d) Just culture

A 'just culture' can be defined as the balance between the assessment of systems, processes and nursing teams' behaviour when an error, event or near miss is reported. 'just culture' is characterised and practised by the nurse manager, based on a safety management plan, by addressing both organisational system defects and nurses' behavioural choices regarding safety (Meyer & Lawrence, 2010:1; Golda, 2013:31; Reiling, 2012:434; Boysen, 2013:400; Nordin, 2015:16; Gotval, 2014:24).

The term 'just culture' therefore refers to a safety-supportive system of shared accountability where nurse managers are accountable for the systems they have designed and for responding to the behaviours of their nursing staff in a fair and just manner (Boysen, 2013:400). This reiterates the Ekenedo Framework whereby behavioural management of safety is encouraged (Golda, 2013:33). As part of a just culture, nurses, in turn, are accountable for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.

A position statement from the ANA official website (2010) elaborates on their endorsement of Reason's 'just culture'. They claim that 'just culture' correlates with nurses' critical thinking skills and with that of the nursing process. According to a report by the ANA, the 'just culture' concept establishes an organisational mindset that positively impacts the work environment and work outcomes in several ways, such as not automatically finding blame but trying to uncover system issues.

The Institute Safe Medication Practices (ISMP) (2012:1) states that in order for a facility to review its 'just culture' practices it requires the following components regarding the facility values: justice (fairness to the workforce) and safety, a reduction of at-risk behaviours, the design of safe practice systems, and the establishment of a reporting and learning environment.

The nurse manager can anticipate three types of behaviours in the department: human error, at-risk behaviour, and reckless behaviour. Based on the literature, each type of behaviour has a different cause and therefore requires a different response by the nurse manager.

- Human error involves unintentional and unpredictable behaviour that causes an undesirable outcome. The nurse manager knows that nurses do not choose to make mistakes, but due to perceptive processes and environmental factors, slips and lapses can occur (ISMP, 2012:1; Gluyas & Morrison, 2014:38; Van Beuzekom, Boer, Akerboom & Hudson, 2010:38).

  Based on sentinel events data, most human mistakes arise from weaknesses in the system. They are managed proactively within a'just culture'through system redesigns that reduce the risk of mistakes (Roth, 2014:11; Fryer, [Sa]: 58; Eggertson, 2014:1; Gluyas & Morrison, 2014:38; Holden, Scanlon, Patel, Kaushal, Escato, Alper, Arnold, Shalaby, Murkowski & Karsh, 2011:1; Boysen, 2013:404; van Beuzekom, et al. 2010:39; American Organization for Nursing Executives (AONE), [Sa]:1). In a 'just culture', the only just option is consoling the worker who made a mistake, doing a root cause analysis and redesigning systems to prevent further errors (Fryer, [Sa]:60; WHO, 2009:2; van Beuzekom, et al. 2010:41).

- At-risk behaviours are different than human mistakes, and nurses often drift into unsafe care practices. They lose perspective of the risks attached to everyday care activities or mistakenly believe the risk to be justified. As humans, our decisions about what is important is typically based on the immediate desired outcomes, not what could go wrong or the consequences of the mistake. As the nurses' perceptions of risk fade away and they try to do more with less, they take shortcuts, violate policies, and drift away from behaviours they once knew to be safer. These at-risk behaviours can often be the norm among the nursing team if no accountability is set, and may be considered as 'the way we do things around here' (Boysen, 2013:405). For these behavioural events the nurse manager should not punish those who engage in at-risk behaviours, but proactively identify and mitigate the system-based reasons for their behaviour, and reduce nurses' tolerance for

taking these risks through coaching (Coordination Council for Medication Error Reporting and Prevention, Webpage, 2014; Boysen, 2013:404; AONE, 2017:3; van Beuzekom, et al. 2010:40).

- In reckless behaviours, nurses always perceive the risk they are taking and understand that it is substantial and will negatively impact the patient's safety. A nurse with reckless behaviour acts intentionally and is unable to justify their behaviour and actions. Nurses' reckless behaviour represents a conscious choice to disregard what they know to be a substantial and unjustifiable risk. This type of behaviour is blameworthy, and as such, should be managed through remedial or disciplinary actions according to facilities' human resource policies (ISMP, 2012:3; AONE, 2017:3; van Beuzekom, et al. 2010:40).

Facilities that practice a 'just culture' have defined and communicated accountabilities, so all nurses clearly understand what is expected of them. Based on their job description, policies, the code of conduct and scope of practices, nurses understand that they are accountable for performing at the highest level of personal reliability, and for making safe behavioural choices and decisions that promote safety. In addition, the nurse manager needs to create a work environment for nurses to be empowered and responsible for identifying patient safety and other environmental risks and system vulnerabilities. Creating an environment whereby the nursing team identifies human errors, at-risk behaviours, and reckless behaviours will allow sustainable care practices (ISMP, 2012:3; AONE, 2017:3; van Beuzekom, et al. 2010:40).

The nurse managers have additional responsibilities whereby they are accountable for constantly reviewing nurses' behavioural choices, proactively monitoring systems and processes, redesigning systems to improve safety, investigating the causes of risks and errors, and providing feedback (ISMP, 2012:3; AONE, 2017:3; van Beuzekom, et al. 2010:40; Abu Dhabi EHSMS, 2012).

Facilities should apply 'just culture' based on a nurse's behavioural choices and not foster an outcome-based model of accountability; meaning, the potential or actual severity of the outcome plays no role in determining the consequences. If patients are harmed, this is a difficult but worthwhile stance for nurse managers to decide on an

outcome-based accountability model. This needs to be avoided as it creates an environment among nurses of 'no harm, no foul'. It also leads to missed opportunities to console nurses for human error, to coach nurses for at-risk behaviours, or to redesign systems to prevent human errors from affecting patients.

The nurse manager needs to create a hospital climate where, if an error occurs, nurses should feel safe knowing they will be treated fairly when they report their mistakes, and they will be accountable for the quality of their choices and not simply the outcome (ISMP, 2012:3; AONE, 2017:3; van Beuzekom, et al. 2010:40; Abu Dhabi EHSMS, 2012). As human behaviour runs counter to safety, the outcome for a nurse taking a risk is often immediate and positive (e.g., saved time due to nurse shortages), while the consequences (e.g., patient harm) are usually delayed (ISMP, 2012:3; Farokhsadin, Nayeri & Borhani, 2018:2). This will result in even the most educated and safety-conscientious nurses adopting and mastering hazardous shortcuts, particularly when faced with an unanticipated system problem (e.g., technology glitches, time urgency, and workload). As a result, nurses will drift from safe and controlled processes they were first taught to unsafe and automatic processes (ISMP, 2012:3; van Beuzekom, et al. 2010:40). This will result in an environment where the risk associated with these processes increases, and the entire culture of the unit or department becomes tolerant to these risks (ISMP, 2012:3).

As discussed, when the unit's or department's tolerance to risk is high, safe behavioural choices may actually invoke criticism among the team, and at-risk behaviours may invoke rewards. For example, a nurse who takes longer to complete the NAA may be criticised, even if the additional time is attributed to safe practice habits, identifying patient needs and patient education. A nurse who is able to handle four new admissions in the course of a shift may be admired, and others may follow her example, even if dangerous shortcuts must have been taken to complete the patients' assessments (ISMP, 2012:4; van Beuzekom, et al. 2010:40).

Therefore, nurse managers must understand that at-risk behaviours represent the greatest risk to patients given that reckless behaviours are rare and human errors usually present as single isolated incidents (ISMP, 2012:4; van Beuzekom, et al. 2010:40). When a unit or department experiences this faded perception of risk, the

habitual nature of the nurses' behaviours and upside-down rewards that discourage safe behaviours and encourage unsafe at-risk behaviours, make it difficult to change these conducts. In applying a 'just culture' approach, the nurse manager does not automatically punish those who engage in at-risk behaviours, but engage nurses to identify and report these behaviours, to determine the range of the behaviour, to uncover and remedy any upside-down rewards and the system-based causes for the behaviours, and to decrease nurses' tolerance to risk-taking (Besnard, et al. 2018:36; ISMP, 2012:4; van Beuzekom, et al. 2010:40).

When a nurse manager establishes a 'just culture', at-risk behaviours are reduced by:

- removing the barriers to safe behavioural choices,
- removing the rewards for at-risk behaviours,
- coaching nurses to reduce their tolerance to risk, and
- encouraging a decision-making process that will result in nurses' desired safe behavioural choice (Besnard, et al. 2018:36; ISMP, 2012:4; van Beuzekom, et al. 2010:40).

Coaching involves the nurse manager helping the nurse to see the risk that was not seen or misread as being insignificant or justifiable (Boysen, 2013:404; Meyer & Lawrence, 2010:1). It entails a productive discussion between the nurse manager and the nurse about the risks versus the rewards of certain behaviours and the decision-making process for behaviours under the nurse's control (Boysen, 2013:404; Meyer & Lawrence, 2010:1). Coaching is a collaborative process and involves manager-to-nurse, peer-to-peer, and nurse-to-manager coaching. Nurses' willingness to coach their peers, and nurse managers' willingness to be coached by others, can be a strong indicator of a'just culture'(Boysen, 2013:404; Meyer & Lawrence, 2010:1).

The other subculture from Reason's framework addresses the manner in which an organisation adapts to changes identified by events and ensures that the facility is able to appropriately manage the complexities encountered in clinical practice. The learning culture from Reason's framework incorporates this aspect.

e) Learning culture

In the *learning culture,* the nurse manager reviews and analyses safety-related data and reports based on the safety management plan, and takes required preventative actions (Joint Commission, Web Access, 2015:3; Health Research & Education Update, 2017:16; Golda, 2013:31; Reiling, 2012:434; Nordin, 2015:16; Gotval, 2014:24). There is an ongoing reflection on current safety practices and beliefs in searching for ways to eliminate or minimise risks (Lingard, Harley, Zhang, Harley, Blismas & Wakefield, 2014:70). The key focus in learning culture is teaching nurse managers and nurses from diverse nationalities the importance of ensuring that all safety-related aspects are addressed (Kaya, 2016:683; Health Research & Education Update, 2017:16).

Care should be taken when developing teaching and in-service programmes to ensure that diversity issues are appropriately addressed for learning to occur. According to the literature, in Asian countries nurses focus on acute care and are not used to caring and managing patients with chronic conditions; they are also not responsible for disease management or conducting patient risk assessments.

The healthcare facility needs to ensure that appropriate hospital and unit-based orientation programmes for all the new employees are thus available. Ongoing teaching programmes should address all key clinical practice areas identified as problematic and/or a potential risk to patients. These include NAA, HH practices, patient fall risk assessments, and HAPU prevention.

Kaya (2016:683) highlights the fact that although healthcare organisations provide orientation programmes, they fail to provide transition programmes to aid Asian nurses in addressing the differences in practices outside their own home countries. Therefore, nurse managers should assume that more is required from training and educational programmes to address nurses' diverse transitional practice needs in the recruitment process (Kaya, 2016:683; Foronda, MacWilliams & McArthur, 2018:36-37).

To conclude on Reason's subcultures, there are many components that should be addressed by both the nurse and the nurse manager. As a result of audits and key

performance indicator trends, it is necessary to investigate the components affecting safety culture practices from being sustained over time. This will provide insight as to why the nurse manager and nurses fail to be responsible and accountable for safety practices (Vu & De Clari, 2014:56; Golda, 2013:37; Reiling, 2012:434; Nordin, 2015:16; Gotval, 2014:24).

The researcher perceives that by utilising Reason's (Vu & De Clari, 2014:56) Safety Culture Framework, this will illustrate how the subsets of cultures impact on each other to facilitate sustained safety. As leadership is crucial, the researcher used Ekenedo's Safety Framework to describe how the nurse managers' leadership affects nurse behaviours in ensuring that a safety culture is sustained.

This study required the application of safety culture frameworks to understand why patient safety best practices are sustained or not sustained. Safety culture frameworks have certain dimensions that must be measured to understand whether sustaining practices is due to the system, to nurses' behavioural choices, and/or the nurse managers' 'just culture' practices. Safety culture frameworks have many different dimensional elements to describe what is required from healthcare facilities to indicate that they practice within a sustainable safety culture framework.

2.2.5 Dimensions of safety culture

The researcher has reviewed safety culture models and frameworks. The frameworks measure different dimensions to determine the safety culture. There are between two to nineteen dimensions of safety cultures listed in the literature (Guldenmund, 2010:35; Halligan & Zecevic, 2011:7).

Risky industries' literature describes dimensions required for a safety culture in terms of (1) being recognised as a high-risk organisation, (2) having a blame-free reporting environment, (3) having a collaborative work environment, and (4) having a commitment of resources to change unsafe work environments (Al-Lawati, et al. 2018:7; Halligan & Zecevic, 2011:7).

Safety culture was initially conceptualised after conducting factor analysis on safety culture assessment tools by reviewing the different listed dimensions (Halligan & Zecevic, 2011:7). On reviewing the literature with a healthcare focus, dimensions of safety culture similar to the concepts of the nuclear and aviation industries were described (Al-Lawati, et al. 2018:7; Law, et al. 2010:111).

The dimensions used in many of the safety culture frameworks are illustrated in Table 2.1. It is evident that the dimensions highlight the different viewpoints and overlap in how they address safety culture in the healthcare setting.

Table 2.1: Examples of Dimensions of Safety Culture Used in Health Care

AHRQ - Hospital Survey On Patient Safety Culture (HSOPSC)	Safety Attitude Questionnaire (SAQ)	Patient Safety Culture in healthcare Organisations Survey [PSCHO]	High-Reliability Organisation (HRO) principles	OTHERS
Management support for safety	Perceptions of management	Organisation leadership for safety	Preoccupation with failure	Competencies of the management
Supervisor expectations and actions promoting safety	Stress recognition	Unit leadership for safety	Reluctance to accept simplification	Attitudes of management towards safety (all levels and the Board)
Compliance with procedures	Stress climate	Perceived state of safety	Sensitivity to operations	Occupational safety and health training and their efficiency
Teamwork within units	Job satisfaction	Shame and repercussions of reporting	Resilience to errors	Communication processes connected with the improvement of safety management systems

AHRQ - Hospital Survey On Patient Safety Culture (HSOPSC)	Safety Attitude Questionnaire (SAQ)	Patient Safety Culture in healthcare Organisations Survey [PSCHO]	High-Reliability Organisation (HRO) principles	OTHERS
Teamwork across units	Teamwork climate	Safety learning behaviours	Deference to expertise	The role of the safety management system and its efficiency
Handoffs and transitions	Working conditions			Practices in occupational safety and health and evaluation of their effectiveness by respondents
Staffing Openness of communication				Job organisation and its connections with safety
Non-punitive response to error				Factors which are risks at work and their perception
Error feedback and communication				Motivating system and engagement of employees in safety issues
Positive reporting norms				Behaviours and co-operation in an emergency
Organisational learning				

Utilising the various dimensions in safety culture assessment tools is not a new concept, and it is of vital importance to address specific safety culture issues (Law, et al. 2010:112; Guldenmund, 2010:27; Golda, 2013:31; Al-Lawati, et al. 2018:7). A combination of the HSOPSC and a SAQ can thus be used when studying the dimensions that affect patient safety outcomes. This is important as accreditation bodies rely heavily on the safety culture of a healthcare organisation.

2.2.6 Accreditation bodies relevant to safety culture

There are various accreditation and regulating bodies that address safety culture and ensure patient safety. Each of these bodies is unique in their focus and standpoints and will be briefly discussed.

2.2.6.1 World Health Organisation (WHO)

The WHO World Alliance for Patient Safety in the 2009 Patient Safety Solutions, called the “High 5’s”, sought to standardise patient safety solutions that would have a broad impact on preventing diverse events in health care (WHO, 2013:5; Leotsakos, Zheng, Croteau, Loeb, Sherman, Hoffman, Morganstein, O’Leary, Bruneau, Lee, Duquid, Thomeczek, van der Schrieck-De Loos & Munier, 2014:110). As safety is so important, there is a constant drive by the WHO to ensure countries are committed to and focus on patient safety. They have also implemented many initiatives to guide countries in these regards.

2.2.6.2 Joint Commission International

Accreditation bodies require safety cultures in healthcare organisations to be assessed in order for the healthcare organisations to identify safety aspects that may impact on their safety culture (El-Jardali, Dimassi, Jaafar & Hemadeh, 2011:1). The majority of accreditation bodies (JCHO, JCIA) set up their standards to assess healthcare organisations based on safety culture principles. The Joint Commission Standards and policies provide organisations with the ability to review their internal structures and processes. This ensures that variations and patient harm are reduced and quality of care is maintained (Joint Commission, Web Access, 2015).

In reviewing sentinel event data over time, the Joint Commission has identified that healthcare organisations must (1) address the behaviour that affects care, and (2) senior nurse leaders should emphasise that nurse managers commit to addressing the behavioural choices of nurses and drive safety culture (Joint Commission Sentinel Event Alert, 2008 Issue 40; & Joint Commission Sentinel Event Alert, 2008 Issue 43; JCIA, Sentinel Event Alert, 2017).

2.2.6.3 Institute Health Improvement

The Institute Health Improvement (IHI) views a culture of safety whereby the healthcare providers are not merely encouraged to work towards change, but are also required to take action when needed. Like the Joint Commission, the IHI iterates the importance of having visible leadership commitment to change where they empower their teams to share and report safety concerns or issues. The IHI constantly advises other healthcare organisations' bodies on assessing their safety culture to determine the need for action in those dimensions potentially posing safety risks (IHI, official website).

2.2.6.4 National Patient Safety Foundation

The National Patient Safety Foundation (NPSF) is another regulating body with the vision to create a healthcare world where patients and those who care for them are free from harm. The NPSF is a not-for-profit organisation and the central voice for patient safety since the late nineties in the United Kingdom. They advance workforce safety and disseminate strategies to avoid patient harm through collaboration with clinicians and patients with regard to safety in clinical settings (NPSF, 2017).

To enable the researcher to conduct and understand the dynamics in sustaining patient safety practices, valid and reliable tools are required. The next section illustrates the tools.

2.2.7 Safety culture tools

There are a number of measures available within health care that examine the patient safety culture of an organisation. It has been argued in naval and commercial aviation

that the administration of safety culture surveys is a useful component in efforts to improve safety culture (Al-Lawati, et al. 2018:7).

Safety culture in the healthcare setting is typically assessed through quantitative questionnaires based on any number of, and/or a combination of, the safety culture dimensions discussed earlier (Al-Lawati, et al. 2018:7; AHRQ, 2014; Law, et al. 2010: 111; Halligan & Zecevic, 2011:8).

Four tools were frequently cited in the literature in 'Western' based organisations with differences in the dimensions that they measure: The Hospital Health Care Research Quality (AHRQ) Hospital Survey on Patient Safety Culture (HSOPSC), the Safety Attitude Questionnaire (SAQ); and the Manchester Patient Safety Framework (MaPSaF) (Al-Lawati, et al. 2018:7; El-Jardali, et al. 2011:1; Tourani, Hassani, Ayoubian, Habibi & Zaboli, 2014:144; Adams-Pizzarro, Walker, Robinson, Kelly & Toth, 2008:2; Farup, 2015:2; Moeidh, Shah & Al-Matari, 2015:271). The following three surveys are briefly discussed to illustrate their value in this study.

2.2.7.1 Hospital Survey on Patient Safety Culture (HSOPSC)

The Agency for Health Care Research and Quality (AHRQ) developed the Hospital Survey on Patient Safety Culture (HSOPSC) in 2004 to allow hospitals to measure safety within their setting. Nurses were asked to rate dimensions such as teamwork and communication in terms of errors by choosing the appropriate number on the Likert Scale. However, surveys or questionnaires are not the only tools for hospitals to measure their safety culture; many organisations use audits to evaluate the performance of their teams (Al-Lawati, et al. 2018:7; Halligan & Zecevic, 2011:3; Ito, Seto, Fujita, Hasegawa & Hasegawa, 2011:1; Fleming, 2005:16).

The general purpose of safety culture measures is to assess those characteristics of the organisation which are flexible, so that interventions can be introduced within those areas where gaps were identified (Al-Lawati, et al. 2018:7; Oña, 2012:18; El-Jardali, et al. 2011:2; Halligan & Zecevic, 2011:3).

2.2.7.2 Safety Attitude Questionnaire (SAQ)

The Safety Attitude Questionnaire was derived from a questionnaire on attitudes in commercial aviation, which was then adapted for use in intensive care unit management (Law, 2011:31). According to Law (2011:32), a six-factor analysis was conducted on the SAQ to ensure validity before introducing it in all care settings. Some dimensions from this tool were used to develop the tool for this study.

2.2.7.3 Manchester Patient Safety Framework (MaPSaF)

The MaPSaF is another safety culture model originally developed for primary care centres in the United Kingdom, and later adapted for tertiary care organisations (Müller, et al. 2014:36; Al-Lawati, et al. 2018:7). The content of the MaPSaF was refined in developmental work undertaken in collaboration with the National Patient Safety Agency, involving a series of workshops and expert reviews with healthcare professionals from acute care settings (Law, 2011: 33). Based on this, the Manchester Patient Safety Culture Assessment Tool (MaPSCAT) was developed to measure the safety culture in an organisation.

Although many regulating bodies promote these tools, care needs to be taken globally to determine the psychometric rigour in healthcare safety culture measurements (Law, 2011:29; Halligan & Zecevic, 2011:3; Al-Lawati, et al. 2018:7).

The HSOPSC and SAQ, and surveys from AHRQ were extensively used to assess safety culture, and limited modifications were made to the tools. However, there is a lack of evidence about the validity of the factor structure of the versions of these instruments, which may limit their use and usefulness in all settings (Hedsköld, Pukk-Härenstam, Berg, Lindh, Soop, Øvretveit & Sachs, 2013:332; Law, 2011:39). Careful testing of the HSOPSC and other safety culture instruments should therefore be conducted before they are widely used or before drawing conclusions about their meaning in countries or contexts other than those for which they were developed (Hedsköld, et al. 2013:332).

The discussion on safety culture models, frameworks, dimensions and tools provided an understanding of how each of these elements can determine how a team is performing in clinical practice. It also indicates the system's issues and behavioural choices of the nurses working in those specific settings.

2.2.8 Safety culture practices

Creating a strong safety culture is a critical yet challenging task for nurse managers, often involving complex nursing care procedures and activities (Singer & Tucker, [Sa]: 2; van Noord, et al. 2010:163; Joint Commission, Web Access 2015:5; Mark, 2013:5). Extensive research over the last century as to why accidents happen provided insight for trending accidents in healthcare and its consequences on patient safety (Khan, Rathnayaka & Ahmed, 2014:2; Reason, 2000:5). Studies done in Australia revealed that 90% of work-related accidents in the eighties resulted from human behaviour. It is suggested that nurse managers need to understand how, why and when human factors become involved in order to enhance their abilities in preventing accidents (Besnard, et al. 2018:36; Feyer & Williamson, 2011:2).

These studies provided informative data as to why accidents occurred in healthcare. The outcome of these studies indicated the unpredictable behaviour of accidents and the consequences thereof on patient safety if proactive measures are not taken. Therefore, it reinforces the need for efficient and effective process safety and risk management strategies. Healthcare organisations should implement preventative and mitigating safety measures, thereby reducing both the likelihood and severity of healthcare accidents (Khan, et al. 2014:2; Besnard, et al. 2018:36).

2.2.8.1 Understanding the causes of accident in health care

The first accident causation models were established by Heinrich in the 1930s and are referred to as the Iceberg Principle and Domino Theory. Reason (2000:2) introduced the multi-causality model, whereby he described an accident as the contact that occurs between latent and active failures. According to Feyer and Williamson (2011:2), causality models placed very limited emphasis on human behaviour and more emphasis on system defects. Therefore, in order to understand how to practice and

sustain safety culture, it is important to review accident modelling and the organisation's inherent safety management plans (Hales & Chakravorty, 2016:2; Besnard, et al. 2018:36). It requires nurse managers to be proactively involved in safety plans to avoid such interactions between failures in the system (de Waard, Axelsson, Berglund, Peters & Weikert, 2010:187; Morello, Lowthian, Barker, McGinnes, Dunt & Brand, 2012:10).

Reason (2000:3) developed the Swiss Cheese Model in 1991, which demonstrated how one small incident could lead to serious events if appropriate defences are not put in place (Hales & Chakravorty, 2016:2; Boysen, 2013:402). On reviewing Reason's Swiss Cheese diagram as illustrated in Figure 2.3, it is clear that if systems do not have protective measures in place to prevent unsafe acts from reaching the patient, it will cause harm. The nurse manager needs to be aware of those triggers in the system posing a potential risk to patients and must put the required defences in place to prevent an adverse event.

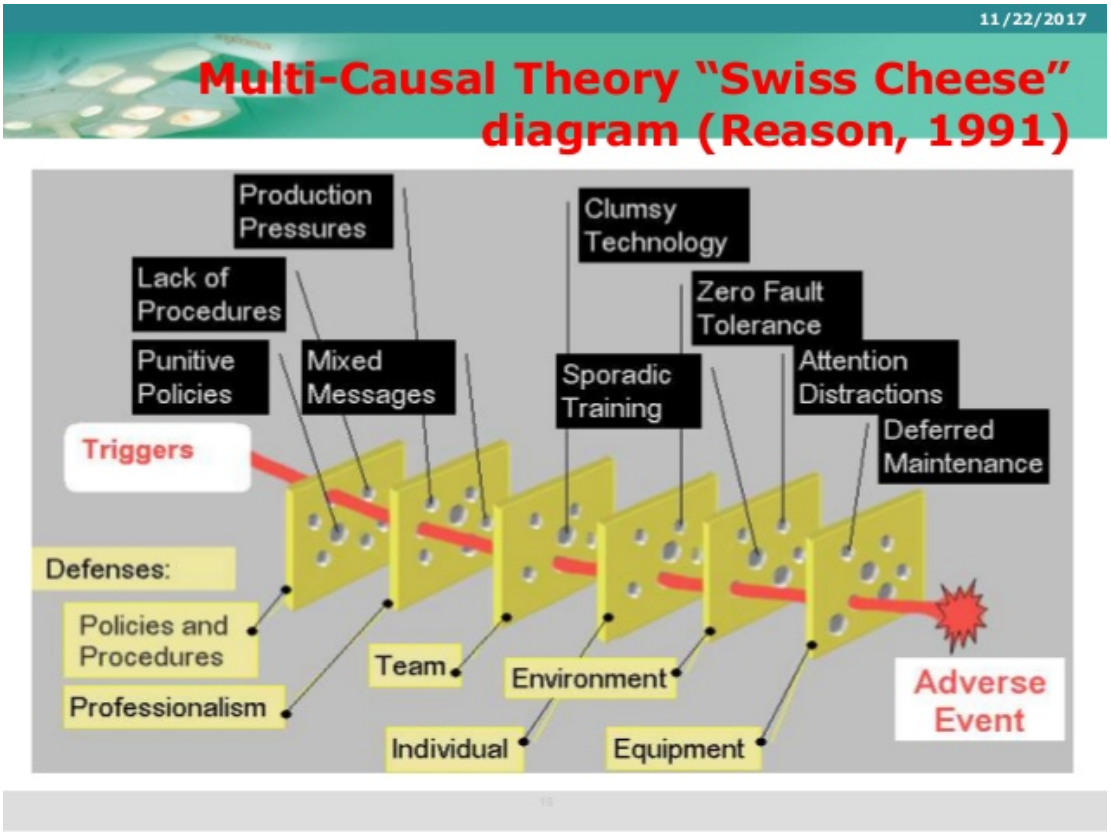


Figure 2.3: Multicausal Theory "Swiss Cheese" Diagram (Boysen, 2013)

The Business Dictionary describes a system as *"*An organized, purposeful structure that consists of interrelated and interdependent elements (components, entities, factors, members, parts etc.). These elements continually influence one another (directly or indirectly) to maintain their activity and the existence of the system, in order to achieve the goal of the system" (Health Research & Education Update, 2017:13). A process can be defined as "a sequence of interdependent and linked procedures which, at every stage, consume one or more resources (employee time, energy, machines, money) to convert inputs (data, material, parts, etc.) into outputs. These outputs then serve as inputs for the next stage until a known goal or end result is reached" (Health Research & Education Update, 2017:13).

The majority of accidents in health care result from technical failures, human errors or organisational problems which can be predicted if appropriate accident models are used (Health Research & Education Update, 2017:5; Besnard, et al. 2014:13; Feyer & Williamson, 2011:1). It requires the nurse manager to understand these accident safety concepts and to have a proactive approach in identifying system defects that could affect patient safety.

2.2.8.2 The roles of the nurse manager and nurses in accident prevention

The nurse manager needs to be aware that errors lead to immediate incidents, lapses or near-misses as a result of the active and latent factors within the complex healthcare system (Besnard, et al. 2014:27; Kaya, Ward & Clarkson, 2018:2). As these errors are often hidden in the healthcare facility, it can potentially trigger what is then considered an adverse event that affects patient care and outcome if it is not proactively addressed (Hales & Chakravorty, 2016:2; Besnard, et al. 2014:27).

In health care, factors such as policies, the design of facilities and the flow of processes and resource allocation create the blunt end of errors and represent the majority of errors that occur in the patient care environment (Feyer & Williamson, 2011:2; Hales & Chakravorty, 2016:2; Besnard, et al. 2014:13; Boysen, 2013:402). Nurses' unsafe acts, such as poor HH compliance, not assessing patients for falls and skin integrity risk, or incomplete admission assessments, are considered the sharp end of errors since they have a direct impact patient care and could affect patient

outcomes (Besnard, et al. 2014:27; Boysen, 2013:402; Hales & Chakravorty, 2016:2; Feyer & Williamson, 2011: 2). It therefore requires commitment from the nurse manager and nurses to constantly assess and scan system factors that may potentially harm patients.

2.2.8.3 Preventing and managing risks

A number of hazards and risks can be reduced if the root causes of incidents are targeted (Besnard, et al. 2014:27; Boysen, 2013:404; Haifa, McGrath & Rollins, 2011:123). In doing so, the relationship between the active factors – when an error has occurred – could be traced to the latent defects in the healthcare systems (Hughes, 2008:20; Haifa, et al. 2011:123).

The main objective of an organisation's safety management plans should be to define the methods and or processes for the identification, management and minimisation of inherent safety risks associated with its healthcare operations. The success of high-reliability organisations relies on embedding their safety values into their safety management plans (Kaya, et al. 2018:2; Jin, Dixon, Selvaraj, Ye, Lee, Schmidt, Espinosa & Ren, 2013:61; Vu & De Clari, 2014:57; Hignett, Jones, Miller, Wolf, Modi, Shahzad, Buckle, Banerjee & Catchpole, 2015:2). Key characteristics of traditional safety management systems are that they focus on failures instead of an in-depth understanding of daily clinical practice and problems encountered by nurses (Sujan, Spurgeon & Cooke, 2015:2). Leadership behaviour plays a vital role in risk management to ensure that safety management plans are actively pursued and practised. As the leader of a team, a nurse manager is therefore required to disseminate risk strategies to keep the team informed and to ensure that the defence measures required to prevent patient harm are implemented in practice. To ensure that the nurse manager understands risk in the care environment, clinical risk management must be reviewed.

Clinical risk management can be defined as all the structures, processes, instruments and activities that enable the nurse manager to identify, analyse, contain and manage risks while providing clinical treatment and patient care (Briner, Kessler, Pfeiffer, Webner & Manser, 2010:1; Besnard, et al. 2014:36). Once the nurse manager

understands concepts of clinical risk management, it will provide them with the tools to identify clinical practice systems in the care environment that could affect patient care.

There is a strong relationship between safety system features and safety outcomes. The positive safety outcomes could be achieved from the successful implementation of safety risk management activities (Besnard, et al. 2014:27; Drückers, Faber, Cruijsberg, Groll, Schoonhoven & Wensing, 2009:5). Therefore, managing risks is a vital component of good patient care governance and should be embedded in unit practices. As part of EHSMS, in the UAE nurse managers are required to ensure that the following elements are addressed in their individual nursing departments:

(1) Risk strategy: A risk strategy should be in place to manage threats, typically to include avoiding the threat, reducing the negative effect or probability of the threat, and transferring all or part of the threat to another party. Clearly illustrating the responsibility and accountability required from the nurse manager and nurses is vital in implementing a risk strategy (Briner, et al. 2010:1).

(2) Risk identification: The nurse manager must balance how care is provided in managing daily clinical operations and continuously evaluate clinical risk and demands brought about by system and process issues (O'Keefe, Tuckey & Naweed, 2015:111). Involving the direct care nurses in risk assessments of patient care activities they performed is vital in risk identification and mitigation (O'Keefe, et al. 2015:112). Many healthcare organisations have anonymous incident reporting systems whereby incidents and near-misses can be reported. Healthcare organisations need to use these incident reporting systems to trend incidents reported to identify potential system issues and human behaviours that could affect patient safety.

(3) Risk analysis: Based on the risk identification the nurse manager and team need to prioritise the identified risks to ensure they focus on the most serious hazards first. The data obtained from trending incidents should provide the nurse manager with valuable insights about weaknesses in safety system defences that can cause harmful situations in the future (Mark, 2013:4). Once data are analysed the nurse manager needs to share this with the nurses to ensure that they understand the risk and will

collectively work on mitigating issues. Therefore, it is imperative for the nurse manager to use the concepts of reliability systems required for appropriate redundancy to introduce safety nets in protecting patients from errors as the fundamental foundation in creating a culture of safety (Mark, 2013:5).

(4) Risk evaluation: In order to ensure that mitigating solutions to risks are working, nurse managers should evaluate them frequently through audits and the use of incident reporting as a means to track and trend issues.

(5) Risk treatment: Is the mitigating solutions that are introduced to avoid harm to patients, and reduce risks from occurring (UAE EHSMS, 2012; Joint Commission, Web Access, 2014; Briner, et al. 2010:1). Healthcare organisations with a safety culture that is open with nurses when an incident occurs, learn from their mistakes. Rather than blaming nurses, it is vital to take a look at what went wrong in the systems (Alam, 2016:4). It is also important for the nurse manager to act on system issues identified by nurses and to rectify mistakes and improve processes (Moeidh, et al. 2015:267). The literature illustrates that the reporting of incidences or events among nurses is low due to the low perceptions of safety culture behaviours, and due to fear of repercussions and the blame culture that still exists in health care (Mark, 2013:4). Nurse managers' clinical risk management and prevention strategies should be supported by providing safety training, and an understanding of safety systems and its impacts on patient safety.

2.2.8.4 Team training in clinical risk management

The nurse manager directing and coaching the team on environmental and patient safety risk issues empowers the team to make this a 'way of life' in all the nursing units (Golda, 2013:35; Desai, Caldwell & Herring, 2011:33). The nurse manager should have regular training and feedback mechanisms in place to ensure that the nursing team has the required safety knowledge to manage and prevent risks. The team also needs training on the basics of process improvement, quality methodology and risk assessment. This information is essential components for nurses' alignment to safety values and safety culture sustainment through their understanding of the basics of quality and their role in identifying risks in the systems they function in daily (Golda,

2013:36; Desai, et al. 2011:32; Mascherek & Schwappach, 2017:2; Hignett, et al. 2015:3).

2.2.8.5 Measuring safety risks

There is a definite association between safety culture and patient safety outcomes in healthcare facilities (Groves, 2014:71). The nurse manager should therefore ensure that a process is in place to continuously assess nursing performance indicators of care delivery, for example, NAA, HH, HAPU, and falls and restraint use. These indicators will determine the baseline and benchmark data to determine the performance of each unit and between similar healthcare facilities (NDNQI, 2014). To facilitate an environment of transparency and to engage the nursing team in safety, an appropriate method is required to regularly share performance data.

2.2.8.6 Current innovative safety culture practices in use

Since safety culture is such an important component for patient safety, many healthcare organisations have research opportunities to improve safety culture practices. Many of these safety initiatives could assist healthcare organisations in practising towards a culture of safety and are recommended by IHI for use.

Leadership Walk-A-Rounds is a structured approach by senior executives conducting patient safety rounds with a purpose (Besnard, et al. 2018:27). During the patient safety rounds, the executives focus on key elements to determine which system issues providers are struggling with and to provide an opportunity for staff recognition.

Appointing safety champions in each clinical unit is crucial to engage direct care providers in driving performance improvement activities. Reviews of safety literature indicate many other initiatives, such as patient safety officers, and developing adverse event response teams (IHI, Web Access).

Campione and Famularo (2018:24) state that the hospital work area/unit requires: (1) communication openness, (2) feedback and communication about errors, (3) frequency of events reported, (4) non-punitive responses to errors, (5) organisational

learning – continuous improvement, (6) overall perceptions of patient safety, (7) staffing, (8) supervisor/manager expectations and actions promoting patient safety, and (9) teamwork within units. The hospital-level composites are (1) handoffs and transitions, (2) teamwork across units, and (3) management support for patient safety. (more information about the survey items and the composites can be found on AHRQ's website).

A review of the literature by the North Carolina Board of Nursing (2015:6-12) and Sevilla-Zeigen (2016:8) illustrate the impact of healthy work environments on the culture of safety. The nurse manager should determine how the hospital climate factors impact on safety culture. An in-depth exploration of safety culture should be done to understand what is required from nurse managers to employ 'just culture' practices and to manage nurses' behaviours affecting patient safety.

Elements in the nurses' work environments that could potentially affect them in reporting system defects, as well as the reasons why nurses make inappropriate behavioural choices that affect patient safety, need to be described.

2.3 HOSPITAL CLIMATE (POSITIVE WORK ENVIRONMENT)

The hospital climate theory was first introduced by Lewin in the 1950s (Dzulkili & Noor, 2012:3). Many authors describe the importance of a healthy work environment as complex and multidimensional, comprising numerous components and relationships among the components (Ostrof, Kinicki & Muhammad, 2013:651; Sevilla-Zeigen, 2016:8; Clarke, 2010:554). The hospital climate can be described as the "perceived and recurring patterns of behaviour, attitudes and feelings that characterise life in the organization" (Sevilla-Zeigen, 2016:8). Since nurses spend the majority of their time in the work environment, facilitating a safe hospital climate is essential for the safety of the patient and the staff.

Some healthcare organisations define the hospital climate as the nurses' perceptions of the formal and informal hospital policy, practices, procedures and routine practices (Ostrof, et al. 2013: 651). According to Sevilla-Zeigen (2016:6) and Clarke (2010: 554),

the “climate exerts influence on psychological and organizational processes and therefore affects the individual and organizational performances and well-being”.

As nurses are working in a diverse environmental context, the nurse manager should determine how the climate factors are perceived by the nurses with regard to issues such as teamwork, productivity and scheduling, to list only a few. This information may provide the nurse manager with supporting information to establish how the climate factors affect the safety culture.

The hospital climate describes the individual behaviours within the nurses’ practice environment, and influences whether the nurses feel personally safe, listened to, valued, and treated with respect and fairness by the nurse manager (North Carolina Nursing Board, 2015:6-12).

Each of these different definitions provides a unique contribution to a positive hospital climate based on the different elements, and therefore should be used concurrently in practice.

2.3.1 Hospital climate evaluation tools

The researcher reviewed the literature to determine the tools that could be used to study the environmental and team factors influencing an individual nurse to practice safety culture in the clinical setting.

Healthcare organisations can obtain information about organisations’ work environments by assessing the individual units’ ‘climate factors’ (Winskow, Albrecht & de Petro, 2010:3). Several reviews recommend survey instruments for assessing the climate factors that healthcare organisations use to facilitate innovation, creativity and the retention of nurses (Sevilla-Zeigen, 2016:8).

The literature on change and hospital climates revealed that for organisations to manage change effectively, the nurse manager should understand the contextual factors that affect nurses’ attitudes in terms of safety (Sevilla-Zeigen, 2016:8; North Carolina Nursing Board, 2015:6-12; Winskow, et al. 2010:3). Numerous studies

conducted by Stringer and Ekvall (in Winskow, et al. 2010:3) found some essential components that nurse managers are required to consider in managing the hospital climate for the nurses. These elements clearly illustrate the reasons for nurses perceiving their work environment either as safe or unsafe. The researcher briefly outlines the dimensions determined by Stringer and Ekvall in Table 2.2 to illustrate what they classify as elements affecting the hospital climate for the nurses.

Table 2.2: Stringer and Ekvall Hospital Climate Dimensions

Stringer, 1968 (McLaughlin, 2006:30; Holloway, 2012:19; Dzulkifly & Noor, 2012: 4)	**Ekvall, 1976** (Iqbal, 2011:4)
Structure can be described as the feeling nurses have about the constraints in the group: how many rules, regulations and procedures there are; an emphasis on 'red tape' and going through channels, or a loose and informal atmosphere.	**Challenge** can be described as the degree to which nurses are involved in the organisation's daily operations and long-term goals. In a high-challenge climate, people are intrinsically motivated to make contributions and to find joy and meaning in their work and thus invest significant energy.
Warmth is the feeling of general good camaraderie that prevails in the nursing team atmosphere; the emphasis on being well-liked; the prevalence of friendly and informal social groups.	**Debate Encounters** encompass exchanges or clashes among viewpoints, ideas, and differing experiences and knowledge. In debating organisations, many voices are heard and nurses are keen about putting their ideas forward. Where debates are missing, teams follow authoritarian patterns without questioning. Debate focuses on issues and ideas.
Support is provided by the nurse manager to ensure that the nursing environment is safe and teamwork is encouraged.	**Trust and Openness:** The emotional safety in relationships. When there is a strong level of trust, everyone in the organisation dares to present ideas and opinions. Initiatives can be taken without fear of reprisals and ridicule in case of failure. Communication is open and straightforward.

Stringer, 1968 (McLaughlin, 2006:30; Holloway, 2012:19; Dzulkifly & Noor, 2012: 4)	**Ekvall, 1976** (Iqbal, 2011:4)
Standards – The emphasis the nurse manager places on high performance standards and the amount of pressure exerted on teams to improve performance.	**Idea Support** – The way new ideas are treated. In the supportive climate, ideas and suggestions are received in an attentive and kind way by nurse managers and colleagues. Teams listen to each other and encourage initiatives. Possibilities are created for trying out new ideas. The atmosphere is constructive and positive.
Risk is the sense of daring and challenge in the job and in the organisation. Is there an emphasis on taking calculated risks; or is playing it safe the best way to operate?	**Risk-taking** – The tolerance of uncertainty and ambiguity exposed in the workplace. In the high risk-taking climate, bold new initiatives can be taken even when the outcomes are unknown. Nurses feel as though they can 'take a gamble' on some of their ideas. Nurses will often 'go out on a limb' to put ideas forward.
Reward Orientation refers to the feeling of being rewarded for a job well done; emphasising positive rewards rather than punishments; the perceived fairness of the pay and promotion policies.	**Idea Time** – The number of time nurses can (and do) use for elaborating new ideas. In the high idea time situation, the possibilities exist to discuss and test impulses and fresh suggestions that are not planned or included in the task.
Conflict is the feeling that nurse managers and other workers would prefer to hear different opinions; the emphasis being placed on getting problems out in the open, rather than smoothing them over or ignoring them.	**Conflict (negatively correlated)** – The presence of personal, interpersonal or emotional tensions in the organisation (in contrast to idea tensions in the debate dimension). When a level of conflict is high, groups and individuals dislike each other and the climate can be characterised as 'warfare'. Plots and traps are common, gossip and back-stabbing occur.
Identity in one's work is the feeling that you belong to the healthcare facility and you are a valuable member of a working team; importance is placed on this kind of spirit.	**Playfulness and Humour** – The spontaneity and ease that are displayed. A relaxed atmosphere with jokes and laughter characterises the organisation, which is high in this dimension.

Stringer, 1968 (McLaughlin, 2006:30; Holloway, 2012:19; Dzulkifly & Noor, 2012: 4)	**Ekvall, 1976** (Iqbal, 2011:4)
Responsibility is the feeling of being your own boss; not having to double-check all your decisions; when you have a job to do, knowing that it is your job.	**Freedom** The independence of behaviour exerted by the people in an organisation. In a climate with much freedom, people are given autonomy to define much of their own work. People are able to exercise discretion in their day-to-day activities, and to take the initiative to acquire and share information.
	Dynamism and Liveliness The eventfulness of the life of the organisation. A highly dynamic situation is when new things occur often, and alternations between ways of thinking about and handling issues occur. The atmosphere is lively and full of positive energy; 'full speed', 'go'.

The researcher highlighted these points in order to illustrate the similarities and opposite opinions with regard to the dimensions to ensure a positive work climate (Dzulkifly & Noor, 2012:4). This exploration of the dimensions for the hospital climate provides the foundation for the hospital climate tools to be used in the clinical setting.

2.3.2 Climate tools

A number of climate tools can be utilised to determine how positively the nursing team perceives the work environment (Warshawsky & Havens, 2011:4; Alsalam, et al. 2018:4-7). Since so many climate tools are available, researchers should understand what the tools are about and how they can be applied in practice.

2.3.2.1 The Creative Climate Questionnaire (CCQ)

The creative climate questionnaire tool was designed to measure organisational conditions that may facilitate or inhibit creativity and innovation among nurses. Many of the reviews suggest that there is some uncertainty about the psychometric quality of this instrument; therefore, researchers need to take appropriate action to ensure

the reliability and validity of the tools (Blegen, Pepper & Rosse, [Sa]:431; Morello, et al. 2012:2; Alsalam, et al. 2018:4-7).

2.3.2.2 The Team Climate Inventory (TCI)

The TCI is a four-factor questionnaire with 38 items using a ten-point response scale that reflects a clear measure of the climate within and among teams (Blegen, et al. [Sa]:431; Morello, et al. 2012:2; Alsalam, et al. 2018:4-7). Several studies indicate that the psychometric quality of the TCI is acceptable for use across different clinical settings (Alsalam, et al. 2018:4-7).

2.3.2.3 Litwin and Stringer Organisational Climate Questionnaire (LSOCQ)

The LSOCQ was designed to measure nine characteristics that reflect the degree of organisational climate factors' emphasis in the dimensions of the tool (Holloway, 2012:14) Forte's ([Sa]:65) study identified that an alpha coefficient of 0.70 was observed for the LSOCQ and test-retest reliability ranged from 0.85 to 0.99 across the nine subscales. These findings were statistically significant (Forte, [Sa]:65).

2.3.2.4 Situational Outlook Questionnaire (SOQ)

This tool was developed to measure the climate factors that support change and innovation, to provide the foundation for a range of referring and other interventions required to assist the nurse managers in managing and leading their teams (Forte, [Sa]:65; Isaksen & Ekvall, 2013:4). Only a few reviews are available on the reported psychometrics of the subscales of the SOQ, posing questions about the use of the instrument in all work environments.

2.3.2.5 National Data Nursing Quality Indicator (NDNQI) Nurse Surveys

The NDNQI has various surveys from which hospitals may choose based on their needs. The NDNQI also allows hospitals to benchmark their respective data with that of hospitals of a similar type to review their performances over time. The tools in use by NDNQI are 'the practice enjoyment scale' and 'job satisfaction surveys' (NDNQI,

Web Access). The researcher discussed NDNQI tools since the majority of hospitals included in this study benchmark their performance against NDNQI as well.

Additional tools were developed over time by the Gallup Group. They measure the essential domains required for healthcare organisations to attract and retain employees (Beck & Harter, 2014:1).

2.3.3 Factors affecting positive hospital climate

Studies conducted over the last decade on nurse staffing and the resulting findings convinced the researcher to explore the links between nurses' practice environment and positive patient outcomes (Morello, et al. 2012:4). Hospital climate literature state that positive work environments improve nurse retention and the quality of care for patients (Twigg & McCullough, 2013:86). Identifying factors that affect happiness in the workplace is important for healthcare organisations. In fact, it is a necessity as it affects not only productivity but patient safety as well (Phattara, Wesarat, Sharief & Majid, 2014:78).

Environmental factors in the nurses' work environment are beneficial to creativity and a positive work climate (Isaksen & Ekval, 2013:4). Nurses who perceive the workplace climate as challenging, involving and trusting, will feel motivated and committed to making contributions in safety practices (Isaksen & Ekval, 2013:4). However, if nurses perceive the environment as uncertain, with low tolerance of ambiguity, less freedom and ideal time for work, they become hesitant to take risks, and are thus less motivated and committed to making safety practice contributions.

2.3.3.1 Teamwork and hospital climate

In healthcare, teamwork among the multidisciplinary team is essential to coordinate and communicate patient care effectively and efficiently, and to facilitate a positive practice environment (Budin, Gennaro, O'Connor & Contratti, 2014:363; AHRQ TeamSTEPPS, 2014). It is these fundamental factors that drive individual effectiveness, which also drive the effectiveness of clinical teams (Purdy, 2011:4). Healthcare facilities with a strong teamwork culture were associated with more

successes in implementing quality improvement programmes and, in turn, had better patient outcomes (Purdy, 2011:15).

The key to teamwork is empowering direct care providers. Numerous studies conducted on nurses' empowerment over the last decade found improvement among nurses' effectiveness and efficiency in clinical settings. These empowering conditions ultimately lead to the team's effectiveness; therefore, greater team effort and shared responsibilities will be observed (Purdy, 2011:17).

2.3.3.2 Empowering nurses and hospital climate

Data from AHRQ surveys conducted in the researcher's organisation indicate that 47% of staff feel free to question nurse managers (Stevens, 2011:4). This finding requires exploration as to why nearly half of the nurses feel less comfortable to question authority. It is also important to determine whether this is a potential trigger for nurses to act recklessly (Opperman, 2015:11).

It is not clear from the literature what the impact of empowering nurses on overall team behaviour may be. High job challenge and autonomy can enhance nurses' perceptions that nurse management has confidence in them and values their contribution, leading to positive work attitudes (Opperman, 2015:11). As discussed in safety culture (see Section 2.2.4.4), leadership is essential for safe care practice by nurses and has an impact on the hospital climate.

2.3.3.3 Leadership and hospital climate

Nurse managers need to facilitate empowering conditions since 'leadership' is a crucial factor affecting hospital climates that impact on patient safety (Holloway, 2012:9). The characteristics required of a nurse manager as described in the safety literature, are explained in terms of transformational and authentic leadership (Lingard, et al. 2014:56; Luiz, Simöes, Barichello & Barbosa, 2015:881). A study by Bahraini, Anvari and Rad (2015:20) illustrates a negative and significant relation between leadership style and unsafe acts from employees. This was especially evident among

the laissez-faire management style with nurse managers failing to intervene and make appropriate decisions when emergency situations arose (Bahraini, et al. 2015:20).

Appropriate development and opportunities should be in place to address leadership skills and ensure leadership effectiveness. The nurse manager needs to express safety values and reinforce these values with consistent behaviour in practice (Lingard, et al. 2014:56; Sumwalt, 2012:12).

Managerial behaviour has been demonstrated as a key driver of positive practice climates that, in turn, drive positive safety performance (Lingard, et al. 2014:56). Evidence shows that nurse managers have a direct impact on the perceived climate based on their commitment, resource provision, and recognition of the nurses' achievements (McFadden, Stock & Gowen, 2014:2).

2.3.3.4 Resource allocation and work schedules

Lack of nursing resources and the negative attitudes among nurses may lead to reduced patient safety outcomes (Naharang, Morgeson & Hoffman, 2011:74). Nurses who are overwhelmed and cannot cope with the workload are unable to care for their patients' safety (Naharang, et al. 2011:74; Ead, 2014:1). Every new patient overextends the workload of nurses and immensely increases the risk for patient harm (El-Melegy, et al. 2016:96). Lack of sufficient nursing resources often requires nurses to work overtime to cover patient care areas. This increase in nurses' working hours often results in increased patient falls and pressure ulcers (Ead, 2014:1). Literature has found that 26.7% of hospital-associatedinfections could have been avoided if the nurse-patient staffing ratio was adequate.

Nurse managers who address climate factors such as personal and social issues among nurses and who have flexible work schedules that allow shift patterns in working hours to prevent fatigue, contribute to a transparent and open environment that nurses may perceive positively (Verbbakel, de Bont, Verheil, Wagner & Zwart, 2015:822; Lowe, 2008:43; Pronovost & Sexton, 2006:335). A review of the literature revealed that if nurses have a positive work environment and feel supported they are 30% less likely to be injured on duty.

2.3.3.5 Nurse education and hospital climate

As stated in safety culture (see Section 2.2.4.3) a learning culture for nurses is vital to enable nurses to practice safely; the nurse manager is required to offer orientation, regular in-service training programmes to sustain and update practices, and unit-specific competency training. In creating an environment of learning the nurse manager ensures that nurses are empowered to assess their own learning needs to be safe (De Oliveria, Do Prado, Kempfer, Martini, Caravaca-Morera & Bernard, 2014:1).

As nurse managers and nurses are from diverse cultures, it is necessary to understand how this can potentially impact patient safety, and culture-specific training is required (Jefreys, 2016:168). A review by the Australian Nursing and Midwifery Federation confirmed that there are significant relationships between nursing education levels, nurse staffing levels, nursing workload, nurses' work environment, and the skills blending of nurses providing care and patient outcomes (Paulson, 2018:44). In understanding nurses' education and training, the nurse manager anticipates how nurses from different cultures cope with their workload. New nurses are also supported through a preceptorship programme (Matua, Seshan, Savithri & Fronda, 2014:e532). If a nurse manager increases the workload of nurses and they are unable to cope, it contributes to an increase in unsafe care practices; nurses burn out and there is reduced job satisfaction among them (Blegen, et al. 2013:92; Ball, et al. 2013:12; Australian Nursing Federation, 2015:6).

2.3.3.6 Nurse shortages and hospital climate

Nurses must provide the majority of care in the healthcare environment, and the predicted shortages of nurses expected in the near future could potentially impact on the quality of patient care (Twigg & McCullough, 2013:85). Reviews on nurse shortages revealed that the effects of nursing environments with limited resources and increased responsibilities could cause nurses to suffer from burnout (Naharang, et al. 2011:653; Ead, 2014:2; Rice, Glass, Ogle & Parsian, 2014:156). Ensuring the availability of appropriate staffing numbers is an important managerial function since this aspect has direct consequences on patient safety. Also, as part of the human

resource management plan, healthcare leaders need to coordinate an effective retention and recruitment strategy.

2.3.3.7 Burnout of nurses and hospital climate

Burnout is another factor that affects the positive work environment for the nurse. Reviews by Welp, Meier and Manser (2014:5), Khamisa, Oldenburg, Pelzer and Iliac (2015:653) and Montgomery (2014:2), indicate that burnout is highly prevalent in healthcare workers, particularly in the critical care areas where significant emotional resources are spent in caring for patients and ensuring patient safety. The literature on nurse shortages revealed that approximately 10% to 78% of nurses suffer from burnout in certain countries. Based on these alarming statistics, healthcare organisations should facilitate a work climate that is conducive to employees' well-being (Khamisa, et al. 2015:653; Welp, et al. 2014:5; Siddiqi, 2013:10; Aini, 2014: 94). Therefore, it is essential for the nurse manager to establish a positive work environment in a time where global nurse shortages already exist (Welp, et al. 2014:5). Many strategies have been implemented over the years to address burnout. However, none of these were aimed at addressing the organisational factors that contribute to the occurrence of burnout (Montgomery, 2014:2). The literature reiterates that the physical and mental energy levels in nurses who are suffering from burnout are not sufficient to ensure safe behaviour that will prevent nurse injuries and ensure patient safety (Naharang, et al. 2011:73; Rice, et al. 2014:156).

2.3.3.8 Conflict management and hospital climate

Working with a diverse nursing team often leads to conflict and interpersonal issues among the team, especially if one group is more dominant than the other. The effects that these dominant groups have on other cultural groups, as well as how it affects safety, is evident from hospital data (Hospital Data, 2013). The nurse manager is required to facilitate clear expectations of safety practices and clarify the potential influence of those resisting change in their safety behaviours.

Some accreditation bodies have identified that bullying behaviour negatively affects patient safety; hence, they released an alert for nurse managers to address this

problem (Joint Commission Sentinel Event Alert 2017). Bullying behaviour can affect staff morale, which could ultimately affect patient safety. Policies thus need to be in place to protect nurses from bullying (Rice, et al. 2014:156).

Magnet accredited organisations have met standards specific to positive work environments, nurse performance and excellence, therefore ensuring improved patient outcome and nurse satisfaction (Kelly, McHugh & Aiken, 2011:2). Many reviews indicate strong predictors of the practice environment, job satisfaction and quality of care in Magnet Hospitals compared to non-Magnet Hospitals (Opperman, 2015:3; Siddiqi, 2013:11; Kelly, et al. 2011:2).

2.3.3.9 Performance measures as climate factor

As technology advances, so does the complexity of systems within health care. Therefore, various subjective safety indicators are required to determine safety performance (Welp, et al. 2014:4). A study by Zhu, Rodgers and Melia (2014:5) indicates that there is an increase in nurses' loss of confidence in the safety and quality of nursing care provided. Currently, there are no benchmarking among the hospitals in the UAE, and quality and services are benchmarked among international hospitals which do not have the same cultural background and issues (NDNQI Data, 2015). Healthcare facilities have to benchmark against other facilities in the same country in order to constantly work towards improved practices and processes for improved patient safety and patient outcomes.

The literature provided direction on what a hospital climate consists of, highlighted the tools, and described the factors affecting the hospital climate for nurses. The hospital climate influences patient safety; the following four nursing care aspects that could determine patient safety will be discussed under patient outcomes. These include NAA, HH, HAPU, and falls.

2.4 PATIENT SAFETY

Mitchel (2008:21) states that the Institute of Medicine defines patient safety as "prevention of harm to patients". This author highlights the importance of the systems

of care delivery, and indicates that nurses are required to: (1) prevent errors, (2) learn from errors that occur in the clinical setting, and (3) build on a culture of safety that involves the healthcare professional, the organisation and the patient (Mitchel, 2008: 21). The Agency for Health Care Research (AHRQ) elaborated on this definition of patient safety by further describing it as the freedom of accidental or preventable injuries produced by health care (Mitchel, 2008:21).

The definition of The National Quality Forum is that "patient safety is the prevention and mitigation of harm caused by errors of omission or commission that are associated with health care…" (National Quality Forum, 2010:3), and this is the definition of preference in this study's context. It allows for the importance of risk identification and the mitigation of systems and processes that could harm patients within a holistic approach to safety. Healthcare providers aim to ensure safety practices in order to decrease the risk of adverse events as a result of health care (Mitchel, 2008:21).

2.4.1 Factors affecting patient safety

Patient safety is often misunderstood since so many factors have an impact on it. Reviews conducted on the impact of safety cultures on patient safety and outcomes found that it remains an issue worldwide (Mullin, Chrostowski & Waszynski, 2011:2; Desai, et al. 2011:1).

Seven per cent (7%) of patients who are affected by adverse events such as poor documentation practices, falls, insufficient HH and HAPU, experienced lasting damage, 7% could potentially die, and approximately 50% of complications could have been prevented. These findings mandate that the nurse manager must understand how safety culture and climate factors impact on safe delivery of care in order to facilitate appropriate mitigating measures in the practice setting (Adibi, Khalesi, Jafari & Jeddian, 2012:2; Drückers et al. 2010:iv).

The adverse events resulting from the provision of care, ultimately lead to a decrease in patient safety and should be monitored by the nurse manager (Adibi, et al. 2012:2). There are many other contributing factors in the patient care environment that affect patient safety and require exploration in the clinical setting. To ensure healthcare

providers are aware of these adverse events that affect safety, they need to explore evidence-based resources and share this among healthcare professionals.

2.4.1.1 Communication in patient safety

Studies conducted by the Joint Commission on sentinel events reported that the major contributors to events like poor NAA, falls, HAPU and infections can be contributed to communication breakdown among the healthcare professionals (JCIA, Web Access, 2014). Communication, teamwork and negative safety culture are ranked the highest barriers to patient safety, with the lack of staffing coming second (AIG Report 2013:12; Amiri, Khademian & Nikandish, 2018:2). Communication is also essential in the continuity of care among the healthcare team.

The Joint Commission has identified communication barriers in the healthcare setting, and therefore introduced the International Patient Safety Goals. These goals state that the healthcare team should have a process for receiving verbal orders and critical results telephonically, and seamlessly hand over between healthcare teams (JCIA, IPSG 2, Web Access, 2014). Care between and among clinicians therefore needs to be communicated through structured handoff tools and appropriate documentation practices.

Healthcare executives are required to set clear expectations as to the manner in which healthcare information needs to be shared, and how hand-overs between clinicians need to occur (AIG Report 2013:12). To ensure that the healthcare team is aware of all the safety goals and standards to prevent safety barriers, the executive team needs to provide the clinicians with the relevant information.

2.4.1.2 Education in patient safety

Since adult learners learn and internalise valuable safety information differently, the nurse manager should take this into consideration when new nurses are recruited and employed. The nurse manager must use real-life experiences from incident report data and event information to prepare nurses to deliver safe care (De Oliveria, et al. 2014:1).

Many healthcare facilities' workforces are very diverse, a factor which could have an effect on patient safety due to differences in the education programmes and the curricula of the countries of origin. Data from nurse engagement surveys and safety culture in the researcher's hospital illustrated that staff perceive workload and teamwork to be a contributing factor in safety issues (Hospital Survey, 2014). As a high-performing facility, it therefore requires nurse managers to address factors such as recruiting appropriate nurses who will fit into the system, developing the skills required, organising a workload that is efficient, and using reward systems that would motivate staff to ensure patient safety (Aiyadh, Yusoff, Al Sharqi & Al Madari, 2014:116).

To ensure that nurses have the skills required to identify risks and manage these proactively, the nurse manager should provide education on quality and risk management strategies in order to align the team with the organisation's safety vision and safety plan (Heck, 2015:4).

2.4.1.3 Systems design in patient safety

In order to prevent patient harm, it is necessary to explore how systems and processes that are not addressed proactively could affect patient safety. There is a need for adequate infrastructure to support patient safety initiatives (Aiyadh, et al. 2014:115). The Joint Commission stipulates that healthcare facilities should constantly review systems through process reviews and root cause analysis to ensure that system issues affecting safety is addressed (JCIA, 5th Edition 2014).

Nurse managers in high-performing work environments should design care systems to enrich the nurses' commitment and skills that will result in increased performance and patient safety (Aiyadh, et al. 2014:115).

2.4.1.4 Responsibility of nurses in patient safety

Patients are nursed 24-hours a day; therefore, the nurse manager expects that patient safety should be the nurses' primary responsibility. Nurse managers are required to

monitor the behavioural choices of nurses and act through appropriate coaching and teaching to achieve the expected behaviour.

Nurses are the constant factor in care provision and should evaluate and detect harmful situations and processes that could affect patient safety (Welp, et al. 2014:5). There are many evidence-based tools (for example, the early warning score) to alert healthcare clinicians that a patient's condition is deteriorating; such tools should be used in practice (Carberry, Clements & Headley, 2014:13).

Policies and processes are also required to ensure that healthcare providers coordinate care among clinicians and different acuity units (JCIA, 5th Edition 2014).

2.4.1.5 Care coordination of healthcare providers in patient safety

Effective physician-nurse-patient care rounds and communication contribute to better care coordination, patient-centred care, patient safety, and it reduces overall healthcare costs (Linebarger, 2014:3; Barnes, 2014:4). Healthcare executives need to ensure that policies and processes are in place to facilitate coordinated care among clinicians and acuity units (JCIA, 5th Edition, 2014).

Unfortunately, data from the NDNQI survey results revealed that nurses perceive the nurse-physician relationship to be a barrier in care coordination and communication, despite the importance of teamwork to ensure improved collaboration and communication to enhance patient safety (Linebarger, 2014:3; Barnes, 2014: 4). It is therefore vital for healthcare executives to address this matter through set guidelines and standards.

2.4.1.6 Standards in patient safety

As different educational backgrounds are a challenge, nurse managers need to ensure the diverse nursing team conforms to a standardised care protocol to reduce variation; for the sake of patients' safety.

The Joint Commission standards mandate that healthcare facilities demonstrate which clinical guidelines and protocols they follow to ensure that clinicians are on par (JCIA, Web Access 2014). The policies and procedures should guide safety practices to standardise practices (JCIA, Web Access 2014; DoH-AD, Web Access, 2015). Nurses should plan nursing care with the aim to reduce risks and enhance patient safety.

2.4.1.7 Care planning by nursing in patient safety

Nurses work in a diverse environment, and lack of care planning has major implications for the patient. Healthcare facilities need to ensure that they have a model of care that facilitates an integrated therapeutic relationship theory into safety practices (van Been 2014:10). The therapeutic relationship between the nurse and patient is important, and involving patients in their own care is an essential step in patient safety (van Been, 2014:6).

As nursing care entails a multitude of activities happening at the same time, involving patients in best practice guidelines is essential for patient safety. Important guidelines should be provided on NAA documentation and HH practices, HAPU and fall risks. Teams' performance of these practices should be monitored and observed to determine the effect on patient care outcomes (van Been, 2014:10).

2.4.2 Patient outcomes

There is data available on how healthcare facilities monitor their performance and determine positive patient outcomes. Disease processes must be monitored and reviewed, as well as performance indicators with regard to care management on patient outcomes (De Oliveria, et al. 2014:4; JCIA, 2014). Length of stay and mortality ratio indicators should not be the only safety indicators; there is a need to focus on preventable, adverse events such as process indicators, i.e. falls, HAPU and healthcare-associated infections as primary indicators for patient safety (Welp, et al. 2014:4). This data can be daunting and by trending this data nurse managers can review what drives performance in their units, combined with what is required by regulating authorities and accreditation bodies (De Oliveria, et al. 2014:4; DoH-AD, Web Access, 2015; JCIA, 2014).

For the purpose of this study, patient harm from falls, healthcare-associated infections due to poor HH practices, documentation practices during the NAA within the 24-hour period, and HAPU are described as indicators that impact on patient safety.

2.4.2.1 Patient falls

Patient falls in hospitals are one of the two most common risk-related patient outcomes, and a key nursing-sensitive measure used to evaluate patient safety and quality (Purdy, 2011:19; NDNQI; Joint Commission Web Access). It is critical that patient falls be prevented at all cost (Degelau, Belz, Bungum, Flavin, Harper, Leys, Lundquist & Webb, 2012:4). The nurse manager needs to ensure that the nursing team proactively assess (screens) patients for fall risks according to a specific policy and by using a standardised tool.

Currie (2008:3) and Lake, Shang, Klaus and Dunton (2010:413) iterate that annually between 700,000 and 1,000,000 people fall in hospitals in the USA. The level of harm to the patient may vary, but the fall always has a negative impact on patient outcome and length of stay (Lake, et al. 2010:413). One-third of these falls could have been prevented and therefore a standard, coordinated approach to risk assessment should be implemented, and quality improvement methods should be used (Lake, et al. 2010:413). This approach should allow effective and targeted interventions to reduce falls, and monitor quality indicators (Lake, et al. 2010:413).

a) Assess patients for risk of fall

A combination of environmental hazards or situations may contribute to the patient being at risk for fall and injury. Most of these risk factors are modifiable and preventable. However, risks can go unnoticed if a risk assessment is not performed (Degelau, et al. 2012:19; Lunsford & Wilson, 2015:29-31). Healthcare organisations need to ensure they have policies, procedures and standardised tools available to allow for a comprehensive initial fall risk assessment of patients on admission and frequently thereafter (JCIA, 2014).

As all clinical data on a patient is electronic, the healthcare team can review the fall risk assessment conducted by the nurses. The healthcare team should ensure that individual and environmental factors that contribute to falls are reduced. Members of the healthcare team must share an understanding of what constitutes a fall, what contributes to falls, and understand their role in the prevention and reporting thereof (Guirguis-Blake, Michael, Perdue, Coppala & Beil, 2018:2; Rajagopalan, Litvan & Jung, 2017:2).

To ensure that the nursing team members are able to screen (assess) patients for fall risks, they need to be educated on the concepts, assistive devices and screening tools.

b) Nurse training on falls prevention

Educating the direct care providers – specifically, nurses who are responsible for caring of patients 24-hours a day – on fall prevention policies, is essential in order to reduce patients being harmed from a fall. Crucial in this training is the use of informative visual cues to illustrate nurses' performance on the prevention of falls.

The risk assessment is the first step in the fall prevention cycle (Phelan, Mahony, Voit & Stevens, 2015:3-7). The patient's mobility, medications, mental status and environmental hazards are key factors potentially affecting the patient's risk to fall (Jones, Blake, Hamblin, Petagna, Shuker & Merry, 2013:14; Phelan, et al. 2015:3-7). All these key factors must be integrated into the risk assessment tool in order to improve the nurses' strategy for risk assessment.

The hospital's safety culture needs to facilitate that not only the nurse but also the entire healthcare team is empowered to report risks when identified. Fall risk assessment is generally a nursing function, but the healthcare team should be aware of risk factors causing patients to fall (JCIA Web Access, 2014). An appropriate method to communicate these risks between healthcare team members should also be initiated. Adequate training on the use of fall risk assessment tools is essential to prevent patients from falling (Singh & Okeke, 2016:8; El-Enein, El-Ghany & Zaghloul, 2012:363).

However, the nurse is the primary caregiver and is responsible for ensuring that the patient care plan is managed and the environment is free of hazards. Of nurses practising 'hourly patient rounding' principles, 89% perceive that this Hourly Rounding on patients improved their care and reduced the patients' risks from falls (Goldsack, Bergey, Mascioli & Cunningham, 2015:28; Hospital Data, 2011).

The factors associated with a high risk for falls should be emphasised in nurses' training and form part of the risk assessment tool. The Morse Falls Risk Stratification visual cues need to be assigned to patient bedsides and hospital prevention policies should be introduced (i.e. bed rails up, educating patients and relatives to call for assistance, the call bell being within reach, fall risk band on the arm, etc.). Meal trays must be within easy reach so patients do not have to reach out (Emanuel, Combes, Hatlie, Karsh, Shalowitz, Shaw & Walton, 2008:627; Degelau, et al. 2012:19). Medication also has the potential to lead to an altered mental state, thus training nurses on the risks and side effects of medication is important. Visual cues serving as pocket guides can be introduced to remind the nurses of the medications that potentially affect patients' gaits (Degelau, et al. 2012:19; JCIA 5th Edition 2014).

Through Hourly Rounding on patients, the patient's bathroom needs can be addressed to prevent falls from occurring when patients try to do this on their own. At the same time the environment within the patient area can be reviewed to ensure there are no risks (Degelau, et al. 2012:19).

Mobilising a patient with functional needs requires the nurse to seek assistance to prevent patient falls. The education programme must emphasise teamwork to empower nurses to speak up and request this assistance.

Nurses also need training on safe lifting practices to prevent injuries to nurses themselves, but also to prevent and reduce patients' mobility issues, pain and HAPU (De Oliveria et al. 2014:3). This is an important component of the fall prevention strategy (De Oliveria, et al. 2014:4; Lake, et al. 2010:414).

Involving the other members of the healthcare team regarding the care plan for patients with mobility risks allows educational gaps among healthcare teams to be

identified with regard to falls prevention policies. Nurses need to provide training to the patient and relatives to enable them to engage in complying with hospitals' fall prevention policies (Singh & Okeke, 2016:8).

c) Patient involvement to reduce falls risk

The involvement of the patients and families are essential for fall prevention, and this has been documented in the literature. The use of educational leaflets on patients' admission ensures constant awareness among patients and families (Vonnes & Wolf, 2017:3; Tzeng & Yin, 2014:694).

In this prevention strategy, it is crucial to ensure that nurses assess the patient's need for assistive devices (walkers, wheelchairs, canes, etc.) and train patients in the use of these devices. During every round, nurses should stress to patients and family to request support before doing an activity alone (Vonnes & Wolf, 2017:4; Tzeng & Yin, 2014:695).

Ensuring that a standardised and structured tool is used will facilitate a shared mindset among the healthcare team so that everyone clearly understands the risks identified and what the care plan needs to be.

d) Falls risk tools

Many different tools have been listed to identify patients at risk of falling to trigger a broader functional assessment. The intrinsic, as well as the extrinsic factors in the patient and in the care environment, should also be identified.

Some of the tools used for fall prevention are the STRATIFY, Hendrich Falls Assessment, Falls Efficacy Scale, Dynamic Gait Index, Berg Balance Scale, and the Morse Scale (Kim, Kim, Choi, Kim, Park, Kim & Song, 2011:29; de Souza-Urbaentto, Pasa, Bittencout, Franz, Rosa & de Souza Magnago, 2016:2).

As the Morse Fall Scale (MFS) is the most popular tool in the UAE, the researcher will discuss it as a standardised tool. The **MFS** is a rapid and simple method for assessing

a patient's likelihood of falling. It consists of six variables that are easy to score, and it has been shown to have predictive validity and interrater reliability. The six variables of the MFS address:

- **History of falls** in the last 3 months. It is scored as 25 if the patient has fallen during the present hospital admission, or if there was an immediate history of physiological falls, such as from seizures or an impaired gait prior to admission. If the patient has not fallen, this is scored 0.
- **Medical diagnosis** is scored as 15 if more than one medical diagnosis is listed on the patient's chart; if not, score 0.
- **Ambulatory aids used** is scored as 0 if the patient walks without a walking aid (even if assisted by a nurse), uses a wheelchair, or is on bed rest and does not get out of bed at all. If the patient uses crutches, a cane, or a walker, this item scores 15; if the patient ambulates clutching onto the furniture for support or is unable to move on their own, the score will be 30.
- **Intravenous therapy** is scored as 20 if the patient has an intravenous apparatus or a heparin lock inserted; if not, the nurse will score this variable 0.
- **Gait** has three dimensions that require the nurse to identify what is appropriate for the patient and each one has a specific score associated with increased risk. A *normal* gait score will be 0, a *we*ak gait score will be 10, and with an *impaired* gait the score rises to 20.
- **Mental status**: When using this scale, mental status is measured by checking if the patient is able to ambulate, has the ability to respond to the nurse and if the patient is on medication that alters their mental state. The scoring for this dimension is based on an assessment between 0 to 15 (de Souza, et al. 2016:3).

The MFS is used widely in acute care settings, but it is not clear how it is used in outpatient clinic settings (de Souza, et al. 2016:3; Degelau, et al. 2012:19). To aid nurses in their workload and to coordinate care among healthcare teams, advances in technology and the introduction of electronic medical records, most facilities in the UAE have fall risk assessment tools built into their system to trigger an alert for nurses anywhere in the care continuum to initiate fall protocols and visual cues (Jones, et al. 2013:14; de Souza, et al. 2016:3).

Hospital policy and the Joint Commission have clear standards with regard to assessments and reassessments of a patient's risk of falls. Additionally, if the nurse identifies a change in the patient's condition, the fall risk needs to be assessed. As this is so important, it is critical to identify patients at risk and then to ensure that preventative measures are taken to prevent the patient from experiencing harm (Heck, 2015:42).

As a preventative measure monitoring how the nursing team is performing in terms of falls prevention, benchmarking against other hospitals is required. Although still below NDNQI measures for hospitals internationally, recent data (Hospital NDNQI, 2014) illustrate that the researcher's organisation's fall rate has increased over time and requires exploration as to the reasons for this occurrence.

As stipulated, this research focuses on four patient safety components, and a risk assessment to prevent HAPU is explored next.

2.4.2.2 Hospital-Acquired Pressure Ulcers (HAPU)

Fifteen point nine per cent (15.9%) of the types of harm to patients is due to pressure ulcers (Studert, Prittal, Mello, O'Malley & Sevenson, 2011:1244). Pressure ulcers are preventable and mostly related to poor quality of care and result in astronomical healthcare costs annually (Brem, Maggi, Nierman, Rolnitzky, Bell, Rennert, Golinko, Yanm, Lyderm & Vladeck, 2010:474; Dealey, Postnett & Walker, 2012:3).

Studies in Europe in 2013 revealed a HAPU prevalence rate of 18.1%, and in the United Kingdom this ranged between 6.7% and 42.7%, with the majority of ulcers acquired in intensive care units (Meddings, Reichert, Rogers, Hofer, McMahon & Grazier, 2015:2). HAPUs have major patient outcome concerns (Rondenelli, Zuniga, Kipnis, Kawar, Liu & Escobar, 2018:2; Lyder, Wong, Metersky, Curry, Kliman, Verzier & Hunt, 2012:1609), resulting in prolonged hospital stays with financial implications.

There is thus a need to understand what contributes to the occurrence of HAPU and how nurses can prevent it from happening.

a) Pressure ulcer knowledge

Nurses need to have theoretical knowledge regarding HAPU. They should understand the causes of pressure ulcers, for example, prolonged pressure on bony areas, friction, shear and moisture. Other important risk factors include changes in metabolic rate and oxygen demand that can compromise tissues; malnutrition and dehydration; a patient's mobility; as well as sensory and cognitive impairment (Brem, et al. 2010:474; Dealay, et al. 2012:3; Padula, Mishra, Makic & Sullivan, 2012:386; National Pressure Ulcer Advisory Panel (NPUAP), 2014:17; Norton, et al. 2017:17).

A pressure ulcer can develop quickly in a vulnerable patient, with negative consequences and outcomes for the patient (Emanuel, et al. 2008:599). Pressure ulcers are multifactorial, and most are considered avoidable if nurses have the necessary knowledge to do a risk assessment, in which case preventative measures can be enforced (NPUAP, 2014:13).

b) Risk screening to prevent pressure ulcers

Many different evidence-based resource entities like the NPUAP and accreditation bodies like the Joint Commission International (JCIA) and healthcare quality research bodies like Institute Healthcare Improvement (IHI) and AHRQ have introduced initiatives, guidelines and standards to reduce pressure ulcer risks.

The NPUAP (2014:14) iterates the importance of healthcare facilities employing a structured risk identification strategy to prevent pressure ulcers. Many other healthcare bodies (Institute for Health Care Improvement; NDNQI) have identified pressure ulcers as one aspect of patient safety that requires action for improvement. The IHI introduced the 5 Million Lives Campaign as a strategy for the healthcare team to focus on reducing pressure ulcers, and the NDNQI lists pressure ulcers as a nurse-sensitive indicator to measuring performance and improving patient outcomes.

Although the exact time to do a risk assessment pertaining to skin integrity risk is not specified, many experts stress that the assessment should be conducted on

admission, or within four hours post-admission (NPUAP, 2014:15; Hospital Policy, 2014; JCIA, 2014; Norton, et al. 2017:17).

Hospital policies need to stipulate the timing of initial risk assessment and the frequency of reassessing skin integrity to ensure that they incorporate changes in the patient's condition with regards to hydration, nutrition and incontinence in the prevention strategy (NPUAP, 2014:15; JCIA, 2014).

The skin integrity risk assessment will ensure that high-risk patients are immediately placed on preventative measures. Preventative skin assessment triggers should also be built into the electronic medical record to ensure consistency in assessing and reassessing skin integrity risk (Hospital Policy, 2015; JCIA, 2014; Norton, et al. 2017:7).

Although skin integrity risk assessment is initially performed by the nurse, the healthcare team needs to be aware of the risk and be vigilant of clinical factors that may increase this risk. Using visual cues to engage and keep the healthcare team informed is vital in sharing potential risks in skin integrity (NPUAP, 2014:16; Hospital Policy, 2014; JCIA, 2014; Emanuel, et al. 2008:603). There are specific skin integrity risk screening tools available, and nurses should be taught on the one used in their facility in order to apply knowledge in practice (Guy, 2012:19). The nursing team needs to consider that patient conditions – like patient haemodynamic status – the nurse's knowledge, insufficient staffing and pressure reduction resources, nutritional support, and pathway bundle might impact skin risk (Coyer, et al. 2015:204; Norton, et al. 2017: 28-46).

The literature on pressure ulcer care stresses the importance of turning and repositioning patients to relieve pressure on surfaces prone to injury (NPUAP, 2014:16; NPUAP, 2016). The appropriate devices to move patients, i.e. hoist, pat slides and draw sheets must be used and available, but were not listed by nurses. Incontinence is another factor contributing to pressure injury development, and appropriate strategies should be applied in avoiding this; it was not mentioned by the nurses. If the patient is immobile, the nurses need to be educated on washing areas and using barrier creams and incontinence sheets; which was not mentioned in the

literature (Guy, 2012:21; Norton, et al. 2017:28-46). As nutrition is vital for skin health and integrity, this needs to be screened and assessed and nutritional support must be provided; respondents in this study did not identify nutrition as essential in skin integrity status (Norton, et al. 2017:28-46).

c) Pressure ulcer risk tools

As mentioned, a number of risk assessment tools for skin integrity are available (Guy, 2012:19). Different tools were developed for different care settings, with the Braden tool utilised within this study context (Guy, 2012:16; NPUAP, 2014:15).

Although the Braden Skin Integrity Risk Scale has not been tested in diverse cultural settings such as the UAE, it is currently the tool of choice pertaining to risk assessment (Guy, 2012:16; British Columbia Provincial Nursing Skin and Wound Committee Guideline, 2014:2-8). This scale includes six domains which can be described as follows:

- **Sensory perception** domain measures a patient's ability to detect and respond to discomfort that is associated with pressure on parts of their body. The ability to sense discomfort itself plays into this category, as does the level of consciousness of a patient and therefore their ability to cognitively react to pressure-related discomfort.
- **Moisture** that is excessive and continuous on the skin can pose a risk and compromise the integrity of the skin by causing the skin tissue to become macerated and a risk for epidural erosion. This category assesses the degree of moisture the skin is exposed to.
- **Activity** domain looks at a patient's level of physical activity since very little or no activity can result in atrophy of the muscles and a breakdown of tissue.
- **Mobility** reviews the capability of a patient to adjust their body position independently. This assesses the physical competency to move and can involve the patient's willingness to move.

- **Nutrition** assessment reviews patients' normal patterns of daily intake and nutrition. Eating only portions of meals or having imbalanced nutrition can indicate a high risk in this domain.
- **Friction and shear** review the amount of assistance a patient needs to move and the degree of sliding on beds or chairs that they experience. This category is assessed because the sliding motion can cause shear, which means the skin and bone are moving in opposite directions causing a breakdown of cell membranes and capillaries (Guy, 2012:16; British Columbia Provincial Nursing Skin and Wound Committee Guideline, 2014:2-8).

Nurses must understand the scoring to determine a patient's risk for skin breakdown (Guy, 2012:16; British Columbia Provincial Nursing Skin and Wound Committee Guideline, 2014:2-8). Based on the Braden Skin Integrity Risk Scale, each domain is rated on a scale of 1 to 4. However, the 'friction and shear' domain is rated on a 1 to 3 scale. A score of 23 means there is no risk for developing a pressure ulcer, while lower scoring patients are at highest risk for pressure ulcer development. The Braden Skin Integrity Risk Scale assessment is applied in practice according to:

- Very High Risk: if a patient has a score of 9 or less
- High Risk: if a patient has a score of 10-12
- Moderate Risk: if a patient has a score rated between 13-14
- Mild Risk: if a patient has a score of 15-18
- No Risk: if a patient has a score of 19-23 (Guy, 2012:16 British Columbia Provincial Nursing Skin and Wound Committee Guideline, 2014:2-8).

Frequently, a lack of resources (such as the availability of pressure-relieving mattresses, gel pads, etc.) and communication can result in healthcare facilities initiating risk stratification on Braden's Skin Integrity Risk Scale for high-risk patients earlier, for the healthcare team to plan based on resources (Hospital Policy, 2014).

There are numerous pressure-relieving devices and aids available to reduce the risk for patients with mobility issues (Guy, 2012:21; HRET, 2017:3). Pressure ulcer care guidelines stress the importance of turning and repositioning patients in relieving the

pressure on surfaces prone to ulceration. Nurse policies and procedures need to support two-hourly repositioning for patients who are unable to move on their own (NPUAP, 2014:16). The nurse manager must ensure that this repositioning is monitored in practice by nurses through Hourly Rounding Principles (Meddings, et al. 2015:2).

The appropriate devices to move patients, i.e. hoist, patslides and draw sheets, should be used and be available. Incontinence is another factor contributing to pressure ulcer development, and appropriate strategies should be applied in avoiding this. Nurses should – according to hourly patient rounding principles – ensure that a toilet schedule is in place for mobile patients. However, if the patient is immobile, the nurses need to be educated on washing patients and the use of barrier creams and incontinence sheets (Guy, 2012:21). Preventing dry skin is just as important, and nurses therefore need to apply lotion to the remaining skin surface area. To ensure that nurses understand the risks and what contributes to pressure ulcer formation, the NPUAP has published evidence-based guidelines to assist facilities in training programmes to prevent pressure ulcers (NPUAP, 2016 Web Access).

d) Pressure ulcer training

Knowledge about pathophysiology and physiology of the skin is important in order for nurses to conduct a quality risk assessment and identify when a pressure ulcer has formed (Boyko, Longaker & Yang, 2018:65-69). Despite nurses' specific education, ongoing professional development and training is important to ensure that nurses stay competent. Healthcare policy and performance management require unit-based competencies to be evaluated annually to identify gaps in pressure ulcer prevention and to ensure that appropriate training is provided to address identified needs (Boyko, et al. 2018:65-69).

The factors to be included in the training should focus on the pathophysiology of pressure ulcers, clinical risk factors and care-related factors. Nurse managers should facilitate regular awareness sessions on changes in practice to keep the team aligned. Risk and skin assessment should be reviewed based on patient status and hospital policy. These assessments include ensuring that nurses provide interventions such as

support surfaces, nutrition, moisture management and positioning (Boyko, et al. 2018: 65-69). Conducting international prevalence studies with pressure-relieving device companies like Hill-Rom can also provide the facility with valuable information.

Together, the training, pressure-relieving resources and the risk assessment tools can facilitate a preventative environment whereby nurses are proactive in avoiding and minimising HAPU.

2.4.2.3 Hand hygiene (HH)

The single most important intervention in reducing healthcare-associated infections is HH (White, Jimmieson, Obt, Graves, Barnett, Cockshaw, Gee, Haneman, Page, Camphell, Martin & Paterson, 2015:2; Al-Dorzi, Matroud, Attas, Azzam, Musned, Naidu, Govender, Yeni, Abarintos, White, Balkhy & Arabi, 2014:361; Al-Tawfiq, Abed, Al-Yami & Birrer, 2013:462). Although essential for patient safety, HH compliance is still a global issue (Al-Dorzi, et al. 2015:361). The importance of sharing policies, continuous HH prevention strategies, skills development, and motivation and system changes are emphasised to facilitate improved HH compliance (Squires, Linklater, Grimshaw, Hraham, Sullivan, Bruce, Gartke, Worthington & Suh, 2014:1515).

As this remains a concern, many accreditation and research bodies have taken steps to reduce hospital-acquired infections resulting from poor HH.

a) Accreditation bodies and hand hygiene

The Joint Commission has named the prevention of healthcare-associated infections through HH their fifth International Patient Safety Goal (JCIA, 2014; Hakko, Guvenc, Karaman, Cakmak, Erdem & Cakmakci, 2014:295). Guidelines on HH practices have been developed by the WHO and the Centre for Disease Control (CDC). These guidelines ensure a focus on HH as the single most important clinical practice that has huge implications for patient safety outcomes and healthcare facilities' operations. These guidelines provide information on when HH is indicated, how to cleanse hands, what agents to use, appropriate drying of hands and the time frame, use of disposable

gloves, wearing jewellery and artificial nails, and the infrastructure needed to support and provide optimal HH (WHO, 2009:5; White, et al. 2015:2; Joint Commission, 2009).

Accreditation bodies support HH as a patient safety factor, and the evolution thereof is considered in order to improve practices.

b) Hand hygiene evolution

As early as the 1800s a researcher by the name of Semmelweiss demonstrated the efficacy of hand disinfection to reduce infections. In recent years, HH replaced the term 'hand washing'; it is a more comprehensive term as it includes hand washing, hand antisepsis and other actions taken to maintain clean hands and fingernails.

The Joint Commission (2009:xxvii) describes hand **antisepsis** as the "reduction in the growth of microorganisms through the application of an antiseptic hand rub or through antiseptic hand washing, and **hygiene** as any means of hand cleaning, and **hand washing** as washing hands with plain or antimicrobial soap and water…" (Joint Commission, 2009). It is important for nurses to understand these concepts in order to ensure better HH practices. Following on from this discussion, nurses must be aware of the flora present on the skin and what is required from them to improve HH.

c) Bacterial skin flora and hand hygiene

In order for the healthcare team to understand HH, they are required to distinguish between normal bacterial skin floras; namely transient or resident flora.

Transient flora is found on the superficial layer of the skin and cause the majority of healthcare-associated infections. The resident flora, on the other hand, is attached to the deeper layer of the skin. Resident flora is more difficult to remove and is not normally associated with healthcare-associated infections, but it can affect a patient who is severely immune-compromised having an invasive procedure, such as the insertion of a central venous line or surgery (Kiprono, Masenga, Chaula & Naafs, 2012:1). This knowledge is vital for nurses to perform the correct HH practices required for different procedures (Cogen, Nizet & Galo, 2012:442).

Nurses should be aware that there are nosocomial pathogens constantly present on their hands. This contamination of the nurses' hands occurs while they are in contact with infected wounds, secretions or contaminated objects in the patient care environment, among others.

Care should also be taken as it has been noted that even 'clean' activities (doing vital signs or therapeutic touch) can cause contamination of nurses' hands (Kiprano, et al. 2012:2). It is thus necessary to use multimodal interventions which include adequate provision of alcohol-based hand rub, soap and water, training and education, evaluation and feedback on performance, provision of workplace reminders, and a culture of safety (Fakhry, Hanna, Anderson, Holmes & Nathwani, 2012:9; Longtin, Sax, Allegranzi, Schneider & Pittet, 2011:2).

To facilitate an environment wherein the healthcare providers are aware of HH concepts and developments, continuous awareness training programmes need to be in place.

d) Hand hygiene promotion

It is evident that the continuous promotion of HH is crucial for the practical implementation and observance of HH policies. This requires the nurse manager's commitment towards educating the healthcare team on HH in the clinical environment, auditing nurses' HH practices, and providing the necessary support for structural design, maintenance and speedy repair of HH facilities (Luangasanatip, Hongsuwan, Limmathurotssakul, Lubell, Lee, Harbath, Day, Graves & Cooper, 2015:3).

Adherence to recommended HH practices should ultimately be part of a culture of patient safety and the promotion of quality within the healthcare setting. Ensuring many different visual aids to encourage the team and patients to practice good HH is crucial for compliance (Luangasanatip, et al. 2015:4). Many factors relating to HH have been discussed, and the need for adequate hand care is an essential component of HH. To support a 'just culture', the nurse manager needs to empower the nurses to speak up when they are experiencing skin irritations that affect their compliance with proper HH (Hospital Policy, 2017).

e) Fingernails and hand jewellery and hand hygiene

As part of being socialised in nursing, nurses were taught that they needed to have short nails as long nails could be harmful to patients in terms of causing injuries and promoting infection control.

There is evidence that bacteria may be harboured in the subungual areas of the hands in high concentrations, and that chipped nail varnish, and artificial nails may support the growth of organisms on fingernails (Longtin, et al. 2011:14). Additionally, nurses wearing artificial nails have been epidemiologically linked to infection outbreaks, and the CDC advises that additional studies in this area are warranted. Hospital policies and guidelines need to be in place to ensure that nurses understand the expectations with regard to nail polish and artificial nails.

Another important issue from reviews illustrates that nurses wearing rings could cause persistent bacterial contamination of the hands, particularly with Staphylococcus aureus and Gram-negative bacilli (Longtin, et al. 2011:14). Hospital policy often provides guidance to ensure that nurses understand what is permitted with regard to wearing jewellery while in the clinical setting.

f) Hand hygiene training programmes

The nurse manager and infection control team must provide a structured programme for HH education and awareness sessions. This will facilitate access for the healthcare team to ensure that they remain aware of HH practice. It will also provide opportunities to review the policy and standards guiding this practice and to demonstrate and practice good HH.

Visitors and patients may transmit epidemic infections and are not primarily targeted by multimodal interventions. Involving patients and their relatives in safety initiatives is essential for successful prevention strategies (Fakhry, et al. 2012:9). Requiring healthcare providers and visitors to sanitise their hands with alcohol before entering the intensive care areas and oncology units where patients are immunocompromised,

is another supportive measure to combat hospital-acquired infections (Luangasanatip, et al. 2015:3).

HH campaigns are the key to reviewing HH practices for both the healthcare provider and the community. Many more initiatives are available, and the use of video aids on hygiene practices in waiting rooms and in-patient care rooms are very effective (Luangasanatip, et al. 2015:3). Many concepts that can potentially influence HH compliance have been discussed, and the effect of the unit's design on HH compliance should be considered.

g) Unit design and hand hygiene

It is evident that the strategic layout and the design of hand washing facilities and alcohol-based wall-mounted sanitisers are crucial to HH compliance. Ensuring that the hand washing basins are in the immediate care facility should facilitate the healthcare team washing their hands before having patient contact and also immediately thereafter (Longtin, et al. 2011:2).

Recent studies have found it helpful to change to automatic water faucets in order to eliminate healthcare professionals touching and contaminating their hands again (Longtin, et al. 2011:2). Disposable paper towels should also be available above washing stations to avoid contamination. Water dripping also poses a safety issue in that people may slip and fall.

It is recommended in best practice guidelines to have wall-mounted antiseptic sanitisers in multiple locations and at entrance doors to present adequate opportunities for healthcare teams to disinfect their hands (Fakhry, et al. 2012:9). The use of visual cues above these facilities on how to wash hands, and the timeframe for washing hands, should be constant reminders for the healthcare team (Longtin, et al. 2011:2; Luangasanatip, et al. 2015:2).

An appropriate and standardised approach to HH is required and will be briefly discussed.

h) Five moments of hand hygiene

As the UAE has adopted the WHO's '5 Moments of Hand Hygiene', the researcher will elaborate on this, following on from HH education. The '5 moments of HH' recommended in the guidelines require the healthcare team to practice HH the moment before touching a patient, before performing aseptic and clean procedures, after being at risk of exposure to body fluids, after touching a patient, and after touching a patient's surroundings (Longtin, et al. 2011:2; Hospital Policy, 2017).

There are three techniques in HH: hand washing with water and soap (social washing aimed at removing transient flora), using hand rubs with alcohol-based sanitisers (antiseptic removing transient flora), and surgical HH with an antiseptic scrub or an alcohol rub (surgical hand antisepsis should be performed prior to all surgical procedures, with the aim of removing all transient flora and substantially reducing resident flora). Each requires specific techniques to ensure its effectiveness in the clinical setting (Longtin, et al. 2011:8).

It is important as part of the '5 Moments of Hand Hygiene' to understand that there are specific disinfectants and to know when to use what, and how to apply it for effectiveness. Each of the different HH techniques requires a specific manner of application and use, and it is important for nurses to comply with these HH practices (Longtin, et al. 2011:2). To review and improve HH compliance, the nurse manager is required to conduct regular audits and provide feedback opportunities to nurses and teams.

i) Hand hygiene audit and feedback

Some reviews suggest using bundles with the multimodal model to reduce healthcare-associated infections and increase HH compliance (Pincock, Bernstein, Warthman & Holst, 2012:S23). The WHO (2009:7) states that the tools that healthcare facilities develop need to be simplified and adapted to current settings and must receive high priority in any healthcare safety programme. The definition of adherence or non-adherence and the manner in which HH observations are carried out are often lacking (Harrington, Lesh, Doell & Ward, 2007:24).

Research done on HH revealed certain barriers that affect HH compliance among healthcare team; system and environmental issues (lack of alcohol dispensers/ wash basins) and other factors were listed (Al-Tawfiq, et al. 2015:462; Squires, et al. 2014:1515).

As part of a proactive system approach in the safety plan, workplaces should be designed in alignment with existing models that support safe practices, i.e. hand wash stations' layout and alcohol sanitisers at patient rooms, and nurses being the 'enforcers' of HH. A very interesting approach by Sax and Clack (2014:4) is for nurse managers to provide opportunities for nurses to enhance their mental models regarding infection prevention and control through experience.

The nurse managers' role in HH compliance in an effort to reduce HAI is vital for the sustainability of any pre-intervention, intervention and post-intervention programmes (Midturi, Narasimhan, Barnett, Sodek, Schreier, Barnett, Wheeler, Barton, Stock & Arroligia, 2015:1; Pincock, et al. 2012:S19). It is essential to provide feedback to nurses with regard to compliance rates. This needs to be done frequently to ensure that staff is aware and able to contribute to behavioural changes (Pincock, et al. 2012: S23). Some researchers claim that nurse managers have gone as far as sending violation letters to staff not complying with HH protocols (Chou, Kerridge, Kulkarni, Wickman & Malow, 2010:576).

Lastly, nursing admission factors contributing to patient safety will be discussed.

2.4.2.4 Nursing admission assessment (NAA) documentation

SEHA (Corporate Office and the Arabic name for Health) and the accreditation bodies (Joint Commission International Accreditation - JCIA and Health Authority Abu Dhabi -HAAD), require nurses to do a 100% complete NAA on every new patient within the specified 24-hour timeframe. This is essential to ensure that the nurses have a foundation on which to base their decision making regarding patient care (Hospital Policy, 2016; JCIA, 5th Ed. 2016). As a baseline when a patient is admitted to the hospital, the nurse is required to perform an NAA within a specified time frame – usually within 24-hours (Hospital Policy, 2014; Joint Commission Assessment of

Patient Standards, 2014). The NAA data contain vital health information consisting of baseline vitals, any allergies to medications or foods, past medical and surgical history, screening of skin integrity, screening a patient's risk for falls, psychosocial assessment, nutritional screening, pain and discharge planning needs. This assessment data aid the nurse in formulating a nursing care plan and determining if the patient's condition improves or deteriorates.

Nurses live in a technology-enhanced world that has transformed healthcare delivery to encompass almost all aspects of care. As healthcare facilities have become more complex organisations, they require the assistance of these technical devices to ensure the provision and coordination of health care (Guite, Lang, McCartan & Miller, 2006:55). Technology has traditionally deferred to the development of new medical devices and equipment, such as smart pumps and monitoring devices.

a) Different ways to communicate patient care

There are various ways that the healthcare team communicates care to ensure that continuity of care is shared among the direct care team. Many healthcare facilities have moved to electronic-based systems to improve the safety and quality of care provided (Abbott, Fuji & Galt, 2015:2; Klenk & Cranner, 2014: 32; Guite, et al. 2006: 56). Healthcare facilities must have a structured approach in transitioning from a purely paper-based system to an electronic version. The key to using these electronic-based systems is for healthcare facilities to ensure good design aimed at improved patient safety (Emanuel, et al. 2008:341). Care needs to be taken to ensure that workflow processes are considered by involving direct caregivers in building the system.

Electronic documentation increases efficiency to eliminate redundant charting and allows for real-time documentation which permits continuity of care (Guite, et al. 2006: 56). Many positive points have been listed with regard to electronic medical record use. The advantage is that information can be entered at any location in healthcare systems and accessed across the entire site. In addition, quality care can be achieved by using prompts in the electronic record based on accreditation standards (Guite, et al. 2006:57; Abbott, et al. 2015:2). For example, if a fall risk assessment is done in the emergency data, it could trigger the fall protocol to alert the healthcare team (Guite, et

al. 2006:57). If the electronic system was not built to trigger alerts, it could affect the way health care is delivered.

b) Barriers to electronic documentation

It is clear from literature reviews that there are some barriers with regard to electronic medical records. Some of the barriers are hardware issues, data entry and irretrievability (Carrington, Gephart, Verran & Finley, 2015:7). Increased workload due to documentation, ignoring built-in alerts and warnings, technical problems, connectivity issues and time-related factors that may potentially affect patient safety should be assessed by the nurse manager (Abbott, et al. 2015:2; Orbaek, Gaard, Fabricus, Lefevre & Møller, 2015:7). The information obtained by the nurse manager needs to be escalated to the Information Technology (IT) department for action to ensure that electronic medical records do not impede workflow and safety.

c) Training on electronic documentation

To ensure that nurses are able to navigate and understand the system, training and educating nurses on electronic medical record use is essential. There needs to be a process for orienting new employees as they arrive in the healthcare setting as well as for existing staff if the need arises (Akhu-Zaheya, al-Maaitah & Hani, 2017:2). Integral to sustainability is determining how nurses perform in their documentation practices. The nursing team should conduct frequent audits to determine completeness and accuracy, and root cause analyses of potential issues (Chapman, 2014:1; Akhu-Zaheya, et al. 2017:2). From this data, the nurse manager needs to ascertain what the causes are and ensure that these are urgently addressed by the team and other stakeholders, such as IT.

Current hospital data from the researcher's facility (2014) highlight that the NAA is completed within the stipulated 24-hours 90% of the time. This issue has significant patient concerns as valuable information is not obtained and appropriate care plans could be missed. The nurse manager needs to be transparent and engage the team in improving processes. The nurse manager, therefore, needs to have processes

available to frequently disseminate documentation performances in order for nurses to participate in finding solutions.

d) Positive characteristics of electronic documentation

A study by Akhu-Zaheya, et al. (2017:2) illustrates the contribution of electronic medical records in reducing patient errors. The data on patient contributions to complete documentation and safety dimensions did not demonstrate a statistically significant relationship. The Joint Commission (2015:1) released a critical document to describe the importance of electronic medical record in patient safety, as well as how to prevent common errors observed from sentinel events data.

The healthcare organisation's incident report system needs to be automated and blame-free to allow healthcare professionals to report incidents in order to prevent patient harm (Chapman, 2014:3).

There are different factors that need to be considered for nurses to apply HH, fall risk assessment, pressure ulcer prevention, and documentation practices to prevent patients from harm. It is beneficial to the nurse manager to review best practice guidelines available in the literature with regard to patient safety prevention protocols.

2.4.3 Patient safety prevention protocols

Although the literature provides many best practices with regard to patient safety, it is necessary to explore what potential hazards exist from a root cause analysis and to work with the team to identify what should be changed to prevent patient harm.

Table 2.3: Topic areas for interventions to improve safety and examples of potential benefits to patients, staff and organisations

	Examples of Strategies	Examples of Settings	Potential Benefits to Patients	Potential Benefits to Employees	Potential Benefits to the Healthcare Organisation
Safe patient handling	Patient lifting equipment; no-lift policies; specialised lift teams	Acute care hospitals; Rehabilitation facilities; Skilled nursing facilities	Increased patient satisfaction; quicker ambulation; fewer falls; improved outcomes;	Increased worker satisfaction; decreased musculoskeletal injuries	Decreased worker compensation; increased staff retention; increased patient satisfaction, returns, recommendations
Fall prevention	Patient assessment; safe-transfer technique; slip-resistant flooring materials; absorbent floor mats	All	Decreased morbidity and mortality; length of stay	Fewer injuries and days away or restricted work	Decreased worker compensation costs; Decreased litigation; Decreased staff replacement
Sharps injury prevention	Sharps with engineered sharps injury protections; blunt suture needles to prevent needle sticks, and surgical injuries; minimise hand transfers of	Acute and long-term care hospitals; home health; ambulatory surgery	Decreased exposure to blood-borne pathogens	Decreased exposure to blood-borne pathogens	Decreased worker compensation claims, insurance costs; Decreased litigation; Improved safety culture

	Examples of Strategies	Examples of Settings	Potential Benefits to Patients	Potential Benefits to Employees	Potential Benefits to the Healthcare Organisation
	surgical instruments				
Infection prevention	Healthcare worker immunisation; HH; standard precautions; personal protective equipment	All	Decreased transmission of organisms from workers to patients and patients to patients	Decreased transmission of organisms from patients to workers	Increased adherence to guidelines; fewer sick days; lower externally reported infection rates; less risk of financial penalties in pay-for-performance initiatives
Assault and violence prevention and management	Frontline staff and security staff training; track patients with a history of disruptive behaviour	All	Fewer injuries and adverse events; less use of restraints	Fewer injuries; less anxiety; improved teamwork; improved satisfaction	Lower staff turnover; Decreased litigation; improved safety culture
Security in the neighbourhood and facility	Lights, locks, video surveillance; training on threat recognition	Home health; Hospitals; Nursing homes	Patients less fearful of violence in parking areas at facilities	Providers maintain patient base; a greater sense of security	Lower staff turnover; Improved safety culture

Table 2.4 describes the intervention and potential benefits of safety for the patient, the healthcare worker, and the organisation (Joint Commission, 2014:13-15).

Table 2.4: Topic areas for interventions to improve safety and examples of potential benefits to patients, staff and organisations

Intervention Focus	Examples of Strategies	Examples of Settings	Potential Benefits to Patients	Potential Benefits to Employees	Potential Benefits to the Healthcare Organisation
Prevent exposure to hazardous drugs	Ventilated cabinets; closed system transfer devices; needleless systems; administrative controls; proper personal protective equipment	Acute care' Pharmacies; oncology clinics	Lower risk of exposure for patients and their families, workers, and others	Lower risk of adverse outcomes such as infertility, allergic reactions	Lower staff turnover; less litigation; improved safety culture; decreased workers compensation costs; improved regulatory compliance
Active surveillance, analysis and feedback of adverse events, environmental hazards and risks	Reporting "near-misses"; Safety walk-a-rounds; periodic health and safety inspections	All	Fewer hazards and adverse events in patients	Fewer injuries and illness; Increased satisfaction	Increased opportunities to intervene before harm occurs; Better quality data; Improved compliance with regulatory and oversight bodies; Improved safety culture
Ergonomics and human factors engineering, workflow redesign	Adaptive clothing and scheduled toilet visits for residents; Mechanical lift equipment; supply kits;	All	Quicker recovery; increased satisfaction; decreased errors; quicker staff response	Fewer errors; increased efficiency; fewer injuries; increased satisfaction	Higher reliability; Improved adherence to guidelines; Improved efficiency; Decreased turnover and absenteeism, work-related illnesses

Intervention Focus	Examples of Strategies	Examples of Settings	Potential Benefits to Patients	Potential Benefits to Employees	Potential Benefits to the Healthcare Organisation
	toilet seat risers				
Appropriate staffing levels, mix and workload assignments	Work-hour restrictions; Evidence-based shift length; Rotation; Rest periods	All	Lower mortality (failure to rescue); fewer fatigue-related adverse events; increased patient satisfaction	Decreased stress and burnout; enhanced morale, quality of work life	Decreased turnover; Decreased absenteeism, work-related illnesses; Improved publicly-reported patient satisfaction; increased market share; improved safety culture
Improving safety culture/climate and teamwork	Engaging workers and engaging patients in safety activities; Leadership rounds; Daily huddles	All	Fewer adverse events; Increased satisfaction	Enhanced morale, employee satisfaction; Decreased fatigue and burnout	Improved patient and worker outcomes; Decreased litigation; Improved reputation; Decreased turnover
Safer design of practices and built environment	Improved ventilation, surfaces, water systems, private rooms, room design, equipment proximity and healing environments	Facility-based settings	Fewer healthcare-associated infections, quitters, increased satisfaction, healing environment	Decreased stress, increase efficiency, fewer errors, improved security	Increased satisfaction, increased staff retention, increased patient loyalty and increase safety culture

As evident from this table, there are standardised approaches, and these could be useful guides for nurse managers to ensure safe patient care provision. The final point to be discussed in this review is the cultural aspects that potentially affect safety culture and positive patient outcomes.

2.5 CULTURAL DIVERSITY

Authors such as Hudson (2014:3) and Dike (2013:3) refer to cultural diversity as the "differences in race, ethnicity, nationality, education, social and economic status or class and that this is related to attributes of groups of people in society." The Oxford Dictionary (2014) defines cultural diversity as the existence of a variety of cultural or ethnic groups within a society.

Cultural diversity in the researcher's context is ascribed to differences in nationalities, cultures, language and educational backgrounds in the field of nursing (Dike, 2013:3).

Culturally congruent care can be described as "culturally based care, knowledge, acts, and decisions used in sensitive and knowledgeable ways to appropriately fit the cultural values, beliefs, and life ways of clients for health and well-being, or to prevent illness, disabilities, or death" (Dike, 2013:3).

The researcher used the definition of culture and culturally congruent care to explore how these concepts affect patient safety.

2.5.1 Cultural diversity impact on safety culture

This section describes the current diversity and the reasons why it exists. The UAE currently has approximately 2 071 Emirati nurses who have conducted their studies through either the Institute of Nursing or through the Higher Colleges of Technology (Ministry of Health & Prevention (MOHAP). Statistics & Research Dept. Clinical Manpower UAE 2011-2016). Due to this low volume of trained Emirati nurses, the UAE's government authorities are obliged to recruit nurses from abroad in order to staff the various healthcare organisations within the UAE (El-Haddad, 2006:284). This policy contributed to a culturally diverse nursing workforce.

The current nursing workforce in a particular hospital demonstrates a cultural diversity consisting of nurses from 33 different countries. The breakdown of these nurses' countries of origin is 76% Asian (Philippines, India and Pakistan), 3.1% from Southern Africa, 3.4% are from Europe, Australia, New Zealand and the USA, and 16.4% are from Gulf States and African countries (Nursing staff database 2013, UAE). The researcher's particular hospital serves a patient population of approximately 150 different nationalities (Hospital Patient Experience Data, UAE 2014).

Cultural diversity brings many challenges and opportunities to the fore that the community, healthcare facilities and managers need to be aware of. As described in the definition of differences in cultures, language and nursing educational backgrounds could potentially affect patient safety. It is very important for healthcare professionals to value cultural diversity as it is an essential aspect of living and working in a multicultural society (Walton-Umkashif, Akram & Hossain, 2014:7; Hofstede, 2011:3).

This requires healthcare organisations to develop guidelines and policies to accommodate these challenges and enable those in positions of leadership to effectively manage a diverse team (Hofstede, 2011:3).

2.5.2 Cultural assessment tools

Reviews have listed various cultural assessment tools that healthcare organisations could utilise. Each tool is used for different aspects (Loftin, Hartin, Branson & Reyes, 2013:5; Ballestas & Roller, 2013:126). The researcher explored these tools to illustrate resources available for the nurse manager to identify potential cultural issues that could affect patient safety.

2.5.2.1 Transcultural Self-Efficacy Tool (TSET)

This tool was developed and tested by various researchers. The instrument consists of 83 items subdivided into three sections: cognitive, practical and affective. The model was designed as a method for nurse educators to teach cultural competence to

nursing students in an academic setting; not for diverse healthcare professionals (Loftin, et al. 2013: 5).

2.5.2.2 Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals Revised (IAPCC-R)

This tool consists of 25 items designed to measure the cultural competence of healthcare providers in the domains of cultural awareness, cultural desire, cultural knowledge, cultural skill, and cultural encounters (Loftin, et al. 2013:6).

2.5.2.3 The Cultural Competence Assessment (CCA)

This tool was designed to assess the cultural competence of healthcare providers. It has similar components as IAPCC-R, and the instrument tests the domains of cultural diversity, cultural awareness, cultural sensitivity, and cultural competence behaviours (Loftin, et al. 2013:6).

2.5.2.4 The Cultural Knowledge Scale (CKS)

This tool was designed to evaluate the effectiveness of a cultural competence education programme for public healthcare nurses. It addresses four subscales: health-seeking behaviours, perceptions of health and illness, response to health and illness, and treatment of illness conditions (Loftin, et al. 2013:6).

2.5.2.5 The Cultural Diversity Questionnaire for Nurse Educators (CDQNE)

This instrument was developed to measure the cultural competence of nurse educators. It contains five subscales: cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural teaching behaviours (Loftin, et al. 2013:8).

Only a few of the assessment tools available were discussed in this section, and the reviews illustrate that each differs in use and application (Loftin, et al. 2013:6; Ballestas & Roller, 2013:126). The researcher chose to use semi-structured questions regarding cultural aspects among nurses and nurse managers on their language, cultural

perceptions, nationality and nursing educational background for the purpose of this study. It is important to explore how cultural education can assist the nurse manager in ensuring that nurses provide safe, culturally congruent care.

2.5.3 Cultural education for nurses

The reviews illustrate the importance for healthcare providers to be educated in providing culturally appropriate and competent care, especially in the globalised world wherein nurses currently find themselves.

Although numerous assessment tools have been developed over the last decade, healthcare facilities still have great difficulty in assessing the cultural competence of the diverse nursing team (Loftin, et al. 2013:8; Phillips & Malone, 2014:46). These instruments should present the nurse manager with guidance to determine cultural factors that could affect patient safety, but no data are available in the current setting on the use of these tools.

Many healthcare organisations in the UAE include cultural programmes in their general orientation programmes, but these merely address the cultural values and customs (SEHA Data, 2015). More information needs to be explored as to the cultural factors affecting patient safety so that healthcare leaders can include this information in their recruitment strategies.

2.5.4 Cultural influences on patient safety

Cultural factors potentially have an impact on the performance of nurses and the safety of the patients. The reviews show that healthcare facilities have the tools to determine the diverse populations and to understand them in order to provide safer care. It is therefore vitally important to review different cultures with regard to power distance, individualism, masculinity, uncertainty, avoidance, pragmatism and indulgence (Hofstede, 2011:3).

Valuing cultural diversity is an essential aspect of living and working in a multicultural society (Loftin, et al. 2013:6). The healthcare team needs to become aware of the

cultural influences and health behaviours related to illness and recovery, and translate that awareness into culturally congruent care (Crawford, Candlin & Roger, 2017:1; Marrone, 2017:1).

It is important to take the years of experience, and the age of the nursing team into account as this could indicate the duration of time they have had to work within a diverse team context (Parand, Dopson, Renz & Vincent, 2014:1).

The reviews on diversity highlight the fact that cultures differ in the activities and the tools they use (Castania, [S.a.]:1; Rosenthal & Levy, 2012:3). These authors continue by commenting that language is the primary cultural tool used, and it is critical to restructuring the mind and in forming high-order, self-regulated thought processes (Castania, [S.a.]:1; Rosenthal & Levy, 2012:1). The home language of an individual is tied to the person's culture. Moreover, language communicates traditions, values and attitudes (Crawford, 2017:1).

2.5.4.1 Communication

Communication is an essential component of care, yet interpersonal communication can be ambiguous and is often misunderstood by the diverse healthcare team (Kim & Kim, 2016:1). Communicating across cultural boundaries increases the risk of misunderstanding, which is further compounded when dealing with complex scientific/medical information (Stockinger, 2010:2; Bhui & Bhugra, 2004:476).

Reviews on diversity illustrate that nonverbal communication accounts for approximately 70% to 90% of a communication episode. Nonverbal communication can impact the success of communication more acutely than the spoken word (Anthem BlueCross, 2013:6; Queensland Health, 2012:5). From personal experience, body language, tone of voice, speaking different languages, gestures and dialects are often the biggest obstacles within the current care setting.

These miscommunications across cultures can lead to conflict, discomfort or miscommunication. One may find that tone of voice may range from being extremely loud to the very soft submissive tones of differing individuals, depending on their

cultural backgrounds (El-Haddad, 2006:284; Singh & Okeke, 2011:1; Anthem BlueCross, 2013:6; Queensland Health, 2012: 5).

The Joint Commission's *Hospitals, Language, and Culture: A Snapshot of the Nation (HLC)* 2002 study was designed to gather information about the activities that hospitals use to address cultural and language needs among an increasingly diverse patient population, aimed at preventing patient harm. Some of the issues that emerged from the study with regard to patient safety are: adequate information on history, safe use of medication, informed consent, involvement in care decision and planning, and understanding discharge instructions.

From these studies, it was evident that facilities require specific tools and strategies to communicate with persons who have limited English proficiency and are from different cultures (Anthem BlueCross, 2013:6; AHRQ TeamSTEPPS for LEP, 2012:5).

Some of the initiatives facilities implemented were: set standards with regard to interpreter use, creating language 'banks' within a healthcare facility, the 'Ask me 3' goal for patients, and the use of the DIVERSE mnemonic for patient encounters (Wilson-Stronks, Lee, Cordero, Kopp & Galvez, 2008:7; Queensland Health, 2012:5; Anthem BlueCross, 2013:6; AHRQ TeamSTEPPS for LEP, 2012:5).

The researcher will briefly explore one tool to demonstrate how nurse managers could apply it in practice to ensure patient safety.

2.5.4.2 Patient culture on patient safety

The UAE is a constitutional federation of seven Emirates. The country expanded exponentially over the last decade due to its oil production and construction infrastructures. The total population of the UAE is now estimated to be over 9.4 million, a hundredfold increase since 1960. Most people live in the UAE's major cities, Abu Dhabi, Dubai and Sharjah. Dubai has a population of over 2.1 million and Abu Dhabi around 2.3 million. Males outnumber females with a ratio of 7:3, while UAE citizens comprise roughly 12% of the total population, and 89% are expatriates from various parts of the world (UAE webpage). The UAE has more than 200 different nationalities

residing in the country. This diversity, as with nursing, brings its own unique challenges to the care environment that needs to be taken into consideration when caring for the patients.

Healthcare professionals should become aware of the cultural influences and health behaviours related to illness and recovery, and translate that awareness into culturally congruent care (Crawford, et al. 2016:1).

The UAE cultural structure consists of each family traditionally bound by obligations of mutual assistance to their immediate relatives and to the tribe as a whole. The culture and traditions of the UAE are firmly grounded in the Islamic heritage of the Arab region (UAE webpage). In Islamic tradition, the difference between health and illness was, and still is, perceived as balance and imbalance or the Humoral Theory. Muslims have historically sought the *Qur'an* as a healing source in times of psychological and spiritual distress. When experiencing physical illness, Muslims have also been open to the rituals and medicinal practices of different traditions, including those of non-Muslims. Life, according to Islam, is considered sacred and suicide and euthanasia are forbidden. 'Do not resuscitate' orders have been reviewed in Islam and are very complex (Taheri, 2008:1). Based on UAE law, 'do not resuscitate' orders are not permissible, and the expectations are that healthcare teams need to continue resuscitation efforts.

As part of Islam, Muslims are required to believe in the wisdom of Allah, be dedicated to giving to charity, worship through daily prayers, fast during the Holy month of Ramadan, and pilgrimage to Makkah (Hilliard, Michelle, Ernst, Wendy, Gray, Shehzad & Cortina, 2012:883).

In times of illness, Muslims find strength from prayer and meditation and may find spiritual healing in reciting the *Qur'an*, especially if they perceive their illness as a test or punishment from God. Therefore, it can be very helpful and comforting to provide Muslim patients and their families a copy of the *Qur'an* and access to a private space to perform their daily prayers (del Pino-Casado, Frias-Osuna, Palomino-Moral & Martinez-Reira, 2012:1133-1135).

Privacy and gender separation are very important aspects of Islam, and the nurse manager needs to ensure that the environment is appropriate, and the gender of nurses is according to patients' genders (del Pino-Casado, et al. 2012:1133-1135; Hilliard, et al. 2012:885). There need to be appropriate signs displayed indicating male or female rooms, to stop males entering female rooms. If the healthcare team needs to enter, they have to knock before entering rooms to ensure that the female Muslim patient is appropriately covered (del Pino-Casado, et al. 2012:1133-1135; Hilliard, et al. 2012:885).

2.5.4.3 Use of a cultural tool to communicate with diverse patients

Besides the use of translators, the nursing team needs to pursue a variety of channels to ensure culturally congruent communication to enable appropriate interviewing of healthcare concerns. Healthcare facilities are bound to ensure that they have communication strategies and tools to communicate appropriately with the diverse patient population to ensure care is not delayed, and appropriate histories are taken. Based on Blue Anthem Toolkit, the 'D-I-V-E-R-S-E' mnemonic will assist healthcare professionals in developing a personalised care plan based on cultural and diversity aspects. They advise healthcare facilities to place this mnemonic in the patient's chart or to use the mnemonic when gathering the patient's history (Blue Anthem Toolkit, 2012:8). Below is a description of this mnemonic:

- **D**emographics - nurses should gather and explore patients' background of cultural origin, age and sex as these influence the healthcare behaviours of the patient.
- **I**deas - nurses must ask patients to explain their ideas or concepts of health and illness so as to ensure that it forms part of the care plan.
- **V**iews of healthcare treatments - nurses should ask the patient about treatment preference, the use of home remedies, and treatment avoidance practices. These form part of the psychosocial assessment on admission.
- **E**xpectations - nurses should ask what their patients expect from their healthcare professional.
- **R**eligion - nurses should ask about their patient's religious and spiritual traditions to ensure that these form part of the care plan.

- **S**peech - nurses should identify their patient's language needs, including health literacy levels, and the need for an interpreter. Nurses should avoid using a family member as an interpreter.
- **E**nvironment - nurses should identify the patient's home environment and the cultural/diversity aspects that are part of the environment. The home environment includes the patient's daily schedule, support system and level of independence (Blue Anthem Toolkit, 2012:8).

These cultural aspects are explored to ensure that the nurse manager provides cultural care required from the diverse patient population and that nurses have tools to provide safe, culturally congruent care.

2.6 CONCLUSION

The literature is clear on how the safety culture and hospital climate affect patient safety. Change is evolutional, and therefore it is essential to ensure that nurse managers address the needs of both the diverse patient and the employee populations to ensure better healthcare outcomes.

The nurse manager needs to be aware of the effect that cultural diversity has on communication, health and education, and manage diversity to ensure that employees are effectively and efficiently aligned with the organisational culture and goals.

A review of Reason and Ekenedo's Safety Culture Framework set the stage to explore what is required for nurses to sustain practices, and for the nurse managers to manage the behavioural choices of their nurses and address system issues that potentially affect patient safety. Each of these factors is interrelated, and if one factor is weak, it affects the others. This is why so much emphasis is placed on ensuring that both the nurse and the nurse manager are held accountable for their choices with regard to patient safety.

The researcher explored various safety cultures, hospital climates and cultural assessment tools for this context. The safety culture tools identify the dimensions assessed in safety culture, and evaluate the measures for validity and usability. On

review of the hospital climate tools, the researcher used some of the elements of Stringer and Ekvall for the purposes of this study.

In the next chapter, the methodology, data gathering and interpretation for Phase 1 of this study are discussed.

CHAPTER 3
PHASE 1: RESEARCH METHODOLOGY, DATA GATHERING AND INTERPRETATION

3.1 INTRODUCTION

This chapter provides a discussion on the overall research methodology used to conduct the study, but with emphasis on a detailed description of Phase 1. Table 3.1 presents an indication of the chapter layout and how the study progressed.

Table 3.1: Study progress

Chapter	Content
1	Orientation to the study
2	Literature review (1) safety culture, (2) hospital climate, (3) patient safety outcomes and (4) managing 'just culture' based on Reason's and Ekenedo's Safety Culture Framework.
3	Phase 1: Research methodology, data gathering and interpretation of outcomes data
4	Phase 2: Research methodology, data gathering and interpretation of questionnaires
5	Phase 3: Literature review on action plan development as well as the development of the draft action plan and the validation assessment instrument
6	Phase 4: Research methodology, data gathering and validation of the action plan
7	Conclusions, limitations and recommendations

3.2 RESEARCH METHODOLOGY

A research design incorporates the methods (Neuman, 2011:163) researchers use to structure a study, obtain and analyse the information relevant to the research question, and ensure the integrity of the study (Polit & Beck, 2012:741). A research design is used to address the objectives as unambiguously as possible (Wood & Ross-Kerr, 2011:114).

The researcher employed a mixed method design that is exploratory and descriptive in nature. In the first two phases, quantitative data gathering methods were used to address the first three objectives. In the third phase, the fourth objective was addressed using the Delphi technique (a qualitative method) (see Chapter 6) to validate the developed action plan for sustaining a safety culture.

3.2.1 Mixed method research

Mixed methods, also known in some literature as multiple methods, can be defined as the combination of qualitative and quantitative research methods, techniques, approaches and concepts in a single study (Molina-Azorin & Cameron, 2010:96; Venkatesh, Brown & Bala, 2015:3). Based on the literature, mixed methods research is more specific than quantitative or qualitative designs alone as it includes the mixing of qualitative and quantitative data, methods, methodologies, and/or paradigms in a research study or set of related studies. It then draws inferences from both data sets (Polit & Beck, 2012:603; Borego, Douglas & Amelink, 2009:57), as was appropriate within the different phases in this study.

There are various schools of thought surrounding the use of mixed methods, as quantitative and qualitative research has different ontological and epistemological assumptions (Molina-Azorin, et al. 2010:96). The following advantages of mixed method research have been mentioned by various authors (Leedy & Omrod, 2013:259; Polit & Beck, 2012:604; Molina-Azorin, et al. 2010:98; Venkatesh, et al. 2015:4), which highlights why this method was used in this study:

- Mixed method research represents the *completeness* of a study, whereby the researcher can assure confidence in the results of a study as it addresses the objectives that were suggested. In this study, both quantitative and qualitative data were collected, analysed and interpreted to address the issues that affect the sustainment of a safety culture.
- Mixed method research *added complimentary* value, as quantitative data could compensate for the weaknesses in qualitative data and vice versa.
- Mixed method research contributes to the *development of appropriate research instrument* tools. The quantitative data from the first two phases provided and

guided the data from which the action plan was developed and validated in Phases 3 and 4; the qualitative phases of the study.

- Through *triangulation* of both the qualitative and quantitative data, the researcher made convincing conclusions that led to the development of an action plan that can enhance the sustainment of the safety culture.
- *Resolution of puzzling findings* - the various results of quantitative studies can occasionally be inconsistent and contradicting. Using the e-Delphi method and qualitative data collection helped the researcher to obtain consensus from the nurses and nurse managers in the development and implementation of the action plan.
- The mixed method approach *practicality* allowed the researcher to utilise quantitative questionnaires for gathering data to answer research objectives and the e-Delphi qualitative approach to validate the action plan.

Although the benefits of mixed method research are clearly indicated, there are some barriers that researchers have to take into account when choosing this method. Some of these barriers are the time needed, financial support and specialised skills that are required (Schoonenboom & Johnson, 2017:110; Molina-Azorin, et al. 2010:98; Venkatesh, et al. 2015:4). The researcher encountered some of these barriers, as it was time-consuming to coordinate the two study hospitals due to geographical distance, and financial support was needed to obtain electronic systems such as SPSS and NVivo for quantitative and qualitative data interpretation, and the use of SurveyMonkey™ for data gathering. The researcher also had to master the skills for all methods of data gathering, namely the audit checklist for outcomes data (Phase 1), the questionnaire (Phase 2) on safety culture and climate, and the validation assessment instrument to replace the electronic questionnaire for the qualitative data component (Phase 4). Although the barriers listed were considered, this approach allowed the researcher to obtain a greater understanding of the multi-facet variables required to address the research objectives.

The literature discusses four basic mixed method designs that could be used, namely triangulation, exploratory, embedded and explanatory designs (Schoonenboom & Johnson, 2017:110; Polit & Beck, 2012:608). The one utilised and applicable in this study was a triangulation mixed method, which is briefly discussed.

Triangulation in this study context meant that both methods were brought together to balance the weaknesses of each of the methods used. Data were collected concurrently in one phase, and the interpretation allowed a comparison of the results of the patient outcomes data (Phase 1) with nurse and nurse managers' responses under patient safety in Phase 2 to best explain the research question.

An *exploratory design* is described by Berman (2017:6), Schoonenboom and Johnson (2017:110) and Polit and Beck (2012:611), as using the quantitative design results (in the first two phases) and adding the information from a thorough literature review to develop an action plan. In this study, it was validated by using the e-Delphi action plan statements technique in Phases 3 and 4. The researcher therefore focussed on the triangulation and exploratory mixed method designs. The data gathered from the patient outcomes data and the nurses and nurse managers' perceptions (Phases 1 and 2) were used to develop the action plan that was validated by panel experts through the use of the Delphi method.

After selecting the design, the researcher considered other key decisions in mixed method studies, namely sequencing, prioritisation and integration (Polit & Beck, 2012:609; Molina-Azorin, et al. 2010:98). In a ***sequential*** *approach,* the researcher can use either qualitative data or quantitative data to gather both data sets concurrently. If a researcher has a well-designed sequential design the analysis and interpretation in one phase inform the collection and analysis in the second phase, as was the case in this study (Polit & Beck, 2012:609; Molina-Azorin, et al. 2010:98). An audit checklist was used to collect the quantitative data from the hospital's patient safety outcomes, and questionnaires were used for collecting data on the nurses and nurse managers' perceptions on safety culture in the first two phases. The data obtained in Phases 1 and 2 informed the development of the draft e-Delphi action plan that required validation by expert panellist. A consensus of 80% for all action statements, the persons responsible for the actions, as well as the timeframe to achieve the actions, was required.

In mixed method designs, the researcher should ***prioritise*** whether to emphasise the quantitative or qualitative design or phases (Polit & Beck, 2012:609; Molina-Azorin, et al. 2010:98). As the researcher utilised the quantitative data results of the first two

phases to develop the action plan that was validated with the e-Delphi method (in Phase 4), the qualitative approach was the supplementary design to validate the action plan to sustain a safety culture among nurses and nurse managers.

The final decision was to determine how the quantitative and qualitative methods would be combined and ***integrated*** (Polit & Beck, 2012:610; Molina-Azorin, et al. 2010:98). In this study, all the data were integrated in an attempt to develop and validate an action plan which is based on the input of important stakeholders (hospital patient safety outcomes data, nurses and nurse managers and panel experts).

3.2.2 Descriptive design

Polit and Beck (2012:725), Schoonenboom and Johnson (2017:110) and Neuman (2011:38) describe descriptive research as the accurate portrayal of the characteristics of situations, individuals or groups, and/or the frequency in which the phenomena occur. This study was descriptive in nature as it described how safety culture is influenced by the hospital climate, by the nurse or nurse manager's culture, as well as how it influences nurse managers' managing the nurses' behavioural choices.

To support the objectives of the study, the researcher used the concepts 'culture', 'culture of safety', 'positive work environment' and 'patient safety' to identify and assess relationships.

3.2.3 Deductive approach

A deductive approach is when a researcher begins a study with an abstract, logical relationship among concepts and then moves towards a more concrete empirical basis (Neuman, 2011: 69). Polit and Beck (2012:11) define the deductive approach as when theories or prior findings are used deductively as the basis for generating explorations that are then tested empirically. In this study, the researcher used Reason's Safety Culture Framework and Ekenedo's Behavioural Safety Culture Model as the basis for the empirical data that was required to answer the research objectives.

3.2.4 Empirical evidence

Empirical evidence involves collecting research data and then preparing that data for analysis (Polit & Beck, 2012:14). The patient outcomes data for each hospital were audited monthly to correlate data received from the nurses and nurse managers in Phase 2. The questionnaire provided biographical information to determine the cultural diversity of the nurses and nurse managers. This was followed by reviewing the nurses' and nurse managers' perceptions of patient safety outcomes related to HAPU, HH, NAA and fall risk; the climate and the safety culture factors affecting patient safety for the nurses; and exploring how nurse managers apply 'just culture' in managing nurses' behavioural choices (Appendix C & D) in the second phase of this study. This empirical data, together with a literature review, was then used to develop the action plan that was developed in Phase 4 by using the Delphi method.

3.3 RESEARCH AIM/PURPOSE

This multiple methods study aimed to develop an action plan to enhance the sustainability of a safety culture in hospitals. This action plan may facilitate a sustainable safety culture among the nursing team and contribute to improved patient outcomes.

3.3.1 Phase 1

Phase 1 involved capturing the patient safety outcomes data relevant to nursing-specific performance indicators; this addressed objective one of this study. The nursing indicators targeted were: completing the NAA within 24-hours; patients' fall risk assessments; HAPU incidence rates, and HH compliance rates. This data were required in order to determine how informed and involved the nurses and nurse managers were in safety culture sustainment.

3.3.1.1 Population

The target population, according to Polit and Beck (2012:279), is where the researcher clearly specifies the characteristics of the study population through a set of eligibility

criteria. It reveals the entire population in which the researcher is interested. Neuman (2011:190) describes the population as a specific pool of 'cases' that the researcher wants to study; in this study, all six hospitals in the Corporate Operational System of SEHA in Abu Dhabi formed the population. The researcher needed to collect the patient outcomes data related to NAA, patients' fall rate, HAPU incidence, and HH compliance from these hospitals to triangulate it with the responses from the nurses and nurse managers in Phase 2. From the population, the sample was drawn.

3.3.1.2 Sample

A sample can be described as the subset or larger pool of a population that is selected to participate in the study (Polit & Beck, 2012:279; Neuman, 2011:241). A purposive sampling method (Polit & Beck, 2012:279; Babbie, 2007:185) was used to select two hospitals that the researcher felt would provide relevant information related to the study phenomenon due to the known diversity of the nursing teams working in these hospitals.

The hospital patients' outcomes data relating to nursing performance (completing the NAA, assessing patients' fall risk, HAPU incidences and HH compliance) were collected from the two selected hospitals. The data from the period of January 2016 to December 2016 were used to complete the data collection instrument (Appendix E).

3.4 ETHICAL CONSIDERATIONS

The ethical considerations relate to moral standards that the researcher should consider in all research methods and in all the phases of the research design. After ethics approval was obtained from the University of South Africa (Appendix I), permission was also obtained from the Institutional Ethical Review Boards (IRB) of the two hospitals in the UAE (Appendix J & K). The researcher followed three principles pertaining to these facilities, namely beneficence, respect for human dignity, and justice (Polit & Beck, 2012:152).

3.4.1 Principle of beneficence

This principle means taking the required steps 'above all to do no harm'. This principle contains broad dimensions such as freedom from harm and exploitation, as well as the researcher's duty to evaluate the risk/benefit ratio (Polit & Beck, 2012:152).

3.4.1.1 Freedom from harm

In this study, physical harm was not considered. However, the researcher kept in mind that there could potentially be consequences that required sensitivity for the hospitals' data. The researcher was sensitive to the hospitals' data as the Corporate Operational Body has strict rules with regards to releasing information, as is confirmed by Polit and Beck (2012:153). The researcher provided the hospitals with detailed information to ensure informed consent and the relevance of the patient outcomes data that were required (Appendix J & K). When capturing the data from the audit checklist tools, all the identifiable data from a specific hospital were removed, and only the statistics required were captured on the checklist (Appendix E).

3.4.1.2 Risk/benefit ratio

The hospitals benefited by sharing their patient safety outcomes data as it illustrated the hospitals' strengths and opportunities with regards to their patient safety performance data compared to a similar hospital with a diverse nursing team. The data were used in developing an action plan to sustain a safety culture for positive patient outcomes (Polit & Beck, 2012:156). Ridt and Wendler (2010:154) describe that there will always be risks associated with research, and in this study the IRB for both study hospitals had to agree that the patient outcomes data would be shared to comply with legal and governance directions.

3.4.2 Right to self-determination

To ensure that this principle of self-determination was applied, both hospitals had the right to decide whether to participate or not without incurring any penalties (Kulmala,

2016:8; Polit & Beck, 2012:78). Both hospitals volunteered to participate in the study (Appendix G & H).

3.4.3 The right to full disclosure

Full disclosure means the researcher has fully explained the nature of the study and the person's right to refuse participation. Self-determination is dependent on full disclosure (Polit & Beck, 2012:78; Kulmala, 2016:8). The researcher shared the aim and purpose of the study, the type of research and the collection of the patient outcomes data with the participating hospitals as illustrated in Appendix B.

3.4.4 The principle of justice

The principle of justice refers to the right to fair treatment (WHO, 2013:25; Fouka & Mantzorou, 2011:8; Kulmala, 2016:8), thus the hospital's right to fair treatment. The IRB ensured justice as they chose to voluntarily participate in the study. To ensure transparency, the purpose and aims of the study were shared with the prospective hospitals (Appendix B).

3.4.5 The right to privacy

The information gathered in research should not be shared without the permission of the custodians of the data (WHO, 2013:25; Polit & Beck, 2012:162). The outcomes data obtained from the hospitals were statistics (numbers). The names of the hospitals did not appear on any checklist.

3.4.6 Confidentiality

Heale and Shorten (2016:1) and the WHO (2013:25) define confidentiality as the process whereby a researcher goes into a trust relationship with a study sample (two hospitals in this study) with the understanding and expectations that data provided will not be shared with others, unless permission is granted. The researcher had to ensure that the following precautions were taken to ensure confidentiality:

- One password-protected and locked computer was used to capture all the data. Only the researcher had access to this computer.
- No identifiable hospital information was evident as data were captured on a blank checklist (Polit & Beck, 2012:81-151; WHO, 2013:26; Sanjari, Bahramnezhad, Fomani, Shoghi & Cheragi, 2014:3).

3.5 DATA GATHERING INSTRUMENT

The researcher used an existing audit checklist data collection instrument and removed the identifiable data (Appendix E). The NAA, patient fall rate, HAPU incidence, and HH compliance data from January 2016 to December 2016 were captured. Both hospitals that were selected and volunteered to participate were required by the Corporate Operational Body (SEHA) to audit key nursing performance indicators; these include NAA, patient fall rates, HAPU incidence and HH compliance. The same data collection format was used that the study hospitals used to collect monthly data to benchmark with each other, and the data collected monthly in each the NDNQI.

3.5.1 Reliability and validity

3.5.1.1 Reliability

As data collection methods vary in quality, the researcher ensured that the captured data reflected the concepts that were relevant, accurate, truthful and sensitive (Wood & Ross-Kerr, 2011:209-219). An existing audit checklist on an Excel spreadsheet was adjusted based on the nursing indicators this study targeted: completing the NAA within 24-hours; assessing patients' fall risk, HAPU prevention, and the HH compliance rate (Appendix E).

3.5.1.2 Validity

Validity can be defined as the degree to which an instrument measures what it is supposed to measure (Wood & Ross-Kerr, 2011:209). According to Wood and Ross-

Kerr (2011:331), the testing of the questionnaire's validity is not proved, but rather is supported by an accumulation of the evidence. There are three types of validity: self-evident measures (face, content validity), pragmatic measures (concurrent and predictive validity), and construct validity. The validity of the checklist was achieved as both hospitals used and collected the same data for a corporate body, using the same checklist. Criterion-related validity was ensured whereby the researcher sought to establish a relationship between the scores on an instrument and some external construct, through comparing data from Phase 1 (outcomes data) to that in Phase 2 (patient safety).

3.5.2 Data gathering

After ethical approval was granted from the Research Ethics Committee of the Department of Health Studies at UNISA, and the hospitals' IRBs, the researcher requested access to the audit forms. As stated in Section 3.5, these nursing performance data are required audits from the Corporate Operational Body and they are an NDNQI condition. The hospitals were requested to provide the patient outcomes data demonstrating the monthly data for each of the four patient outcome measures (falls, NAA, HH and HAPU – see Appendix E). The CNOs, who were already trained to collect these types of data since they regularly collect similar data for the hospitals' corporate office, acted as field workers to gather the audit data on the checklist (Appendix E). The data were captured for the 12 months January to December 2016.

3.6 DATA ANALYSIS

Descriptive statistics were used to synthesise and describe the data as explained by Wood and Ross-Kerr (2011:249). The SPSS 2010 was used for data analysis. The audit checklists (Appendix E) completed from Hospitals A and B were submitted to a statistician for data processing and analysis, and are presented in bar graphs (Figures 3.1 to 3.4 & Appendix F). In the discussion of the results, the following apply:

The **conventions** for the presentation of data are as follows:

- N= refers to the total sample.
- n= refers to subsections of the sample (N), for instance, males. 'n' also becomes the divisor/denominator used to calculate percentages.
- f= refers to frequencies within the sample set under discussion and can refer to either N or n, which serve as a divisor to arrive at a percentage of the sample set (Polit & Beck, 2012:Loc 24267). Percentages in graphs are presented in first decimal point.
- Missing values were not included in the n= values as divisors (denominators).

The procedures for the analysis of the data is illustrated in Table 3.2.

Table 3.2: Data Representation

Data Analysis Procedures	Phase 1
Preparing Data	Quantitative data regarding patient outcomes for Hospitals A and B was transferred to a data checklist (Appendix E)
Reviewing and exploring Data	Descriptive analysis and identifying trends and distributions from patient outcomes data for Hospitals A and B
Analysing Data	SPSS 2.0 tool was used for the data analysis and comparisons in Phase 1
Representing Data	Data for this phase were presented in tables, graphs and figures

3.7 RESEARCH RESULTS

The results are presented taking the different types of obtained data into consideration.

3.7.1 Patient outcomes data

The data regarding patient outcomes for Hospitals A and B pertaining to NAA, fall rates, HH and HAPU were obtained. In presenting, but specifically in the interpretation of the data, it is important to describe the number of patient admissions for both hospitals to illustrate patient volumes and the risk associated with non-compliance. In Hospital A, a total number of sixteen thousand seven hundred (N=16700) patients, and in Hospital B, a total of twelve thousand one hundred and thirty-six (N=12136)

patients were admitted during the period January to December 2016. The breakdown for the different units' admission volumes can be found in Appendix E.

3.7.2 Nursing Admission Assessment (NAA)

As discussed (see Chapter 2, Section 2.4.2.4), SEHA (Corporate Office and the Arabic name for Health) and the accreditation bodies (Joint Commission International Accreditation - JCIA and Health Authority Abu Dhabi - HAAD), require nurses to do a 100% complete NAA on every new patient within the first 24-hours after admission. This ensures that the nurses have a foundation on which to base their decision making regarding patient care (Hospital Policy, 2016; JCIA, 5th Ed. 2016).

As illustrated in Figure 3.1, in Hospital A the nurses working in the Medical and Surgical units had an average 96.5% compliance rate (all four quarters of the year) for completing the NAA within the stipulated 24-hour period. Paediatric wards were at 94.2%, and the Critical Care Areas at 96.9%. In Hospital B (Figure 3.1), the nurses working in the Medical units had a 97.2% compliance rate for completing the NAA within the stipulated 24-hour period, Surgical Units were at 98.2%, Paediatrics at 98.8%, and the Critical Care Areas at 98.5%.

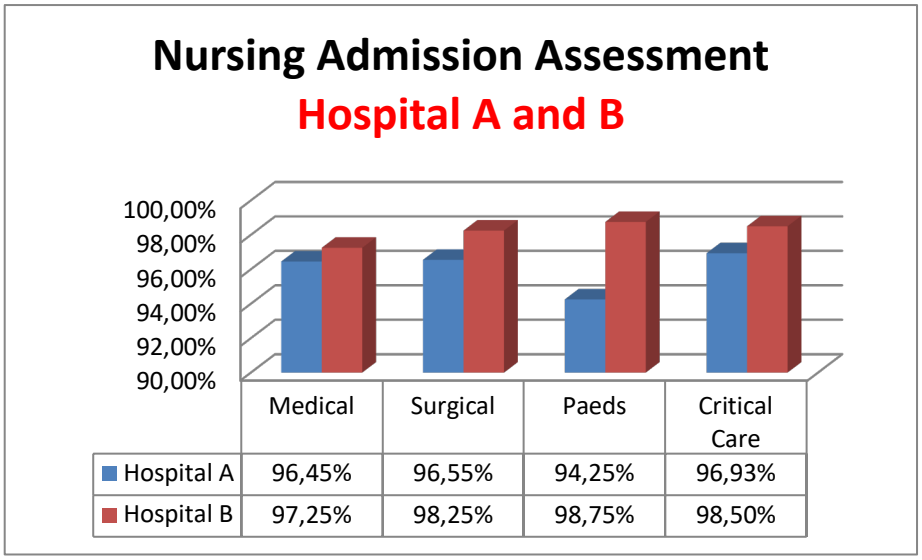


Figure 3.1: Hospitals NAA Rates

The data for both hospitals reflect that practices in terms of NAA are not equally sustained in each quarter. On average, Hospital B's compliance was higher than that

of Hospital A. Comments from nurses in Phase 2 (see Table 4.19 in Chapter 4), revealed resource deficits and connectivity issues with the electronic medical record system as reasons for non-compliance (see 4.6.3.1 regarding NAA). The nurse manager is required to address the resource deficits and connectivity issues listed in Phase 2 as it could negatively affect the nurses to develop a sound care plan for the patient as all relevant information is not available.

3.7.4 Falls

Hospitals are also required to monitor falls according to SEHA and accreditation bodies (DoH, 2016; Hospital Policy, 2016; JCIA 5th Ed. 2016) to ensure that mitigating measures can be taken to prevent future patient harm and meet the patient safety goals. Although the nurses did fall risk assessments for the total number of patients admitted in both hospitals (N=28836), fall incidents still occurred. From the data, 162 (n=162) falls were reported by nurses within the units of the selected hospitals (total number units represented Medical N=12; Surgical N=8; Paediatrics N=6; Critical Care N=9). The statistics unfortunately only reveal the falls recorded, and not the ones not reported or recorded.

The nurses in the Medical units in Hospital A documented 25 falls with a marked increase of falls during the 4th quarter (13 out of the 25 falls documented), which is of concern. The nurses in the Surgical units documented 12 falls (4 in the 1st quarter, 6 in the 2nd quarter and 2 in the 4th quarter), and in the Paediatric units 22 falls (11 in Q1, 8 in Q2, only 1 in Q3 and 2 in the Q4). In the four Critical Care units, the nurses documented seven falls in quarters 2 and 3. In Hospital B (see Figure 3.2), the data illustrate that the nurses in the Paediatric units documented five falls in quarter 2, and four in quarter 3. It is of concern that there were 25 falls documented in the Medical units. On a similar trend, the nurses in the three Surgical units documented 31 falls (Q1 n=17, Q2 n=5, Q3 n=6, and Q4 n=3). Although the falls decreased in the last quarter, it is troublesome that the fall rates increased in the first quarter for the Surgical units and in the second quarter for the Medical units.

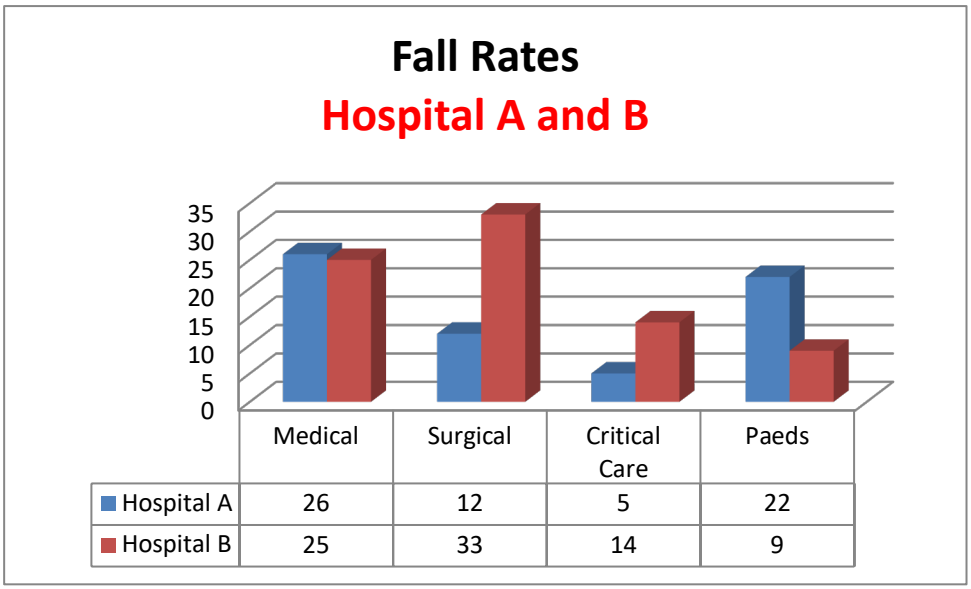


Figure 3.2: Hospital Fall Rates

It was evident from the data retrieved, that despite all efforts to ensure zero falls, nurses fail to comply 100% to fall prevention protocols as there were still incidences of falls in the Medical, Surgical, Paediatric and Critical Care units. Responses from the nurses in Phase 2 (see Section 4.6.3.2, in Chapter 4) indicate patient conditions and inadequate staffing as reasons for patients falling in their units.

3.7.5 Hand Hygiene (HH)

As HH is also a JCIA patient safety goal, SEHA has stipulated that hospitals under their portfolio should use the WHO's '5 Moments of Hand Hygiene' to reduce hospital-acquired infections (Hospital Policy, 2016; JCIA, 5th Ed. 2016). As discussed in Chapter 2 (Section 2.4.2.3), there is a dedicated team that oversees the healthcare team's efforts to prevent and control the transmission of hospital-acquired infection and conducts unit-based audits. The HH compliance data from the different units were documented and collated on the checklist provided (Appendix E).

The data for Hospital A for the different units demonstrated that the HH rate ranges between 85.4% to 94%, and in Hospital B the HH rates range between 91.8% to 95.6%. Thus, Hospital B had better compliance in all units compared to Hospital A (Figure 3.3). This is similar to Hospital B having an overall better compliance rate pertaining to NAA (compare Figure 3.1 and Figure 3.3).

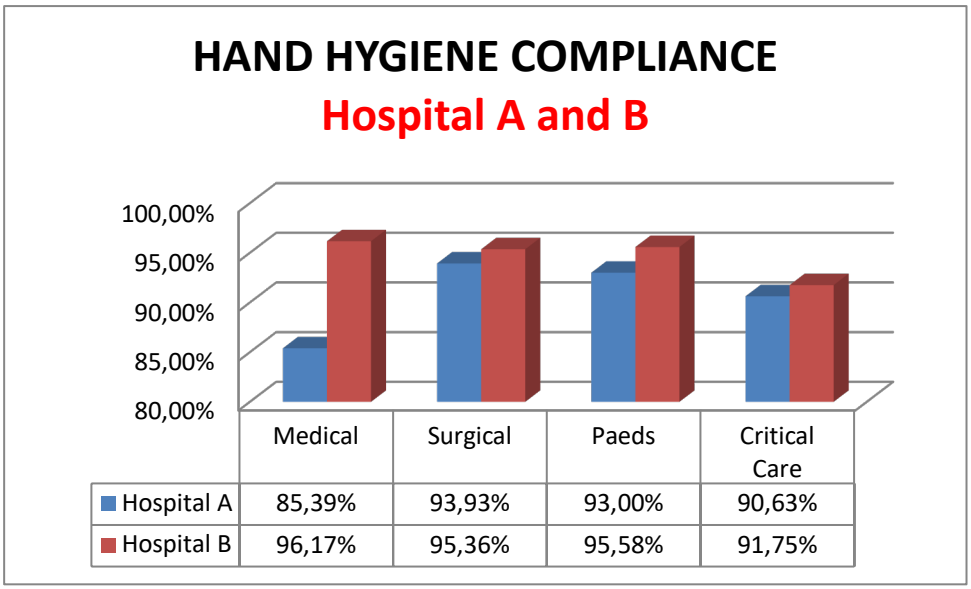


Figure 3.3: Hospitals Hand Hygiene Rates

This data is of concern as non-compliance to HH could be contributing to hospital-acquired infections that negatively affect the length of stay in a hospital, hospital costs and patient outcomes (Fox, Wavra, Drake, Mulligan, Pachecho, Bennet, Nelson, Kirkwood, Jones & Bader, 2015:217).

3.7.6 Hospital-Acquired Pressure Ulcers (HAPU)

The literature suggests that hospitals have skin risk assessment tools and appropriate pressure reduction resources available as HAPU is preventable (NPUAP, 2016:14). Although the nurses did the Braden Skin Integrity Risk Assessment for all patients admitted in both hospitals, HAPU incidents still occurred.

From the data, ninety-six (n=96) HAPU incidents were reported by nurses within the units of the selected hospitals. This did not only have a negative impact on patient outcome (injury and loss of work), it also increased costs for the hospital as the patients' length of stay increased. Thus, hospitals must monitor HAPU incidence and share this outcomes data with the nursing teams to prevent future incidences (DoH JAWDA KPI, 2017; Hospital Policy, 2016, JCIA 5th Ed, 2016; NPUAP, 2016:14).

The nurses in the Medical units reported (Hospital A: n=13, Hospital B: n=7) 20 incidents of HAPU, and in Hospital B the nurses reported four HAPU incidents in the

Surgical units (see Figure 4.4). The Critical Care units had the highest HAPU incidence reported (Hospital A: n=28, Hospital B: n=22).

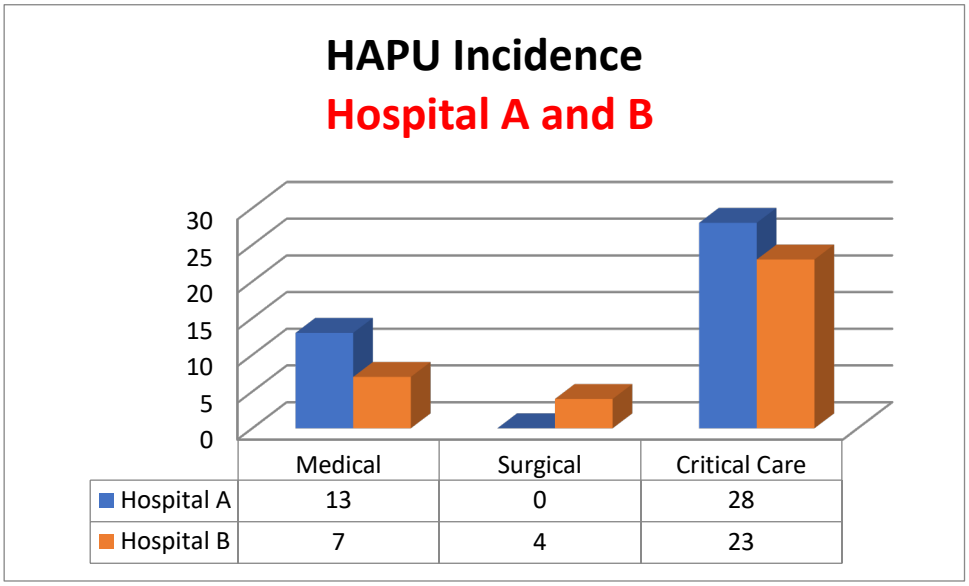


Figure 3.4: Hospitals HAPU incidence

The nursing team must explore why immune-compromised patients develop pressure ulcers while in hospital (NPUAP, 2016:15). The reported data illustrate increased incidence rates in the Medical, Surgical and Critical Care units for 2016. These factors may include patient haemodynamic status, nurse knowledge, insufficient staffing and pressure reduction resources, nutritional support, pathway bundle, etc. Coyer, Gardner, Doubrovsky, Allen and McNamara (2015:204) iterate that HAPU results in poor outcomes for patients and increased cost for the hospital; therefore, the nurse managers need to be aware of how these factors impact skin risks for patients in their unit.

3.8 CONCLUSION

The data revealed that despite requirements of the Corporate Operational Body and regulation and accreditation bodies, the nurses did not manage to comply 100% with HH requirements, or complete the NAA within the 24-hour timeframe. Despite a 100% compliance in nurses conducting falls and skin risk assessments, incidences of HAPU and falls still occurred. It was also evident that Hospital B performed better in all aspects compared to Hospital A.

In Chapter 4, the methodology, data gathering, data analysis and interpretation of the data from Phase 2 of the study are discussed.

CHAPTER 4
PHASE 2: RESEARCH METHODOLOGY, DATA GATHERING AND INTERPRETATION

4.1 INTRODUCTION

This chapter discusses the methodology, data analysis and interpretation of the results from Phase 2 of the study (see Table 4.1). Phase 2 represents the quantitative part of the mixed methods research design as described in Section 4.2.

Table 4.1: Research progress

Chapter	Content
1	Orientation to the study
2	Literature review (1) safety culture, (2) hospital climate, (3) patient safety outcomes and (4) managing 'just culture' based on Reason's and Ekenedo's Safety Culture Framework.
3	Phase 1: Research methodology, data gathering and interpretation of outcomes data
4	Phase 2: Research methodology, data gathering and interpretation of questionnaires
5	Phase 3: Literature review on action plan development as well as the development of the draft action plan and the validation assessement instrument
6	Phase 4: Research methodology, data gathering and validation of the action plan
7	Conclusions, limitations and recommendations

4.2 RESEARCH DESIGN

Wood and Ross-Kerr (2011:114) describe a research design as the plan that describes how, where and when data is to be collected and analysed. The role of the research design is to ensure that the evidence obtained enable us to answer the initial question as unambiguously as possible. The researcher used a multi-method study that is descriptive and exploratory in nature to conduct this study. As illustrated in Table 1.1

(Chapter 1, Section 1.8), for this phase of the study the research design was quantitative in nature, and a convenience sampling method was used to select respondents.

4.2.1 Population

The population of nurses and nurse managers in the two hospitals based in the UAE (see Chapter 1, Section 1.8.2), according to the March 2016 Hospital Master Staffing Rota were 46 nurse managers and senior charge nurses combined, and 1597 registered nurses (Charge Nurses & Staff Nurses).

4.2.2 Sampling method and sample size

Convenience sampling, defined as a non-probability sampling method, was used. The sample included participants who were available and willing to participate (Wood & Ross-Kerr, 2011:72), thus accommodating the on and off duty times of all possible participants in the two hospitals.

The researcher took into account various factors affecting the sample size and the homogeneity of the nursing team, the population, their co-operation and the potential attrition (Wood & Ross-Kerr, 2011:167). There is no easy formula to predict how large a sample should be, but the larger the sample the more representative it is (Polit & Beck, 2012:284). Due to the diversity pertaining to the prospective participants' different nationalities, the researcher needed to include a larger sample to ensure that different nationalities' perceptions of safety culture were taken into consideration.

Attrition is likely to occur if the times between data collection is great or the population is mobile (Polit & Beck, 2012:285), and as the geographical dispersion of the two hospitals is approximately one hundred and fifty kilometres apart, there was an opportunity to have greater attrition. The researcher ensured that the information leaflet was shared and that the gatekeeper on each site understood the study aim and purpose (Appendix B).

The suggested sample size for the nurses was 312, and nurse managers 41, ensuring a confidence level at 95%. Although the statistical sample CI tool recommended the mentioned sample size, a total number of 900 questionnaires, including the information letter to ask for their voluntary participation (Appendix B), were handed out to the nurses (600 in Hospital A and 300 in Hospital B) and 46 questionnaires were distributed to the nurse managers (23 in Hospital A and in 23 Hospital B). Questionnaires were handed to those nurses and nurse managers conveniently available during a particular shift in Hospitals A and B. A total sample size of 946 was obtained.

4.2.3 Data gathering technique

Without an appropriate data collection method or technique, the validity of the research conclusions can easily be challenged (Polit & Beck, 2012:288). Questionnaires developed from a thorough literature review that was pre-tested (see Chapter 1, Section 1.8.4), were used. Data were obtained to describe, explain and explore the views from the nurses' and nurse managers' perspectives.

A structured, quantitative approach for collecting self-report data was appropriate. Two separate questionnaires were developed to obtain the necessary information from the nursing team (Appendix C & D). The first questionnaire (Appendix C) was developed to review the nurses' safety culture, patient safety, climate and cultural aspects that could affect sustainable patient outcomes. The second questionnaire (Appendix D) was developed to review the nurse managers' culture of safety, hospital climate, cultural and 'just culture' practices affecting sustainable patient outcomes.

A questionnaire as data gathering instrument has both advantages and disadvantages, as explained by Polit and Beck (2012:264). The advantages served as motivating factors for the researcher choosing a questionnaire to gather data.

4.2.3.1 Advantages of questionnaires

- Questionnaires are able to direct multiple questions at once and require less effort to administer since participants can answer questionnaires in a time convenient to

them. Participants were allowed to complete the questionnaire at their own time, and they could also complete them anonymously as no identifiable data were requested on the questionnaire. Confidentiality could also be maintained, and participants could choose to complete or not to complete the questionnaire; the information letter (Appendix B) provided information pertaining to voluntary participation.

- An interviewer was not required, which limited bias since a possible reflection on the researcher was not applicable.
- The different questions were easy to complete in open and or closed format and were tested (Appendix C and D) to ensure that they were understandable by the diverse team.
- As nurses were in their own environment it provided them the freedom to answer questions about sensitive topics, such as about the nurse manager, openly.
- Replication of a study where questionnaires were used is easier for future studies (Polit & Beck, 2012:264).

4.2.3.2 Disadvantages of questionnaires

The following disadvantages of questionnaires are described in the literature (Zohrabi, 2013:255):

- Questionnaires can suggest ideas to participants that they would not otherwise have thought about, as could have been the case in this study. However, in this study's context, this was more of an advantage than a disadvantage.
- Due to language barriers, respondents could misunderstand questions, but a pre-test was conducted to ensure that the nurses and nurse managers did not misinterpret a question. The pre-test respondents could also suggest changes to ensure that the questions are clear.
- The use of open-ended questions requiring narrative responses might lead to inappropriate responses due to language barriers. In this study, open-ended questions were posed in a manner that nurses and nurse managers could share their subjective perception related to culture, safety culture practices, climate

factors and how managers manage the behavioural choices of nurses to allow them to respond in a manner that they preferred.

To limit the disadvantages of questionnaires, it was pre-tested on a diverse group of nurses and nurse managers.

4.2.3.3 Development of the questionnaire

Multiple factors were required to be included in the questionnaire for Phase 2 of the study. Firstly, the researcher used the Reason Safety Culture Framework that comprised five subcultures: the informational, flexible, reporting, just and learning culture (Reason, 2000:7), to ensure that the nurses and nurse managers were able to reflect on how safety culture was applied in clinical practice and how it improves patient safety. Ekenedo's Safety Framework was used to illustrate the need for leadership, role modelling, a shared vision and expectations, and behaviour-based training (Golda, 2013:31) to sustain practices to improve patient outcomes.

Secondly, the researcher had to determine how the hospital climate factors (positive work environment used interchangeably in the literature) that address work environmental structures, affect the nursing team's morale. This was considered in terms of scheduling, staffing levels and patient allocations, teamwork, effective communication, acknowledgement and appreciation, and nurse managers' visibility (Twigg & McCullough, 2013:86; Bronkhorst, et al. 2018:5). These factors were found to impact sustainable patient safety.

Thirdly, to incorporate patient safety practices into the questionnaire, best practice evidence from the literature related to patient outcomes for HH, HAPU, the NAA documentation, and fall risk were used as a guide in the development of the questionnaires.

Fourthly, to establish how the nursing team's and patient's culture affects patient safety, the questionnaire had to include questions pertaining to culturally congruent care.

In the first part of the questionnaires, the researcher needed to assess the diversity of the team and the cultural factors that could potentially influence patient safety. Section A addressed the biographic data reflecting the cultural diversity of the participants, their nursing educational background, experience and length of service. In the second part of Section A, how their own and patients' cultures affect them in providing safe patient care was considered (Appendix C & D).

Section B of the questionnaire (questions 1-36) was based on patient safety outcomes for HH, HAPU, and NAA and falls. This section contained closed- and open-ended questions (Appendix C). This section for the nurses' questionnaire also included questions (37-38) to determine the nurses' perceptions as to what safety culture means in clinical practice and their understanding of the hospital climate (Appendix C). Section B of the nurse managers' questionnaire (Appendix D) included questions on patient safety in terms of HH, HAPU, NAA and falls.

Section C of the nurse managers' questionnaire included questions on safety culture (Appendix D). Section C of the nurses' questionnaire (Appendix C) included questions on safety culture and hospital climate, and Section D for the nurse managers' questionnaire included questions on 'just culture' (Appendix D). A five-point Likert Scale – a technique which consists of several declarative statements that express a viewpoint on a topic (Polit & Beck, 2012:297) – was used to evaluate the nurses' perception on safety culture and hospital climate; and nurse managers' perception on 'just culture' practices (Section C for nurses; Section D for nurse managers).

The questionnaires included both open- and closed-ended questions. According to Polit and Beck (2012:298), open-ended questions allow for information to be provided in narrative form, thus allowing the nurse and nurse manager to share subjective opinions in their own words for qualitative enhancement of the questionnaire.

4.2.4 Validity

Validity can be defined as the degree to which an instrument measures what it is supposed to measure (Polit & Beck, 2012:336). According to Polit and Beck (2012:

336), the testing of the questionnaire's validity is not proved but rather supported by an accumulation of evidence. There are four types of validity (Neuman, 2011:211):

a) **Face validity** is judgment by the scientific community that the indicator really measures the construct. A pre-test of the questionnaire was conducted to determine whether the individuals – who did not form part of the sample group – had any difficulty in understanding and answering the questions (see Chapter 4, Section 4.2.4). The researcher included five graduate nurse interns and five clinical resource nurses who were not part of the sample group to pre-test the instrument. The questionnaire was also submitted for scrutiny and assessment by the scientific review committee of the Department of Health Studies at UNISA.
b) **Content validity** addresses the fact that all the components were measured. Content validity is concerned with the adequacy of coverage of the content area that is being measured, and this is crucial when testing knowledge (Polit & Beck, 2012:337). The literature study supported the development of the questionnaire. Questions were based on cultural diversity and how it affects the workplace. It also explored the components of the various factors affecting safety culture to ensure positive patient outcomes.
c) In **criterion-related validity** assessments, the researcher seeks to establish a relationship between the scores on an instrument and some external construct through comparing data from Phase 1 (outcomes data) to that obtained in Phase 2 (patient safety).
d) **Construct validity** is the most difficult and challenging to measure. In construct validity, there is always an emphasis on testing the predicted relationships based on theoretical considerations. There were a couple of very similar questions that were purposefully added to correlate if perceptions remain the same. Nurses' culture of safety and patient safety responses were also compared to that of the nurse managers and the outcomes data from Phase 1.

4.2.5 Reliability

Reliability informs researchers about a data collection tool's dependability and consistency in measuring the same attribute (Polit & Beck, 2012:331; Neuman 2011:209). All concepts and constructs were conceptualised. There were multiple

indicators for a variable, and a pre-test was done to test the questionnaire before the study, as suggested by Polit and Beck (2012:331) and Neuman (2011:211). This also ensured the stability of the questionnaire (see Chapter 4, Section 4.2.6 for pre-testing).

4.2.6 Pre-testing the questionnaire

Once approval was obtained from the scientific review committee and from the Research Ethics Committee of the Department of Health Studies at UNISA, the researcher initiated the pre-test. A group of five graduate nurse interns and five clinical resource nurses who were not part of the sample group and who were also from diverse cultural backgrounds were purposefully selected for the pre-test as they were known to the researcher and volunteered to participate. The information letter (Appendix B) and questionnaire (Appendix C & D) were handed to the pilot group, and they were instructed to complete and provide feedback within a two-week period. To ensure anonymity, a sealed box was placed at the Nursing Secretary's office for them to deliver their completed surveys. Six out of the ten volunteered to participate, which resulted in a 60% response rate.

The following recommendations were made based on feedback from the pre-test respondents:

- Section A: Question 5 was changed as the respondents all commented that they had English training at school, so it was changed to reflect formal training received in English, other than as a school subject.
- Section A: Question 12 was changed to 'Do you think that your own culture (traditions, values and beliefs) has an effect (positive or negative) on how you ensure patient safety where you are working?' because the respondents indicated that the question was not specifically referring to their own culture.
- Section A: Question 13 about patients' culture was changed to 'Do you think that the culture (traditions, values and beliefs) of your patients have an effect on you, in providing safe care to them?' to prevent misinterpretation, as was the case with the respondents in this question.

- All double-barrel questions in Sections B and C, where the word 'and' appeared, led to confusion, and these questions were changed to ensure that only one question was asked at a time.
- Respondents felt that a few questions in Sections B and C were duplications; however, these were kept for triangulation in the analysis chapter.

Based on the feedback received from the group, the inputs from the supervisor and the statistician, the questionnaire was amended and then forwarded for approval to the scientific review committee of the Department of Health Studies at UNISA prior to distributing it to the nurses and nurse managers (Appendix C & D).

4.2.7 Data gathering

Once the questionnaires were approved by the scientific review committee and the Research Ethics Committee of the Department of Health Studies at UNISA (Appendix I) and the two hospitals' Institutional Ethics Review Boards (Appendix J & K), the researcher started collecting data.

The researcher planned meetings with the two CNOs who acted as the gatekeepers for both facilities (Hospitals A and B) to arrange for the distribution of the information letters and questionnaires to the available nurse managers and nurses. After explaining the reason and purpose of the study to the CNOs, they distributed the information leaflets (Appendix A & B) and questionnaires to the nurses and nurse managers in Hospitals A and B (Appendix C & D). All possible respondents had the choice not to complete the questionnaire as was explained in the information letter (Appendix B). By completing and submitting the questionnaire, the respondents gave consent to participate in the study voluntarily.

The CNOs – as gatekeepers – distributed the questionnaires to the nurses (900) and nurse managers (46) during their different shifts. A four-week period was allowed for voluntary completion of the questionnaires. Clearly labelled and sealed boxes were distributed in the nurse manager's office at each of the units for ease of dropping off

the completed and sealed questionnaires. Every nurse manager was asked to oversee the integrity of the sealed boxes for confidentiality.

All the sealed boxes were collected from the different units by the gatekeepers' secretaries; then the researcher collected them from the CNOs' offices.

4.3 ETHICAL CONSIDERATIONS

The general ethical principles discussed in Chapter 3, Section 3.4 were adhered to in terms of (1) Beneficence (see Section 3.4.1), (2) Freedom from harm (see Section 3.4.1.1) and (3) Confidentiality (see Section 3.4.6). Ethical approval was obtained from the University Research Ethical Board (Appendix I) and the two hospitals' Institutional Ethics Review Boards (Appendix J & K), and implied consent was applicable for respondents who volunteered to participate (see Chapter 1, Section 1.9.2). The only aspects specific to Phase 2 were the freedom from exploitation, the principle of human dignity, the principle of justice, and anonymity.

4.3.1 Freedom from exploitation

The researcher-participant relationship should not be exploited (Polit & Beck, 2012: 153). The nurses and nurse managers in this study were protected from adversarial situations. They were assured that the information they provided to the researcher or their participation would not be used against them. The questionnaires were safely stored in a locked cupboard and on a password-protected computer. All data will be destroyed (Polit & Beck, 2012:162) two years after the publication of the study.

4.3.2 Principle of human dignity

The principle of human dignity in this phase of the study pertains to the right to self-determination and full disclosure (Polit & Beck, 2012:77) of the nursing team.

The right to self-determination meant that the prospective participants were not coerced into taking part in the study (Polit & Beck, 2012:78). Nurses and nurse managers had the right to decide whether to participate without incurring any penalty.

Nurses and nurse managers were approached in the sessions conducted by the gatekeepers in Hospital A and Hospital B, the purpose of the study was explained, and questionnaires were distributed. No remuneration was offered, and the nurses and nurse managers were informed of the opportunity to withdraw their participation at any stage of the research (Appendix B). Completing the questionnaire implied that the respondent gave consent to participate in the study and that they received the information leaflet.

The right to full disclosure meant the researcher fully explained the nature of the study and the person's right to refuse participation. Self-determination is dependent on full disclosure (Polit & Beck, 2012:78). The gatekeepers in each hospital shared the aim and purpose of the study, the type of research, and other data collection procedures with the nurses and nurse managers (Appendix B).

4.3.3 The principle of justice

This principle includes the nursing teams' right to fair treatment and privacy. The right to fair treatment stipulates that the selected nursing teams' inclusion was based on the requirements of the research. The gatekeepers, on behalf of the researcher, ensured non-prejudicial treatment of the nurses and nurse managers who refused to take part or who withdrew. Sensitivity was exercised and respect was shown for the nurses' and nurse managers' beliefs, habits, lifestyles, cultures and emotions. Respondents were treated courteously at all times (Polit & Beck, 2012:81). The sampling method was utilised in selecting nurses and nurse managers based on their availability.

In this phase, the **right to privacy** means that the information provided by the nursing team would not be shared without their knowledge (Kulmala, 2016:8). As the study was conducted and the nursing teams were allowed to complete the questionnaires in their own natural setting, there was no intrusion of privacy.

4.3.4 Anonymity

Anonymity was ensured as the researcher provided the data with a unique identification number to ensure that there was no link between the data and the respondents (Polit & Beck, 2012:150; Kulmala, 2016:8). Anonymity and informed consent were obtained, which protected the respondents from recrimination. A sealed box to ensure anonymity was placed inside each of the department nurse managers' offices for the nurses and nurse managers to return their completed questionnaire.

4.4 DATA ANALYSIS AND PRESENTATION

During the data analysis, the raw data collected from the questionnaires were captured by the statistician into the software programmes: SPSS version 10 for quantitative data, and NVivo software for qualitative data.

The information gathered from the closed-ended and Likert Scale questions is therefore presented in tables, pie graphs and bar charts. The pie chart is used in cases where the respondents could choose only one alternative, and the pie chart for the total respondents opting for each choice. Bar charts were used where the respondents could mark more than one choice and where the bar chart compares the frequencies of the different choices.

The narrative comments from the nurses and nurse managers were open-coded (see Chapter 4, Sections 4.6 and 4.7) using an NVivo computer file in a specific format as suggested by Neuman (2011: 384). NVivo is designed to organise, analyse and find insights into qualitative data from open-ended responses (NVivo Webpage).

4.4.1 Levels of measurement

Polit and Beck (2012:379) and Neuman (2011:218) state that there are four measurement levels a researcher can use to analyse data: *Nominal, Ordinal, Interval,* and *Ratio* measurements (Polit & Beck, 2012:379; Neuman, 2011:218). The researcher made use of the ordinal (rank) and the ratio (frequency) measurements to

rank the factors affecting a sustainable safety culture to ensure positive patient outcomes.

4.4.2 Descriptive statistics

Statistical procedures enable researchers to organise, interpret and communicate numeric information (Polit & Beck, 2012:379; Neuman, 2011:218). Most scientific questions are about parameters and researchers use statistics to estimate these parameters (Polit & Beck, 2012:379).

The researcher used percentages to synthesise and describe the biographical diversity data. Averages and percentages were employed for the various components affecting sustainable safety culture to improve patient outcomes.

4.4.3 Inferential statistics

Inferential statistics, according to Polit and Beck (2012:379), are based on the laws of probability, and these statistics provide a means for drawing conclusions about a population or set of given data from a sample. In this study, inferential statistics should illustrate the relationship between factors affecting a sustainable safety culture to improve patient outcomes.

The statistician utilised inferential statistical tools to determine how cultural diversity and hospital climates affect safety culture practices of the diverse nursing team, and how nurse managers apply ‘just culture’ principles to manage the behavioural choices of the nurses to sustain practices (Wood & Ross-Kerr, 2011:261; Statistician SKMC, 2014). In the analyses of data from Phase 2, descriptive and correlation analyses (Pearson and ANOVA) were also conducted to examine possible associations among the qualitatively constructed thematic and quantitatively based measured variables (Castro, Kellison, Boyd & Kopak, 2010:11).

4.5 DATA PRESENTATION AND INTERPRETATION

This data provide information pertaining to: (1) the nursing team's safety culture practices that affected patient safety; (2) the nursing team's climate factors that affected patient safety; (3) the challenges of nurses regarding safety culture practices that influenced patient safety; (4) the nurses' opportunities regarding safety culture practices that influenced patient safety, and (5) the nurse managers' perception of how they were managing the behavioural choices of the nurses to ensure positive patient outcomes.

Out of 900 questionnaires distributed to nurses, 417 completed questionnaires were received for analysis (N=417), thus a response rate of 46.33% was achieved. For the nurse managers, 34 of a possible 46 questionnaires were returned for analysis (N=34), thus a response rate of 73.91% was obtained.

In the discussion of the results, the following apply:

The conventions for the presentation of data are as follows:

- N= refers to the total sample.
- n= refers to subsections of the sample (N), for instance, males. "n" also becomes the divisor/denominator used to calculate percentages.
- F= refers to frequencies within the sample set under discussion and can refer to either N or n, which serve as divisors to arrive at a percentage of the sample set (Polit & Beck, 2012:Loc 24267).
- Percentages in graphs are described in first decimal point.
- Missing values were not included in the n= values as divisors (denominators).

For Pearson Correlation and ANOVA Regression data see Appendix G and H.

It is important to note that where responses in the open-ended questions are quantified the reason is only to emphasise the importance of a specific motivation and not to quantify the data.

4.6 SAFETY CULTURE PRACTICES OF NURSES (QUESTIONNAIRE)

The nurses' biographical data, their understanding of their own culture as well as patients' culture, the hospital climate, patient safety and a culture of safety practices are described.

4.6.1 Biographical data

The biographical information included variables such as gender, age, nationality, language, highest level of nursing education, current work area, current position, and years of experience in current position.

Hilliard, et al. (2012:885) iterate that privacy and gender separation is very important in Islam and therefore gender in the context of this study was essential, as illustrated in Table 4.2. Three hundred and forty-five of the nurse respondents were female, while the remaining 67 were male nurses. The nurse manager therefore needs to ensure a relevant female: male ratio in accordance with the gender of the patients admitted to the unit.

Numminen, Meretoja, Isoaho and Leino-Kilpi (2013:1) were of the opinion that older nurses are more experienced and competent. The **age** of nurses was thus asked to inquire about the skill mix and competence of the nurses appropriate for safe staffing. The data from the 416 nurses who participated, as illustrated in Table 4.2, revealed that the minority of nurses (n=9) were between 18-24 years, with the majority being between the ages 35-64 years. This supposedly indicates sound experience in practice, therefore indicating skill mix and competence.

Table 4.2: Gender and Age of Nurses (N=416)

	Age	n	f=%
Female n=345	18-24	8	1.92
	25-34	113	27.2
	35-44	139	33.41
	45-54	64	15.38
	55-64	21	5.04

	Age	n	f=%
Male n=67	18-24	1	0.24
	25-34	32	7.7
	35-44	17	4.08
	45-54	15	3.6
	55-64	1	0.24

The respondents' **nationality** was important to describe the unique cultural diversity among the nurses, as culture may potentially influence patient safety and outcomes (Hofstede, 2011:3). Table 4.3 highlights the 21 diverse nationalities that participated in this study, of which the majority (n=164) were nurses from the Philippines, followed by Indian nurses (n=155). Based on admission data, the compilation of patient nationalities (Hospitals data, register 2017) treated in both Hospitals A and B in 2017 were 75% Emirati and 25% Non-Emirati (from a total of 19 different nationalities). As most patients were Emirati, it is concerning that the Arabic nationalities were represented by only 70 nurses. The data therefore indicates that although most patients are Emirati (f=75%), the nurses are mostly Philippine and Indian. This could potentially affect the delivery of culturally congruent care.

Table 4.3: Nationality of Nurses (N=416)

NATIONALITY	n	f=%
JORDANIAN	21	5.05
PHILIPINE	164	39.42
INDIAN	155	37.25
SOUTH AFRICAN	9	2.16
EMIRATI	6	1.44
MALAYSIAN	1	.2
BRITISH	4	.96
GERMAN	1	.2
PAKISTANI	2	.24
SYRIAN	1	.2
EGYPTIAN	3	.72
PALESTINIAN	14	3.36
LEBANESE	2	.48
SOMALIAN	12	3.36
SUDANI	6	1.44
BANGLADESHI	3	.72

NATIONALITY	n	f=%
OMANI	5	1.2
SEYCHELLOIS	1	.2
AUSTRALIAN	1	.2
INDONESIAN	3	.72
BULGARIAN	1	.2

Identifying the respondents' **home language** was important, as effective communication is essential for conveying messages during service delivery and interaction with patients and colleagues (Meuter, Gallois, Segalowitz, Ryder & Hocking, 2015:1). The Corporate Operational Body (SEHA), requires the healthcare provider communication to be English to avoid valuable patient care information being lost in translation due to the diverse workforce who provide care and healthcare information. As illustrated in Table 4.4, almost a third (n=163) of all the nurses speak Tagalog (the dialect spoken by the Philippine nurses), followed by Urdu/Hindi/ Malayalam dialect (n=131), which are the languages spoken by the Indian and Pakistani nurse respondents. As illustrated by the respondents' nationalities, most patients were Emirati, and only 73 nurses spoke Arabic dialect – the Emirati, Jordanian, Syrian, Sudanese and Palestinian nurses. This clearly illustrates that important patient information might not be retrieved due to language deficits as translators may not be readily available (Kaur, Oakley & Venn, 2014:1; Hospital Manpower Data, 2016).

Additionally, communication between nurse managers and nurses might be compromised due to the communication difficulties when translators are not available to translate conversations between nurse managers and nurses (Juckett & Unger, 2014:276).

Table 4.4: Language Spoken by the Nurses (N=416)

LANGUAGE	n	f=%
ARABIC	73	17.54
ENGLISH	24	5.76
AFRIKAANS	5	1.2
GERMAN	1	.24
POLISH	1	.24

LANGUAGE	n	f=%
URDU	12	2.88
MALAYLAM	109	26.2
SWAHAILI	3	.72
TAGALOG	165	39.66
TAMIL	4	.96
HINDI	10	2.40
BULGARIAN	1	.24
BENGALI	2	.48
BAHASA INDONESIAN	1	.24

It was important to establish whether nurses, with a mother tongue other than English, received formal English training other than on school level since most of the nurses' home languages (see Table 4.5) were not English. The data obtained revealed that 220 (f=4.8%) of the nurses had English training, whereas 393 (f=95.2%) did not. Two nurses did not respond to this question. It is alarming that it seems as if only 20 (f=4.8%) of the nurses understood and answered this question accurately (see Table 4.5). The question clearly asked respondents to indicate training not received at school, but 118 (f=28.4%) nurses indicated that they received their English training at school. It seems that English proficiency posed a problem in understanding the questions asked in English, despite all changes made after the pre-test to ensure clarity. Directions and instructions with regards to patient care are given in English, which can be a concern as English language proficiency can negatively affect patient safety as mentioned by Van Rosse, deBruijne, Suurmond, Essink-Bot and Wagner (2016:46).

Table 4.5: Place English Training Received (N=413)

		n	f=%
Valid	Home language	2	.5
	School	118	28.4
	Nursing School	29	7.0
	Country	53	12.7
	Training Centre English	18	4.3
	Total	413	99.3

Only 166 (f=40%) nurses responded to the open-ended question on how "**The English training improved their communication**" (Appendix C). After open-coding and a thematic analysis were done, three themes were identified, namely: (1) improved communication, (2) improved quality of patient care, and (3) no English training is needed. Seventy-seven responses were received which indicated that English training "*Improved their communication skills with others"*, while 25 responses indicated that "*It would improve the quality of care provided to the patient*s". Some respondents indicated that "*Arabic language is preferred over the English language as to communicate with their Arabic patients*". The data reflects that English proficiency might be a concern as nurses did not clearly understand the question that was pre-tested for clarity.

All nursing units are required to conduct a (1) NAA on admission, (2) risk assessment on skin integrity, (3) risk assessment for falls risk, and (4) prevent infection through HH. It was important to **determine the work area for nurses** to cross-reference whether the nurses were from Medical, Surgical, Paediatrics and Critical Care units (Section 3.7), where the data indicated patient safety concerns.

The nurses' **current positions** were obtained to illustrate their involvement in direct patient care which require them to do a NAA, a fall and skin integrity risk assessment, and ensuring HH compliance to prevent hospital-acquired infections. Different categories of nurses were responsible for direct patient care in the two study hospitals. The charge nurses have a dual role whereby they might be the team leaders for the shift who oversee nurses' care practices or work directly with patient care, whereas the staff nurses are responsible for providing direct patient care. As indicated in Table 4.6, 76 nurses were charge nurses, and 338 were staff nurses. Thus, the greater majority (n=338 out of N=414) of the nurses involved in the study were directly responsible for patient care.

Table 4.6: Nurses Position in Unit (N=414)

		n	f=%
Valid	Charge Nurse	76	18.3
	Staff Nurse	338	81.2
	Total	414	99.5

Years of experience after completion of basic training as a nurse was asked not only to indicate the nurses' level of experience and seniority in line with their peer groups, but also to determine the duration of time they have worked within a team context under the leadership of a nurse manager (Numminen, et al. 2013:1). The data in Table 4.7 revealed that the majority (n=271) of the nurses had between six- and sixteen-years' experience, which is indicative of a well-established and experienced nursing staff component in the study hospitals.

The nurse manager has to review the skill mix of the nurses on each shift to ensure that nurses' experience and clinical competence are based on the hospital's allocation guidelines since it is an important aspect for safe staffing (Yang, Hung, Chen, Hu & Shieh, 2012:228; Lewis, 2011:1; Blegen, et al. 2013:92). Approximately one-third of the nurse respondents (n=142) had less than 5 years' experience, which according to Staggs, Olds, Cramer and Shorr (2016:39), could impact on a sustainable culture of safety due to the nurses' inexperience in the diverse clinical setting.

Table 4.7: Nurses Years of Experience (N=414)

	n	f=%
1-5 YRS	142	34.1
6-10 YRS	123	29.6
11-15 YRS	96	23.1
16 YRS & ABOVE	52	12.5
Total	414	99.5

The data concerning the **highest nursing qualification** was required to determine the educational background of the nurse respondents, thereby indicating the nurses' professional skill mix. Table 4.8 illustrates that more than two-thirds (n=295; f=70.9%) of nurse respondents had a Bachelor of Nursing (BSN), followed by a Diploma in Nursing (n=95; f=22.6%); only 25 (f=6%) of the respondents completed their Master's

Degree in Nursing (MSN). Unfortunately, no doctoral prepared nurses formed part of the staffing. The high numbers of nurses with degrees were encouraging as they can positively contribute to research-related activities and improve a culture of evidence-based practice (Blegen, et al. 2013:92) to enhance a culture of safety.

Table 4.8: Nurse Respondent Highest Nursing Qualifications (N=416)

	n	f=%
BSN	295	70.9
DIPLOMA	94	22.6
MSN	25	6.0

4.6.2 Culture

Participants were asked how their own culture and that of the patient influence patient safety. Questions also addressed the training that they received on culture.

4.6.2.1 Effect of the nurses culture on patient safety

It was necessary to determine whether nurses from the 21 different nationalities (see Table 4.4), **believed that their own culture could affect patient safety**. The responses from nurses showed that they believed their culture does affect patient safety (n=325; f=78.1%). However, 87 (f=20.9%) of respondents stated that it does not affect them in providing safe care (see Figure 4.1).

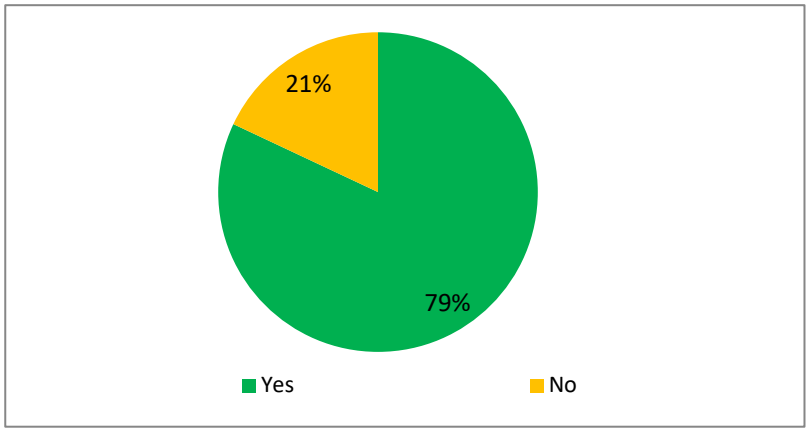


Figure 4.1: Culture Effect Patient Safety (N=412)

The literature (Hilliard, et al. 2012:885) emphasised the importance of gender and the relevance to privacy as required in Islam. Table 4.2 indicates that the majority of nurses were females. However, care was also provided by males, which is likely why 322 (f=78.92%) participants indicated that their culture does affect patient safety. Nurses' indications on whether their own culture affected patient safety based on their gender revealed that of the 67 males, 54 (f=80.5%) mentioned that culture affects patient safety. From the 341 female nurses, 268 (f=79%) indicated that their own culture affects patient safety. This requires careful consideration by the nurse manager in scheduling the nurses to ensure that the male:female ratio on a specific shift is adequate to care for female as well as male patients.

Table 4.9: Gender * Culture Affect Cross-Tabulation (N=408)

		Culture Affect patient care				Total
		Yes	Yes	No	No	
		n	f=%	n	f=%	
Gender	Male	54	80.5%	13	19.5%	67
	Female	268	79%	73	21%	341
Total		322		86		408

Nurses provided 88 responses regarding **reasons why they think their own culture affects patient safety**. The responses were open-coded, and four themes were identified, namely (1) respect for diverse culture, (2) caring and compassion, (3) safety and quality, as well as (4) improved patient interactions. Responses that underpinned the themes were, for example, "*my own culture enabled me to understand and respect the values and traditions of the country*" (Theme 1); "*my culture enabled me to support, and care for patients as it is the core principles of nursing"* (Theme 2), "*my culture will lead to improved safety and quality because my specific culture should not affect patient safety negatively"* (Theme 3), and "*my culture enabled me to communicate better with my patients*" (Theme 4).

Nurses also provided **reasons why their own culture does not impact patient safety negatively**. The responses were analysed, and three themes emerged: (1) gender preferences for patient care, (2) culture sensitivity, and (3) prescribed safety standards, as is illustrated in Table 4.10.

Table 4.10: Culture does not affect patient safety

Theme	Direct quotes underpinning the theme
Gender preferences for patient care	'*gender is not a problem as females can care for both males and females'* *'we are assigned to male patients only'*
Culture sensitivity	*'I need to respect cultures as part of being a nurse'* *'caring and respects allows you to care for other nationalities also'* *'I am from the same culture as the patients'* *'If oriented on different cultures then it helps you to care for them'*
Prescribed safety standards	'*By complying with hospitals quality and safety standards patient safety cannot be affected'* *'in nursing we follow standards of care'*

Female participants felt that "*gender is not a problem as females can care for both males and females"* and the male nurses said *"we are assigned to male patients only",* indicating that culture did not pose a problem to them. As stated by Truong, Paradies and Priest (2014:2) and Renzaho, Romios, Crock and Sønderlund (2013:269), cultural competence and sensitivity are essential in healthcare. Nurses supported this notion by indicating that *"I need to respect culture as part of being a nurse"* and *"If oriented on different cultures then it helps you to care for them".* Concepts that need to be considered for culturally congruent care, according to Taheri (2008:4) and Walton-Umkashif, et al. (2014:9) in Islam, are health beliefs and practices, religious-cultural values, family systems, privacy and modesty, dietary considerations and communication; these aspects were not mentioned by participants.

4.6.2.2 The effect of the culture of the patient on patient safety

Schim and Doorenbos (2010:3) stated that the reason why culturally congruent care is problematic in a clinical setting is because of the diverse cultural domains patients bring to the healthcare encounters that can impact on patient safety (Hilliard, et al. 2012:884). In this study, the patients admitted and treated in both study hospitals were from 20 different nationalities (see Chapter 3 Section 3.7). As indicated in Table 4.11, 339 of the 413 nurses perceived that the patient's culture does affect them in delivering safe care, while 74 were of the opinion that it does not. It is evident from the responses

that the majority of nurses perceive the patient's culture to affect patient safety.

Table 4.11: Patient's Culture Affect Patient Safety (N=413)

	n	f=%
Yes	339	81.5
No	74	17.8
Total	413	99.3

The cross-tabulation in Table 4.12 illustrates the significance of the gender of the nurse and the potential influence on patient safety. Fifty-two (f=77.6%) of the 67 male respondents indicated that the patient's culture affects patient safety, whereas 284 (f=83%) of the 341 female nurses confirmed the effect on patient safety.

Table 4.12: Gender * Patient Culture Affect Cross-tabulation (N=410)

		Patient Culture Affect				Total
		Yes	Yes	No	No	
		N	f=%	n	f=%	
Gender	Male	52	77.6%	15	22.4%	67
	Female	284	83%	58	17%	342
Total		337		73		410

Nurse managers have a challenge in today's globalised world to ensure that nurses provide culturally competent care for patients with different health beliefs than their own (Murphy, 2011:5; Hilliard, et al. 2012:884). Two hundred and ninety-seven responses were reviewed to describe the **reasons why nurses felt the culture of a patient have an effect on patient safety**. This open-ended question revealed four themes: (1) gender sensitivity, (2) disrespect for nurses, (3) cultural values and beliefs (affecting patient care and treatment), as well as (4) communication challenges (see Table 4.13). Nurses said that "*gender is a problem as male patients do not want a female nurse to nurse them and similar approach for male nurses looking after female patients"* (Theme1). Nurses also felt that patient safety can be negatively affected since "*patients still view nurses as maids;'* as well as *'we often get screamed at by patients calling us bad names"* (Theme 2), which might influence the nurses' attitude towards the specific patients. Nurses expressed that "*patient's attitude about medical*

care and sometimes their ability to understand and cope with the illness affects the level of providing care" (Theme 4), thus negatively impacting on patient safety. It seems from the responses that some questions might have been problematic due to diverse levels of English proficiency.

Table 4.13: Reasons why Patient Culture Affects Patient Safety

Theme	Direct quotes underpinning the theme
Gender sensitivity	*'gender is a problem as male patients do not want a female nurse to nurse them and similar approach for male nurses looking after female patients'* *'the segregation of male from female as practiced in this country according to their religion needs to be followed thus creating a safe environment for female population'*
Disrespect for nurses	*'we respect patients, but they treat us not nice when we ask them to comply with treatment'* *'patients still view nurses as maids'* *'we often get screamed at by patients calling us bad names'*
Cultural values and beliefs affecting care and treatment	*'patient's attitude about medical care and sometimes their ability to understand and cope with the illness affects the level of providing care'* *'we spend a lot of time to explain the care required and as a result of cultural beliefs they still don't comply'* *'patients want to use their traditional medicine and therapies with regular medicine even when a doctor informed them it is not safe to do so'*
Communication challenges	'*patients don't understand us very clearly'* *'we can only inform some members of the family about a patient diagnosis and prognosis because in Arabic culture healthcare professionals and nurses are not allowed to communicate directly with female patient but with husband or a male family member'*

Two hundred and ninety-seven respondents provided **reasons on why they thought that the culture of a patient does not affect the care of the patient and thus patient safety**. The nurses' responses were open-coded, and only one theme could be identified, namely cultural sensitivity. Direct responses, such as "*I don't think the culture or tradition of a patient should affect patient safety as a nurse I need to do the*

right process", and "*No, it will not affect patient safety coz (because) I apply culturally sensitive services to my patients*" were provided. These responses might be an indication of a potential knowledge deficit among the nurses on culturally congruent care, since the concepts stipulated by Taheri (2008:4) and Walton-Umkashif, et al. (2014:9) to be specific to the Islam culture were not mentioned by respondents.

Nurses must be oriented towards culturally congruent care, and they require a structured training programme to address the components of culturally congruent care (Mixer, 2011:4; Murphy, 2011:5). The respondents (n=273) indicated that they received **cultural training**, but whether it was a structured training programme was not mentioned. Participants merely described the programme content (see Table 4.14). It appeared as if a structured programme did not exist in either of the two hospitals.

Table 4.14: Training on Culture

Theme	Direct quotes underpinning the theme
Programme content	'*I was given basic Arabic Phrases to communicate with Arabic patients, but not other languages'* *'I had an orientation program in which they explained well about the tradition, values, and beliefs of people here and how to follow that'* *'I was informed what gestures not to use in this culture'* *'cultural beliefs like wearing full covered dress when we come to hospital. Ramadan timing - we need to co-operate with the Arab culture and what to do and not to do'* *'dress code in the Muslim country'* *'how to manage patients from different cultures'* *'in general orientation that we need to ensure that patient understand their rights and responsibilities'* *'patient has right to refuse treatment'*

Culturally congruent care refers to the interaction between clinicians, including nurses, and their patients in all healthcare encounters to ensure effective communication with patients to enhance patient safety (Schim & Doorenbos, 2010:258). The respondents indicated **how the training on culture that they have received assisted them in**

providing cultural congruent care. The responses were open-coded, and two themes emerged, namely (1) interaction and communication, and (2) knowledge of diverse cultural needs (see Table 4.15). The nurses felt that the training provided them with "*the information to interact with patients in a proper way"* (Theme 1). Some said that the training, "*formed (the) basis for communicating basic phrases in patients own language"* (Theme 1); and *"we obtained knowledge to respect patient and their culture even if different than ours"* (Theme 2), and that training *"released tension among patients to allow us to provide safe care"* (Theme 2). As indicated from the responses received it was not clear how the content of training assisted the nurses in providing culturally congruent care, but it rather focussed on interactions with patients and patient safety.

Table 4.15: Culture Training and the effect on Culturally Congruent Care

Theme	Direct quotes underpinning the theme
Interaction and communication	*'it provided us the information to interact with our patients in proper way'* *'the basic Arabic phrases helped greeting patients in their language'*
Knowledge of diverse cultural needs	*'it helped us to respect the patient and their culture even if different than ours'* *'we could deal with patients the way they need us to'* *'we understood that during Ramadan, patient routines change as patients fast during the day even if they are ill'* *'it released tension among patients and nurses as for us to provide safe care'* *'working with different nationalities in the hospital helped me a lot in improving my care to my patients. I have learned to create an effective safety culture and a positive attitude and safety, thus reducing incident'*

4.6.3 Patient safety

During daily patient interactions nurses often have a number of care activities happening at the same time. This requires nurse managers to have best practice guidelines in place to direct nurses towards patient safety (van Been, 2014:10; Vahdat,

Hamzehgardeshi, Hessam & Hamzehgardeshi, 2014:3). Important guidelines to ensure patient safety include, among others, (1) conducting the NAA within a 24-hour timeframe, (2) the '5 moments' of HH, (3) doing a risk assessment to prevent HAPU, and (4) a risk assessment to prevent patient falls. According to van Been (2014:10), to determine how teams were performing these practices, the practices needed to be monitored and observed to identify and describe the effect on patient care outcomes. Pearson correlation data are presented in Appendix G for patient safety.

4.6.3.1 Nursing Admission Assessment (NAA)

The essential components – based on regulations, standards and policy (Hospital Policy, 2017; JCIA, 2016) – to be obtained from patients to have an adequate health history are the assessment of baseline vital signs, all-inclusive information regarding allergies, past medical and surgical history, screening of skin integrity, screening the patient's risk for falls, a psychosocial assessment, nutritional screening, medication history, pain assessment, as well as discharge planning needs. This assessment data aid the nurse in formulating a nursing care plan and to determine if the patient's condition improves or deteriorates during hospitalisation to enhance positive patient outcomes. The NAAs in the study hospitals are built into the electronic medical record to allow continuity of care and communication with all the healthcare workers responsible for patient care.

Four hundred nurses (N=413) indicated that it is **important to complete the NAA within the 24-hour timeframe,** while 10 nurses surprisingly stated that it is not important (see Table 4.16). It is of concern that three claimed that completing NAA within the specified timeframe was not applicable to them, and four did not answer the question.

Table 4.16: Importance of completing NAA within the 24-hour period (N=413)

	n	f=%
Yes	400	95.9
No	10	2.4
NA	3	.7
Total	413	99.0

Although most nurses indicted the importance of completing the NAA, some provided **reasons for not being able to complete the NAA** within the 24-hour timeframe. Four themes emerged after open-coding the reasons provided by respondents: (1) patient-related aspects, (2) staffing aspects, (3) knowledge deficit, and (4) language barriers (see Table 4.17 for direct quotations underpinning the themes).

Table 4.17: Reasons for not being able to complete NAA

Theme	Direct quotes underpinning the theme
Patient-related aspects	*'example patient coming in middle of the night when in the room they prefer to go to sleep how can we do the nursing admission assessment unless there is somebody with them that knows the patient (on admission some patients settled in bed and then they prefer to sleep rather than give information for the nursing assessment)'* *'most of the children or patient coming for admission with maid or driver and most of the time patient will be lethargic and cannot give the details. And, maid and driver also did not know patient's or child's details. And family will come after long time and days (the nannies escort kids into hospital and often don't have the relevant health history required for nursing assessment)'*
Staffing related aspects	*'was busy and the patient's acuity was high, so I was unable to complete the nursing assessment'* *'I had six patients assigned to me and 2 new admissions so difficult to do all the work'* *'too much workload on the bedside and high demands from patient. Too much acuity or high acuity patient came late, and nurse has no more time to document'*
Knowledge deficit	*'this (nursing) assessment is to lengthy and does not apply to us'* *'we don't need all the information in the nursing admission assessment'*
Language barriers	'*the patients are unable to understand, and no translator is available to get the information (difficult for patients to communicate due to language difficulty)'* *'there are some things/issues that you will find out along with your care that you may need to amend your previous entry. Sometimes the person you are interviewing may not give you*

Theme	Direct quotes underpinning the theme
	the exact or correct information, when you find out the correct information after 24 hours then if you amend it, the audits will say it is not done right (often patients do not provide accurate information about health history)'

Nurses also provided reasons for why they felt **motivated to complete the NAA within the 24-hour timeframe**. As illustrated in Table 4.18, the reasons were coded, and three themes emerged from the responses. The themes identified were (1) development of the nursing care plans, (2) ensuring patient safety, and (3) compliance with hospital policy (see Table 4.18).

Table 4.18: Motivation to complete NAA within the 24-hour timeframe

Theme	Direct quotes underpinning the theme
Development of the nursing care plan	*'it aids in the development of an appropriate care plan for the patient'* *'the assessment included the patient history which includes: allergies, medical, surgical and psychosocial history to develop care plan'*
Ensuring patient safety	*'to ensure understand safety concerns that might affect treatment (identify from the patient their health history to determine the appropriate care and support required for patient care)'* *'it is easy for nurse's workflow and proper communication among nurses (allow continuity of care among caregivers)'*
Compliance with hospital policy	*'to ensure we are following hospital policy'* *'it's required elements in the policy' (the nursing assessment fields are built into the electronic medical system)*

Nurses made **suggestions that can assist them in completing** the NAA within the required 24-hour timeframe (see Table 4.19). Two themes were identified after the responses were open-coded, namely (1) process, and (2) system issues. The themes required for improving the completion of the NAA within a 24-hour timeframe was supported by Abbott, Whear, Rodgers, Bethel, Thomson, Kuyken, Stein and Dickens (2015:2), Orbaek, et al. (2015:7) as well as Kaur, et al. (2014:1).

Table 4.19: Suggestions required to complete NAA within the 24-hour timeframe

Theme	Category	Direct quotes underpinning the theme
Process	Adequate staffing	*'need to reduce the workload as we have heavy (high acuity) patients assigned to us and unable to cope (manage)'* *'proper nurse: patient ratio'*
	Communication barriers	*'ensure sufficient (translator resource adequacy) translators on duty even during night shift'* *'sometimes the patient is from country and we have no one able to translate (provide translator services to support translating care concerns from patient's whose language is not supported within hospital translation resources)'*
System issues	Electronic medical record connectivity	'*the system is slow, and signal often lost if go into patient rooms (improve internet connectivity to allow real time documentation without interruptions)'* *'we don't have enough computers on wheels as the batteries not working'*

The nurses' responses on **how improvements** mentioned in the above question could assist them in enhancing the completion of the NAA within a 24-hour timeframe, revealed two themes, namely 1) process, and (2) system improvements (see Table 4.20). As indicated in Chapter 2, Section 2.2.8.1, the literature on systems and processes clarifies what is required to ensure a safe environment. Abbott, et al. (2015:2), Orbaek, et al. (2015:7) as well as Kaur, et al. (2014:1), are of the opinion that it is the nurse manager's responsibility to attend to process and system issues that affect nurses in completing the NAA.

Table 4.20: Recommendations to improve NAA completion

Theme	Category	Direct quotes underpinning the theme
Process	Realistic workload	*'with a proper nurse-patient ratio, nurses will have ample time to complete NAA in the timeframe required'* *'there is not enough nurse and that mean not enough time to complete my assessment and PRO (patient relation officer) to solve problems'*
System	Improve functioning of Electronic Medical Record	*'if EMR faster it will allow us to complete in timely fashion (if internet connectivity works well then real time documentation of assessment would not be affected)'* *'a good working EMR will help assessing all the assessment elements to get care plan (the workflow for the documentation of assessment in electronic medical record will aide in conducting assessment within timeframe)'*

Christianson, Sutcliffe, Mille and Iwashyna (2011:3) mentioned the importance for the team to be **knowledgeable about the nursing team's patient safety performances** regarding NAA within 24-hours, falls and HAPU incidences, and HH compliance. As indicated in Figure 4.2, it is of concern that 35% (n=144) of nurses were not aware of the team's performance on completing the NAA within the 24-hour timeframe; thus, they did not know the gaps identified so that the challenges could be addressed.

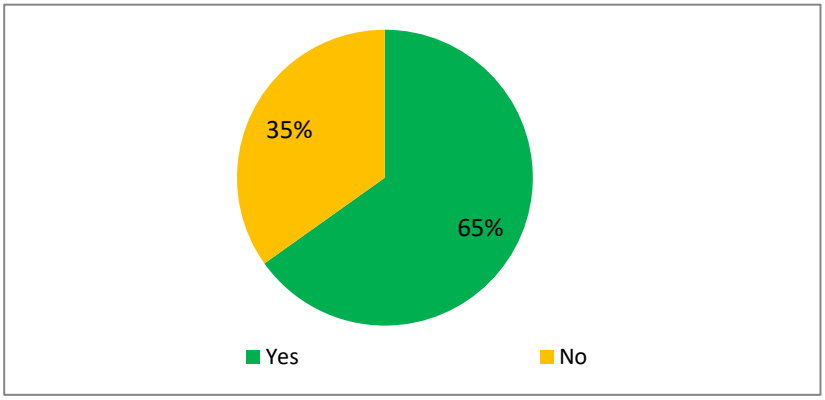


Figure 4.2: Team Performance on NAA Completion (N=412)

Nurse assessment and documentation, such as the NAA within a 24-hour timeframe, is required to make sound patient care decisions, thus impacting on safety culture and positive patient outcomes (Chapman, 2014:1). Nurses gave reasons for **why they thought it is important to complete the NAA within a 24-hour timeframe**. All responses could be included under one major theme, namely identification of areas for improvement (see Table 4.21).

Table 4.21: Importance of completing NAA within the 24-hour timeframe

Theme	Direct quotes underpinning the theme
Identification of areas for improvement	'*it shows us what we have missed in our initial assessment on admission'* *'Policy indicates that in case not completed by the admitting nurse, the nurse on next shift should complete the assessment. It is important for the continuity of care'* *'as I am part of the audit team, I understand the value of completing the assessment within timeframe as so if gap identified we use the quality tool PDCA (Plan, Do, Check, Act) for corrective actions to improve'*

Of concern was the fact that only 182 (N=391; f=43.6%) of the respondents indicated that they **would like to be aware of the performance of the team** with whom they work (see Table 4.22).

Table 4.22: Do nurses want to know about NAA compliance of their team (N=391)

	n	f=%
Yes	182	43.6
No	40	9.6
Not Applicable	169	40.5
Total	391	93.8

As part of a safety culture, it is of utmost importance for the **nurse manager to share the NAA performance data** with the team to promote the engagement of all the team members to improve care decisions that affect patient safety. Interesting is the fact

that 412 (N=414; f=99%) of the respondents expected their nurse manager to share compliance issues with them, but only 182 (N=417; f=43.6%) respondents (see Table 4.22) wanted to know about their team's performance. This seems contradictory, as they wanted to be informed but were not really interested in what specifically was shared.

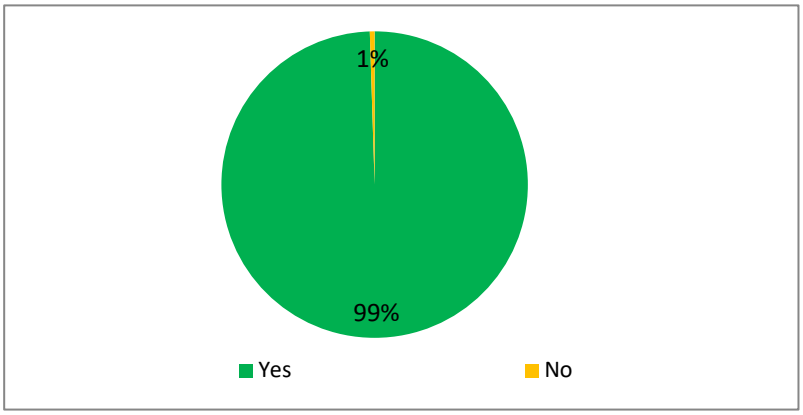


Figure 4.3: Nurse Manager to Share Compliance Data (N=414)

A total of 228 out of the 417 respondents provided 734 responses **to explain why the nurse managers are required to share compliance issues with the team**. The answers to the open-ended question were grouped, and ten main reasons were provided as illustrated in Table 4.23. The reasons were (1) that sharing assists in identifying areas for improvement (162 responses); (2) that it is helpful to maintain a good standard of care (120 responses); (3) sharing can improve the quality of care provided (89 responses); (4) sharing allows one to identify the needs of patients (81 responses); (5) sharing allows one to identify the gaps in safety practices (68 responses); (6) sharing allows one to check elements of patient care provided (56 responses); (7) sharing assist in developing a care plan (54 responses); (8) sharing ensures that we comply with policy (43 responses); (9) sharing is important for continuity of care (38 responses); and (10) sharing identify team needs (23 responses). The wide range of reasons did not address the strategies, accountability in compliance, educational needs, structured safety measures, or competencies that can affect sustainable safety practices according to literature (Hinchliffe, 2009:18; Parand, et al. 2014:11; Smith, Mossialos & Papanicolas, 2008:2).

Table 4.23: Reasons why nurse managers share compliance data NAA (N=228)

Responses	Number of comments = F
Identify areas of improvement	162
Maintain good standard	120
Improve quality of care	89
Identify the needs of patients	81
Identify gaps in practice	68
Check elements of patient care	56
Develop a care plan	54
Compliance with policy	43
Important for the continuity of care	38
Identify Team needs	23
Total	**734**

How the nurse manager shares or neglects to share performance compliance can contribute to safety practices not being sustained (Ramsay, Turner, Cavell, Oborne, Thomas, Cookson & Fulop, 2014:143). The respondents mentioned two important aspects (two themes identified from all responses) that affect the sharing of performance compliance, namely (1) timing, and the (2) communication medium to describe the way performance data is shared (see Table 4.24 for categories and direct quotations). According to Ramsay, et al. (2014:143), there needs to be a formal process to communicate team performances, and as indicated in Table 4.24, some of the responses under Theme 1 were that feedback is provided "*during monthly unit meetings*" and *"during shift change"*. Other responses under Theme 2 were that feedback is provided verbally ("*they tell us when the audits is completed"*), while others receive feedback "*through our e-mails".* The responses indicated no clear, structured process being used by nurse managers to share performance data which could impact patient outcomes negatively. Based on the data, the nurse manager is thus required to develop a structured and standardised communication process, and use set verbal text (scripted notes) to communicate compliance data to nurses.

Table 4.24: Description how nurse managers share compliance data (NAA)

Theme	Category	Direct quotes underpinning the theme
Timing	During ward meetings	*'in our charge nurse meetings'* *'in monthly unit meetings'*
	During shift handover	*'during our safety debrief meetings (huddles)'* *'during shift change'*
	During performance evaluations	*'during our annual (performance) appraisal'*
	During manager Rounding	*'during rounding on staff'* *'face to face when they identify issues'*
Medium	Written	*'through our emails'* *'just place it on the notice boards no discussions'*
	Verbally	*'tell (inform) us when the audits completed'*

The respondents provided suggestions on **how they thought the nurse manager should share performance** data (see Table 4.25). Two hundred and forty-three of the 417 participants provided 850 responses, that could easily be themed in two groups (1) timing (the where and when), and (2) manner (the how). Most responses were under Theme 2 (the manner in which feedback was provided) about "*the nurse manager to follow a polite and supportive culture when sharing"* (155 responses), followed by 120 responses which indicated that the nurse manager should share feedback through "*awareness training on hospital policies sessions*". Responses listed under Theme 1 were about where and when feedback should be provided. Respondents mentioned examples such as *"to conduct audit and routine tracers"* (95 responses), and 94 responses indicated that the nurse manager should merely "*place the information on the quality boards*". As illustrated from the varied responses, there is a lack of an appropriate communication method which is vital in sharing performance data to sustain practices.

Table 4.25: Recommendation how nurse managers should share compliance data NAA (N=243)

Theme	Direct quotations underpinning the theme	Number of comments = F
Timing (where and when)	*'to conduct audit and routine tracers'*	95
	'place information on quality boards'	94
	'to update us during handover'	68
	'to provide advanced workshops'	67
	'during daily rounds in the unit'	48
Manner (How)	*'nurse manager to follow a polite and supportive culture'*	155
	'provide awareness training (on) Hospital policies and procedures'	120
	'by involving the nurses'	94
	'follow a Just culture of openness when managing us'	78
	'during daily safety debriefs (huddles)'	31
	Total	**850**

Respondents' **motivations for completing the NAA** were grouped into two themes. As illustrated in Table 4.26, the responses were (1) availability of baseline data, and (2) improve patient care. The variance in responses indicates the need for a structured behaviour-based education programme on NAA for nurses to understand the rationale for conducting a nursing admission assessment.

Table 4.26: Importance of completing NAA

Theme	Direct quotes underpinning the theme
Availability of Baseline Data	*'to have baseline data to compare patient progress (on treatment and care provided)'* *'for care plan coordination (with interdisciplinary team)'*
Improve Patient Care	*'to improve the (nursing) care that we provide'* *'continuity of patient care'* *'compliance with hospital policies and standards'* *'improve patient safety'*

4.6.3.2 Falls

Patient falls in hospitals are one of the two most common risk-related patient outcomes and a key nursing-sensitive measure used to evaluate patient safety and nurse performance (Purdy, 2011:19; NDNQI; Joint Commission Web Access). The completion of a fall risk assessment by means of set criteria, such as the Morse and Humpty Dumpty Risk Assessment tool (Emanuel, et al. 2008:598; Degelau, et al. 2012:19), must therefore be emphasised to ensure patient safety.

As illustrated in Figure 4.4, 405 nurses (N=417; f=97.12%) indicated that they do comply with the fall risk assessment requirements. Hospital outcomes data (see Section 3.7.3 Figure 3.2) however, indicated that there are monthly reported patient falls occurring in the Medical and Surgical units in Hospitals A and B, as well as in the Paediatric units in Hospital A. It might be that the tools were used, but that they were not interpreted correctly.

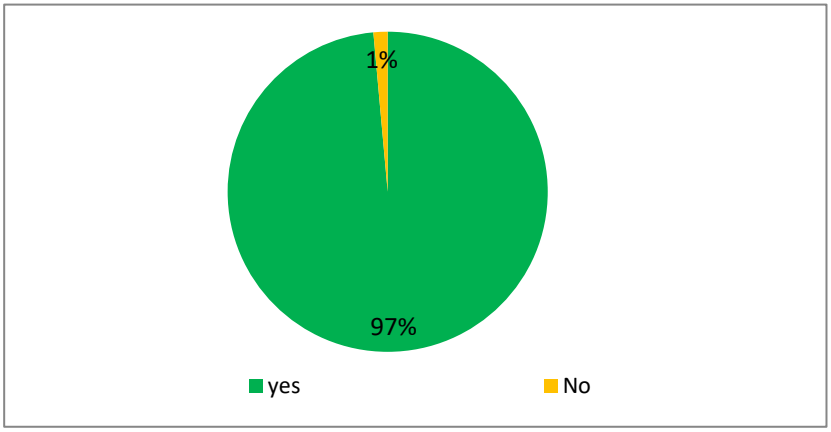


Figure 4.4: Completion Falls Risk Assessment (N=408)

Regulatory, accreditation body standards and hospital policies require that nurses **must do a fall risk assessment** of every patient (1) on admission, (2) at every shift thereafter, (3) when the patient's condition changes, (4) after a fall, (5) when transferring a patient, (6) after a surgical procedure, or (7) when sedatives and gait-altering drugs are administered (JCIA, 2014, Hospital Policy 2017). Four hundred and fourteen (N=417) respondents commented on the risk assessment process and their responses were grouped together as (1) correct fall risk assessment process, and (2) incorrect fall risk assessment process. As mentioned from the respondents, only 110

were able to correctly list all times when a fall risk assessment must be conducted, and the majority of respondents did not use the correct fall risk assessment (see Table 4.27). The data reflect that the fall risk assessment is not understood by all the respondents.

Table 4.27: When are fall risk Assessments conducted (N=414)

Theme	Direct Quotes underpinning the theme	Number of comments = F
Incorrect fall risk assessment	*'On Admission'*	391
	'Every shift'	384
	'Change in medication'	312
	'Change in patient condition'	226
	'Patient transfer'	124
	'After sedation or surgery'	97
Correct fall risk assessment process	*'On admission, every shift, when patient falls, patient transfer, after surgery and sedatives, after a fall and change in patient condition'*	110
	Total	**1644**

The use of **safety devices that can assist in the prevention of patient falls** allows for a proactive approach in preventing patient harm and injuries to patients (De Oliveria, et al. 2014:3). The Hospital policy (Falls Prevention and Management for Adult and Paediatric Patients, 2017), requires that the nurse ensures patients and families are educated on fall risks and the environment must be reviewed for potential hazards. The following must be ensured: (1) the patient's call bell and belongings should be within reach, (2) bed position (at lowest), (3) bed brakes should be secured, (4) side rails should be up, (5) visual cues (yellow high-risk sign and armband) should be in place, (6) non-slippery shoes should be worn, (7) no water should be left on bathroom and room floors, (8) lighting in the room should be adequate, (9) no carpets or clutter should obstruct walkways, and (10) Hourly Rounding checks should be completed. Three hundred and ninety-six (n=396) of the 417 nurses responded to the question regarding safety devices and processes available to prevent patient falls, which resulted in 935 comments. These mentioned aspects and available processes were used as the basis to analyse the responses to this open-ended question (see

Table 4.28). It is of concern from the varied responses that not all safety measures are applied by all respondents as per policy, indicating potential educational gaps that could impact patient safety.

Table 4.28: Safety Devices for Fall Prevention (N=396)

Type of safety devices	Number of comments = F
Side rails up	221
Visual Cues (High-risk signs and armband)	140
Call bell and possessions within reach	122
Non-slippery floors (no wet floors) and an environment free of clutter	86
Falls Risk Assessment and policy	78
Bed brakes secured	74
Bed at lowest	67
Hourly Rounding	65
Lighting in room adequate	58
Patient and sitter education	50
Mobility Aides	35
Total	**935**

Despite the responses which indicated that most respondents **were aware of the risk of falls prevention measures**, some respondents (n=190; f=45.6%) stated that they were not aware of patient falls in their units (see Figure 4.5). As illustrated in the data, 226 (N=416; f=54.3%) of the nurses responded that they do have falls in their units (data identified responses mainly from Medical: f=31%, Surgical: f=20%, Paediatrics: f=19% and Critical Care: f=22%), which is similar to patient falls data presented in Chapter 3, while 67% (n=190) were aware of falls measures.

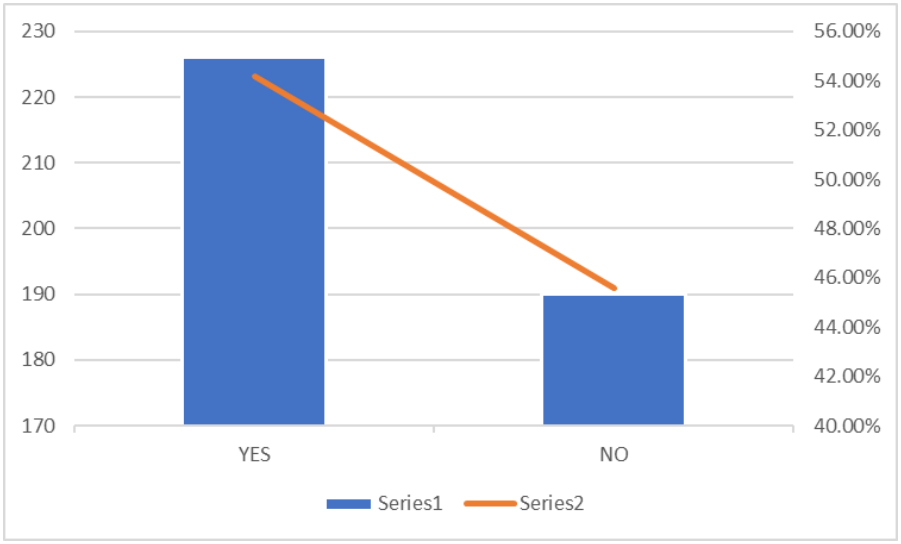


Figure 4.5: Are there Patient Falls in the Unit (N=416)

The respondents' opinions regarding whether they have falls in a unit correlate with the patient outcomes data (see Section 3.7.3) which reflect that patient falls were documented in various units.

The Hospital Falls Prevention Policy (2017) requires that nurse managers must conduct a root cause analysis for all falls that occurred to identify the **reason for patient falls**. Respondents, in an open-ended question, provided reasons why patient falls still happened. The responses were coded into two major themes namely (1) patient condition, and (2) lack of falls training (see Table 4.29). It seems as if the respondents saw the condition of the patient as a contributing factor for the falls that happened, however the safety measures listed in Table 4.29 should have prevented patient falls if they were used correctly with patients at high risk for falls. A lack of training is of concern as training is essential (Quigley & White, 2013:6); if nurses are trained and aware of fall risk prevention requirements, patient falls can be prevented.

Table 4.29: Reasons why patients fall

Theme	Direct quotes underpinning the theme
Patient Condition	*'patient's mental status (behavioural condition) resulted him to fall'* *'patient non-compliance to our education (about not standing up alone)'* *'mother left child alone on bed (unattended with the side*

Theme	Direct quotes underpinning the theme
	rails down)'
Lack of Falls Training	*'falls cannot be predicted for all (even if proper falls risk assessment done patient do fall)'* *'lack of training'*

Nurse managers need to ensure that nurses understand **what measures must be implemented to prevent patient falls from occurring**. Respondents, in the open-ended question, indicated what they thought should be done to prevent patient falls. The suggestions were analysed, and two themes emerged as indicated in Table 4.30. It was evident that the respondents saw (1) adequate staffing, and (2) fall prevention education as the major themes that need to be addressed to prevent patients from falling (see Table 4.30 for direct quotations). The responses provided by nurses included safety concerns based on nurse managers not providing safe staffing, inappropriate risk assessments, and education practices by nurses.

Table 4.30: Measures to prevent Patient Falls

Theme	Direct quotes underpinning the theme
Adequate staffing	*'we are short of staff and acuity often not allowing to prevent falls (short staffing and high patient acuity prevent us to not be more proactive to prevent patient falls)'* *'to many patients assigned to one nurse every shift and unable to care for patient safely'*
Fall prevention Education	*'sitter (family member or aide in room) involvement in falls prevention training'* *'educating the cleaners to clean more frequently bathrooms to ensure floors not wet (increase the cleaning of bathrooms to ensure no wet floors)'*

4.6.3.3 Hospital-Acquired Pressure Ulcers (HAPU)

Regulators, such as the DoH of Abu Dhabi, emphasise the importance of preventing pressure ulcers as they are preventable and often related to poor quality of care, which leads to additional costs for both healthcare organisations and patients (Brem, et al. 2004:474; Delay, et al. 2012:3; Emanuel, et al. 2008:598; Department of Health Abu Dhabi Webpage, 2017). Nurses are required to demonstrate theoretical knowledge

regarding HAPU, and the causes and the risk factors associated with pressure ulcers (Mwebaza, Katende, Groves & Nankumbi, 2014:2). Nurses must be able to use the Braden Skin Integrity Risk Assessment instrument to identify patients at risk for HAPU.

Respondents explained in an open-ended question **how, by conducting a risk assessment of skin integrity, they could prevent HAPU**. The responses were analysed using the Braden Skin Integrity elements (sensory, moisture, mobility, activity, nutrition, friction and shear) as the guide to assess whether these elements were mentioned in the responses. Ultimately, this would provide some evidence of the nurses' knowledge about the instrument to be used. Two themes emerged from responses which were open-coded, namely (1) assessing Braden Risk Elements and (2) multiple factors (see Table 4.31 for direct quotations). As illustrated, the responses were not consistent with all the Braden Risk Elements, which demonstrate a lack of knowledge.

Table 4.31: Use of Skin Integrity Assessment to prevent HAPU (N=366)

Theme	Direct Quotes underpinning the theme	Number of relevant responses = F
Assessing the Braden Risk Elements	'*we assess the sensory, moisture, mobility, activity, nutrition, friction and shear'*	233
	'we check this on admission assessment (when patient admitted to the ward)'	301
Multiple Factors (not part of Braden Risk Elements)	*'we provide patient education'*	127
	'using proper prevention equipment'	73
	'to do the hourly rounding'	61
	'attending pressure ulcer staging education'	40
	Total	**835**

According to Table 4.32, nurses were aware of the **incidences of HAPU in the units** (see Figure 3.4, Section 3.7.5), but there were a number of nurses (see Table 4.32) who did not understand the Braden Risk Assessment Elements.

Table 4.32: Do Patients in units have HAPU? (N=414)

	n	f=%
Yes	133	31.9
No	281	67.4
Total	414	99.3

The NPUAP (2014:17-28) describes the following preventative measures: (1) skin risk assessment (as well as assessing temperature of the skin, oedema and pain), (2) nutritional assessment and dietary supplements, (3) position changes, (4) managing moisture and friction, (5) continence management, (6) using protective barriers, and (7) to support surfaces through pressure reduction resources. The respondents were asked how they could **prevent HAPU from happening**; 18 responses were received and open-coded using NPUAP's preventative measures. As mentioned in Table 4.33, only 240 of the 386 responses indicated the correct preventative measures, and this could well be why there are HAPUs developing in the units.

Table 4.33: How to prevent patients from developing HAPU

Themes Preventative measures	Number of responses = F
Skin Risk Assessment	87
Nutrition assessment & Support	21
Position changes	101
Support surface through pressure reduction resources	31
Total	**240**

To prevent HAPUs nurses providing care **need to conduct a risk assessment** (1) on admission, (2) during every shift change, (3) when there is a change in the patient's condition, as well as (4) after they have been transferred between units (Skin Assessment for Adults and Paediatrics, 2016; NPUAP, 2014:15; JCIA, 5th Ed. 2016). The responses from the 358 (N=417) nurses regarding when and how often a risk assessment should be done were assessed against the prescribed frequency as described in the Skin Assessment for Adults and Paediatrics policy (see Table 4.34). The open-ended question therefore allowed nurses' true opinions to be shared, as they were not provided with a checklist to choose frequencies from.

Table 4.34: Frequency for Skin Risk Assessment (N=358)

Frequency – Direct Quotes	Number of responses = F
On Admission	104
Every shift	265
Change in patient condition	98
Before transfer to another unit	42
Total	**509**

To function competently in clinical practice, the nurses must have knowledge about pathophysiology and physiology of the skin, must be able to conduct a quality risk assessment and identify when a pressure ulcer has formed, and must be able to **stage pressure injury** (Cage, 2015:55; NPUAP, 2016). The responses from the respondents in Table 4.35 indicate that some nurses were aware of how to stage a pressure ulcer, however, a third reported that they did not know (n=86). The data suggest that nurse managers must ensure that staging of pressure ulcers (injury) is understood by all nurses to facilitate prevention compliance.

Table 4.35: Ability to stage pressure ulcers (N=413)

		n	f=%
Valid	Yes	327	78.4
	No	86	20.6
	Total	413	99.0

Respondents explained in an open-ended question **when they received the training to stage pressure ulcers**. Two hundred and forty-two (N=417; f=58%) responses were analysed and divided into four timeframes, namely (1) part of the curriculum during their general nurse training, and (2) during orientation at the hospital, (3) during our Annual Performance Evaluation, and (4) at Awareness Workshops (see Table 4.36). The data thus indicate a number of different timeframes when training was provided on how to stage pressure ulcers.

Table 4.36: When was Pressure Ulcers Staging Training received? (N=242)

Time frames: Direct Quotes	Number of relevant responses = F
'Part of the Curriculum during their general nurse training'	142
'During Orientation'	162
'During Annual Performance Evaluation'	91
'During Awareness Workshops'	23
Total	**418**

Nurses were asked whether they would want the training **if they did not have training on staging pressure ulcers (injury)**, and it was alarming that the greater majority (n=271; f=65%) of nurses stated that they do not think this training is needed (see Table 4.37). This could well be a reason for nurses not conducting skin integrity risk assessments and adequately staging, which could cause delays in applying prevention protocols.

Table 4.37: Training needed if not received on Staging Pressure Ulcers (N=417)

		n	f=%
Valid		1	.2
	Yes	89	21.3
	No	20	4.8
	Not Applicable	271	65.0
	Total	417	100.0

This question is similar to that in Table 4.33, as it was necessary to determine whether the nurses were aware of the **HAPU prevention strategies** to eliminate HAPU. The existing strategies from NPUAP (2014:17-30) – (1) skin risk assessment (as well as assessing temperature of the skin, oedema and pain), (2) nutritional assessment and dietary supplements, (3) position changes, (4) managing moisture and friction, (5) continence management, (6) using protective barriers, and (7) to support surfaces through pressure reduction resources – were used to assess whether the respondents provided the correct prevention strategies. Three hundred and forty (N=417; f=81.53%) respondents completed this open-ended question on the prevention strategies they use to prevent HAPU. As indicated in Table 4.38, the prevention

strategies were not consistently mentioned, which is of concern as it could well be the reason for nurses not preventing HAPUs from developing.

Table 4.38: Measures to Prevent Pressure Ulcers

Prevention Strategy	Total Number of responses = F
Skin Risk Assessment (a well as assessing temperature, pain & oedema)	211
Nutritional assessment and dietary supplements	150
Position Changes	235
Managing Moisture & Friction	80
Continence Management	40
Using protective barriers	35
Support surfaces (pressure reduction resources)	185
Total	936

4.6.3.4 Hand Hygiene (HH) Compliance of Nurses

As discussed in Chapter 2 (Section 2.4.2.3), HH is the single most important intervention in reducing healthcare-associated infections (White, et al. 2015:2; Al-Dorzi, et al. 2015:361; Al-Tawfiq, et al. 2013:462). As stated in Phase 1 (Section 3.7.4), the hospitals under SEHA umbrella are required to follow the **'5 moments of HH'**. Nurses were asked whether they were using the '5 moments of HH' to determine compliance. Responses in Table 4.39 indicate that 404 (N=406; f=96%) nurses said they do apply the '5 moments of HH', however, the hospital data (Section 3.7.4) indicate that nurses are not practising the '5 moments of HH' all the time.

Table 4.39: Nurses always use the '5' moments of hand hygiene (N=406)

	n	f=%
Yes	404	96.9
No	2	.5
Total	406	97.4

If nurses do wash their hands as required, they were asked to **explain the '5 moments'** in an open-ended question, which was open-coded. The '5 moments' recommended in the Hospital Policy require the healthcare team to use HH (1) the moment before touching a patient, (2) before performing aseptic and clean procedures, (3) after being at risk of exposure to blood and body fluids, (4) after touching a patient, and (5) after touching a patient's surroundings (Chen, Sheng, Wang, Chang, Lin, Tien, Hsu & Tsai, 2011:2; Hospital Policy, 2017). As evident from the nurses' responses, only 190 of the 374 (N=417; f=50.80%) who responded were able to accurately describe the '5 moments' (Table 4.40). The data illustrate that nearly half (f=49.2%) of the respondents were not able to mention the '5 moments', which demonstrates a lack of knowledge among nurses.

Table 4.40: Nurses' explanation of the '5 Moments of HH' (n=374).

Direct Quotes as categories	Responses = F
The moment before touching a patient	220
Before performing aseptic and clean procedures	190
After being at risk of exposure to blood and body fluids	190
After touching a patient	220
Touching a patient's surroundings	190
Total	1010

Then nurses were asked to **provide reasons if they were not able to do the '5 moments of HH'**. Their responses were grouped into three themes, namely (1) lack of HH resources, (2) staff shortages, and (3) reactions to cleaning agents (see Table 4.41 for direct quotations). It is of concern that the reasons provided in the responses indicated some system and process issues, which could have been addressed by nurse managers in a proactive risk assessment.

Table 4.41: Reasons Unable to do proper HH

Theme	Direct quotes underpinning the theme
Lack of HH resources	*'not enough hand basins in between patient rooms'* *Not enough paper towels to dry hands'*
Staff shortages	*'we have too many patients allocated and unable to complete*

Theme	Direct quotes underpinning the theme
	task' *'multiple care activities (patient allocations not equally distributed and unable to complete workload)'*
Reactions to cleaning agents	*'the hand hygiene agents cause skin lesions and irritations'* *'allergic to the hand hygiene agents'*

As part of improving gaps in practice regarding HH compliance**, nurses were requested to explain the HH compliance rate in their units**, and the responses from the 323 (N=416) nurses revealed types of compliance data, namely (1) numerical descriptions (in percentages), and (2) word descriptions (good, satisfactory, compliant etc.) (see Table 4.42 for direct quotations). The responses indicated no consistency among the nurses on either what their unit's HH compliance rate was, or that it is provided in terms of percentages (see Section 3.7.4). The responses therefore indicated a concern, as nurses should understand HH performances in order to improve practices and prevent hospital-acquired infections.

Table 4.42: Nurses explanation of the HH Compliance Rate (n=323)

Theme	Direct Quotes underpinning the theme	Responses = F
Numerical Description	*'we are between 80%/85%with HH compliance'*	21
	'our unit HH are between 90%-99%'	14
	'our HH compliance rate is 100%'	9
Word Description	*'we are compliant in our HH practices'*	50
	'our HH practices are average'	30
	'our HH compliance rate is excellent'	21
	'our HH compliance rate is good'	91
	'HH compliance rate is satisfactory'	61
	'our HH compliance rate is very good'	37
	'I am not sure what our HH compliance rate is'	18
Total		**413**

HH compliance for the healthcare team must be enforced through regular auditing, sharing policies, continuous HH prevention strategies (use of visual aids and cues), skills development, motivation, and system changes as emphasised to facilitate

improved HH compliance (Squires, et al. 2014:1515; Longtin, et al. 2011:2; Luangasanatip, et al. 2015:2). The responses in Table 4.43 illustrate two themes to encourage other healthcare professionals to observe HH for compliance, namely (1) education, and (2) monitoring. As revealed by the responses, there was no structured process in place to enforce HH practices among the healthcare team, and this could contribute to HAI occurring (see Table 4.43 for direct quotations).

Table 4.43: Enforce HH Among Healthcare Professionals (n=366)

Theme	Direct quotes underpinning the theme
Education	*'tell (inform) them'*
	'observes them'
	'remind them'
	'infection control link (nurses)'
	'educate patients and families'
	'provide proper equipment and material'
Monitoring	*'Audit to ensure they perform HH'*

The misconception still exists among healthcare workers that **wearing gloves is just as appropriate as HH** (WHO, 2009). As illustrated in Figure 4.6, it is alarming that a third (n=103; f=25%) of the nurses perceived wearing gloves as equal to washing hands, which indicates a lack of knowledge on HH principles.

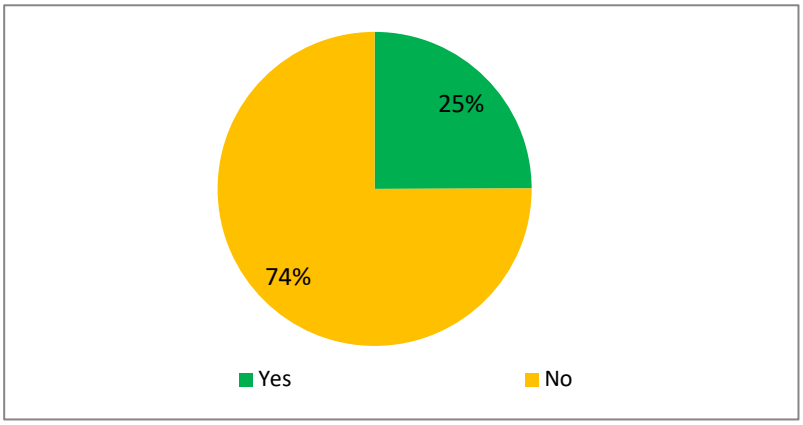


Figure 4.6: Wearing Gloves Just as Important as HH (N=310)

The WHO (2009:1) suggested that gloves should be used to (1) reduce the risk of contamination with blood and body fluids, and to (2) reduce contamination to self and other patients. To determine nurses' knowledge on glove use, they were asked to

motivate why they use gloves and their responses revealed that they used gloves for three major reasons, namely (1) to protect the patient and nurses, (2) to prevent infection between patients, and (3) as supportive of HH (see Table 4.44). The responses indicated no consistency among participants on glove use in practice, which could impact patient care outcomes.

Table 4.44: Reasons for Wearing Gloves Just as Important as HH (N=331)

Direct quotes as categories	Responses = F
For protection of the patient & staff	291
To prevent infection between patients	301
Supportive of hand hygiene	50

It is vital to include patients and families in HH programmes (Fakhry, et al. 2012:9) in order to enhance for prevention of hospital-acquired infections. This question was asked to understand how nurses **educate patients and families on HH practices when entering the unit**. Three themes were established, namely (1) HH education provided to patient or relatives, (2) display of HH visual posters, and (3) through HH awareness campaigns (see Table 4.45). The responses illustrate no consistency in how education on HH is presented to the patients and families, which potentially could impact patient outcomes.

Table 4.45: Engaging the Patient and Family in the HH Programme (N=371)

Theme	Direct quotes underpinning the theme	Responses = F
HH Education Provided to Patient or Relatives	*'we provide education materials to the patients on HH'*	387
	'we observe patient and family compliance with HH practices'	116
	'we demonstrate to patient and family HH practices when we are educating'	48
Display of HH Visual Posters	*'placing HH signs and posters at every wash basin for all to see'*	91
	'ensure rules and consequences of non-compliance to HH practices are communicated'	51
HH Awareness Campaigns	*'we introduced system where the security staff ensures that families wash hands*	97

Theme	Direct quotes underpinning the theme	Responses = F
	before entering the unit'	
	'we conduct awareness campaigns on HH practices'	87
	'we communicate HH practices in media to inform the community of best practices'	30

Not only are the nurses' opinions pertaining to patient safety important, but it was also necessary to assess how team safety culture practices and positive work environment factors may impact on patient safety.

4.6.4 Safety culture practices within the team

The purpose of safety culture is to assess the safety values, beliefs and practices existing in a hospital that allow for a proactive approach to identify gaps in patient safety practices and processes, through risks assessed in practice and trending of incidents reported (Pronovost, et al. 2015:333; Oña, 2012:18; Bonner, 2008:15; El-Jardali, et al. 2011:2; Halligan, et al. 2010:3). The safety culture elements of Reason were used to assess whether nurses understood safety culture; namely (1) informational culture, (2) flexible culture, (3) reporting culture, (4) 'just culture', and (5) learning culture. Three hundred and thirty-one (N=416; f=79.5%) responses revealed that only three of the safety culture elements were mentioned, namely (1) informational culture, (2) flexible culture, and (3) learning culture (see Table 4.46). However, the other two important safety culture elements (reporting culture and 'just culture') were not mentioned at all, which indicates a knowledge deficit among the respondents on safety culture in practice.

Table 4.46: Team Safety Culture (N=331)

Culture of safety elements as themes	Direct quotes underpinning the theme	Responses = F
Informational culture	*'we follow hospital policy for safety'*	97
Flexible culture	*'enforce use of the international patient safety goals'*	243
	'we have team work together'	197
	'we do risk assessment to ensure safe care environment'	67

Culture of safety elements as themes	Direct quotes underpinning the theme	Responses = F
	'we use effective communication in handing patients over between shifts'	64
	'we follow Hourly Rounding Principles to allow us to flex care'	53
Learning culture	*'we use the Comprehensive Unit Safety Program (CUSP) to guide us'*	181
	'we use patient education to ensure alignment with care regime'	67

4.6.5 Hospital climate (positive work environment) factors affecting patient safety

Literature on hospital climate (also referred to as positive work environment) states that positive work environments improve nurse retention and the quality of care for patients (Twigg & McCullough, 2013:86; Cooper, 2016:18). The elements required to ensure positive work environments, according to Twigg and McCullough (2013:86), were used as the themes. These elements were (1) adequate staffing, (2) resource availability, (3) communication, (4) teamwork, (5) support from leadership, (6) patient allocation, (7) nurse manager visibility, (8) nurse recognition programmes, and (9) flexible duty scheduling (see Table 4.47). Participants did not reflect on adequate staffing, nurse recognition or adequate resources, although they are important aspects described in the literature. Adequate staffing was mentioned as factors affecting patient safety and it is alarming that respondents failed to mention it in this section.

Table 4.47: Positive Work Environment (Hospital Climate) and Patient Safety (n=324)

Themes	Direct quotes underpinning the theme	Responses = F
Communication	*'we use effective communication to share patient safety information and patient safety data'*	251
Teamwork	*'to help each other when unit busy'*	301
Support from Leadership	*'leadership needs to support staff with issues on unit'*	213

Themes	Direct quotes underpinning the theme	Responses = F
	'daily meeting with staff to follow up issues'	42
Patient Allocations	*'ensure balance of nurse patient allocations based on acuity and needs'*	267
Nurse Manager Visibility	*'we have nurse manager visibility as they do round daily to follow up on issues'*	94
Flexible Duty Schedule	*'need to improve duty schedule and leave planner for nurses'*	94

4.6.6 Culture of safety and climate factors

A 5-point Likert Scale was used to allow nurses to grade their opinion on every statement, from strongly disagree to strongly agree. Based on the descriptive statistics, all questions demonstrated a mean of above 3 and the standard deviation of all ranged between 0.59 and 1.0, which is indicative of high reliability of the data (see Appendix G for Pearson correlation data). The subheadings represent the rephrased statements posed to 417 nurses (Appendix C) and the data results follow. The percentages responses are presented to the closest decimal point.

Many hazards and risks can be reduced if the root causes of incidents are targeted by the nurses involved in incidents, as well as the nurse manager (Hughes, 2008:20; Cooper & O'Neill, 2015:24). **Engaging nurses in patient safety improvement** is vital for sustainable practices and most nurses (n=359; f=86%) either agreed or strongly agreed that they are actively pursuing improvement activities. However, as evident in Figure 4.7, 57 (N=416; f=14%) respondents remained neutral and or disagreed, which could affect sustainable safety practices.

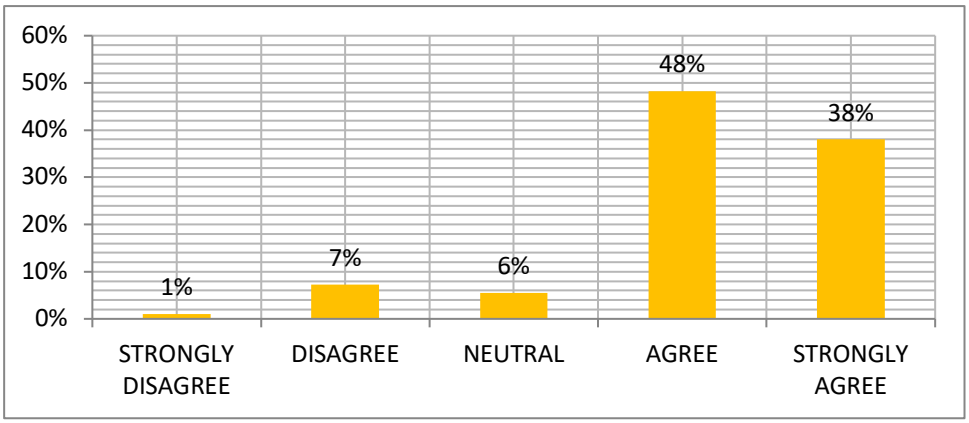


Figure 4.7: Nursing Team and active engagement in patient safety (N=416)

Ensuring nurse support in a non-punitive environment is essential to allow nurses to report unsafe events, leading to 'just culture' practices (Braun, et al. 2012:9). Some **nurses perceive that their mistakes can be held against them if they are reported**. As illustrated in Table 4.48, 179 (N=416; f=33%) respondents agreed that mistakes are held against them, with a third (n=135; f=33%) remaining neutral, which is suggestive of a punitive environment.

Table 4.48: Nurses perceptions that mistakes are held against them (N=416)

	n	f=%
STRONGLY DISAGREE	11	2.6
DISAGREE	91	21.9
NEUTRAL	135	32.5
AGREE	151	36.3
STRONGLY AGREE	28	6.7
Total	416	100.0

It is also true that **mistakes made, and incidents reported could contribute to the identification** of system issues that affect patient safety (Golda, 2013:31; Reilig, 2012:434; Nordin, 2015:16; Gotval, 2014:24). Figure 4.8 shows that two-thirds of respondents either agree or strongly agree (n=277; f=67%) that their errors have resulted in process or system improvements. A third of nurses (n=139; f=33%) remained neutral and disagreed regarding their involvement in process improvement activities.

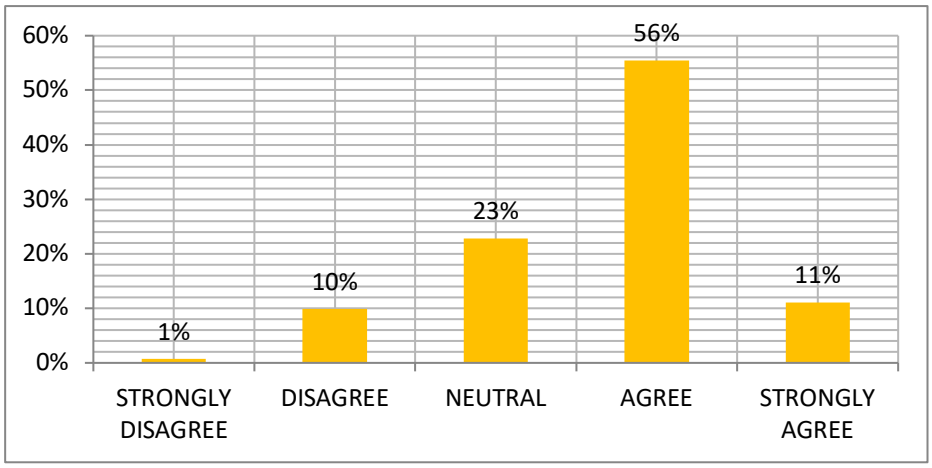


Figure 4.8: Mistakes have led to positive changes in the unit (N=416)

Teamwork and support among nurses are vital for patient safety and establishing a positive work environment (WHO, 2009:21; Budin, et al. 2014:3). Nurses have to feel free to ask for help if needed. Figure 4.9 illustrates that the respondents felt positive (n=277; f=67%) that teamwork does exist within their units. However, it is of concern that 139 (N=417; f=33%) perceived that no teamwork exists among nurses.

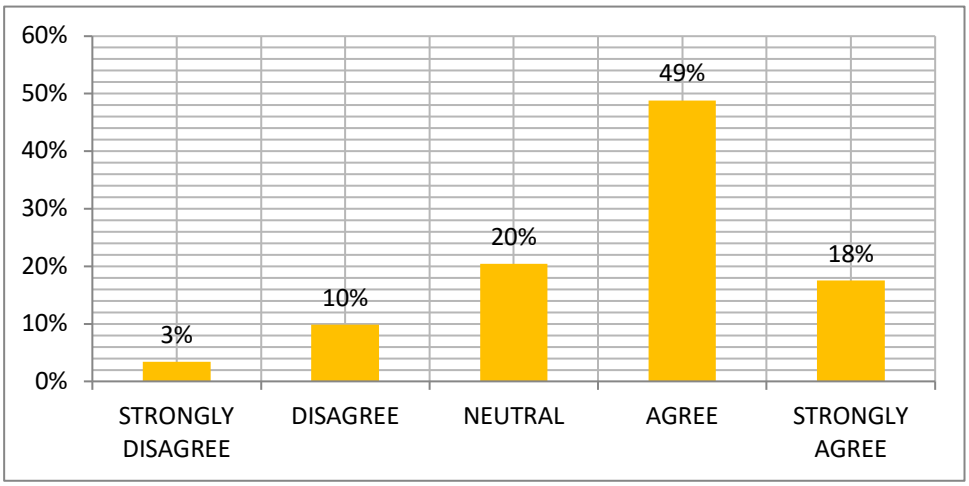


Figure 4.9: Teamwork among Nurses (N=416)

Establishing a reporting safety culture requires the work environment to support errors being reported to identify system issues affecting patient safety (Golda, 2013:36; Burns, Mearns & McGeorge, 2006:1139). Figure 4.10 presents that more than half of the nurses (n=229; f=55%) feel that **mistakes made are kept in personal files**, which is similar to responses in Table 4.48 indicating a punitive environment.

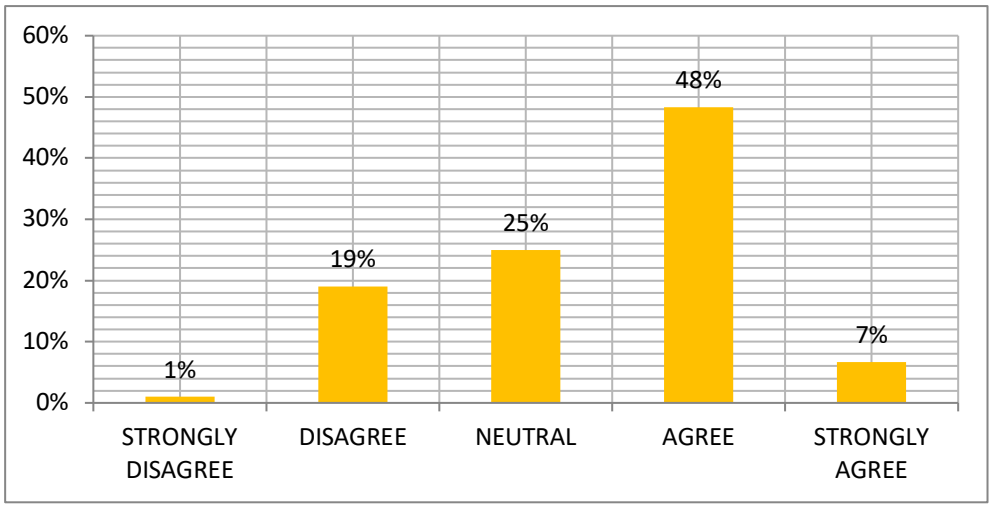


Figure 4.10: Mistakes made is kept in nurses' personal files (N=416)

Engaging bed-side nurses in process improvement activities is crucial as they understand the system's flaws and potential issues that could lead to patient harm (Golda, 2013:37). Of the respondents, 290 (N=417) nurses stated that they are involved. The minority of nurses (n=127) did not feel that they are engaged in process improvement (Figure 4.11).

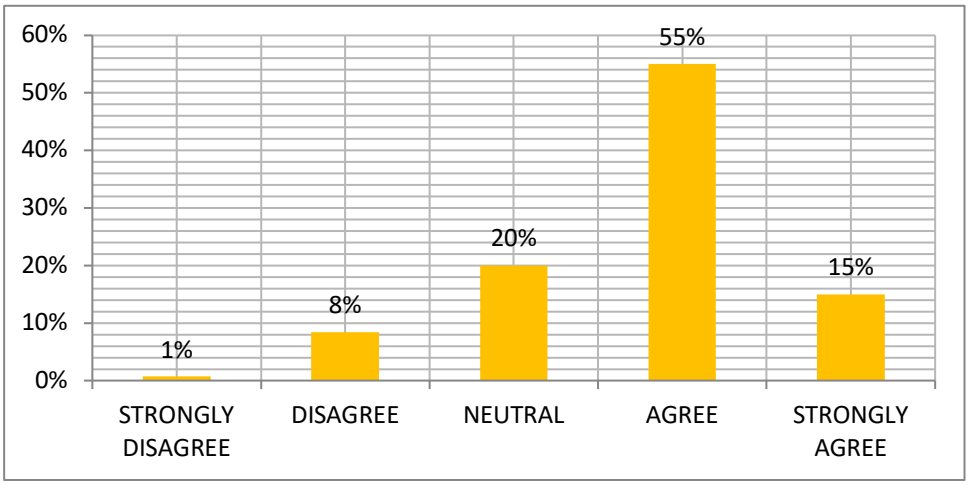


Figure 4.11: Nurses involved to improve procedures and systems defects (N=416)

A **proactive approach to risks in the patient care environment is important for identifying system defects that could affect patient safety** (Mahajan, 2010:70). The majority of positive responses (n=275; f=66%) in Figure 4.12 shows agreement with this statement. However, a third of nurses disagreed or remained neutral (n=141; f=34%), revealing that not all nurses were engaged and aware of system defects.

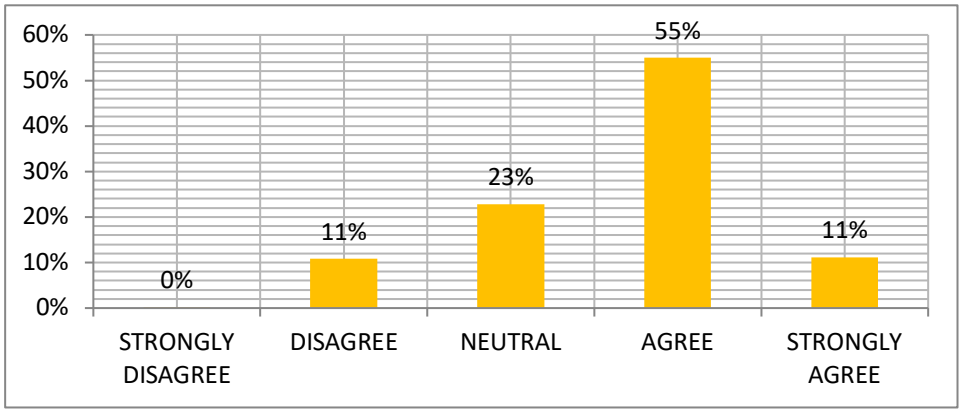


Figure 4.12: Proactive unit procedures and systems to prevent errors (N=416)

Opperman (2015:11) and Golda (2013:34) iterate that **appreciation should be the driver for nurse engagement in safety activities** and motivation, and that low morale affects not only productivity but also patient safety. The larger group of nurses (n=315; f=75%) agreed that their nurse manager celebrated successes and praised nurses who practice safely (see Table 4.49). Although the majority perceived praise to be present in their unit, 101 (N=416; f=25%) of the nurses did not experience similar recognition based on 'disagree' and 'neutral' responses, which could influence morale and ultimately patient safety.

Table 4.49: Recognition of nurse-patient safety procedures (N=416)

	n	f=%
STRONGLY DISAGREE	8	1.9
DISAGREE	30	7.2
NEUTRAL	63	15.1
AGREE	241	57.9
STRONGLY AGREE	74	17.8
Total	416	100.0

Two hundred and seventy-six **nurses replied that their recommendations on potential system defects are considered to improve patient safety**. However, 140 (N=416; f=33%) respondents remained neutral and disagreed (see Table 4.50), thus they felt that their recommendations for improvements were not being valued.

Table 4.50: Including Nursed' Recommendations to improve patient safety (N=416)

	n	f=%
STRONGLY DISAGREE	7	1.7
DISAGREE	42	10.1
NEUTRAL	91	21.9
AGREE	219	52.6
STRONGLY AGREE	57	13.7
Total	416	100.0

Nurse managers should ensure that they employ a flexible culture to adapt to the ever-changing environment that could affect patient safety and care delivery though constantly reviewing and assessing the system and processes (AHRQ, 2012:1; Pronovost, et al. 2015:2; Weaver, Lubomski, Wilson, Pfoh, Martinez & Dy, 2013:184). This awareness by the nursing team is the key to **identifying risks and preventing them proactively**, and the greater majority of nurses (n=304 of N=416) were in consensus of a proactive approach. However, as indicated in Figure 4.13, 112 (N=416; f=27%) nurses remained neutral or agreed that nurse managers ignore patient safety problems, thus a proactive approach to identifying safety risk is not perceived by all nurses.

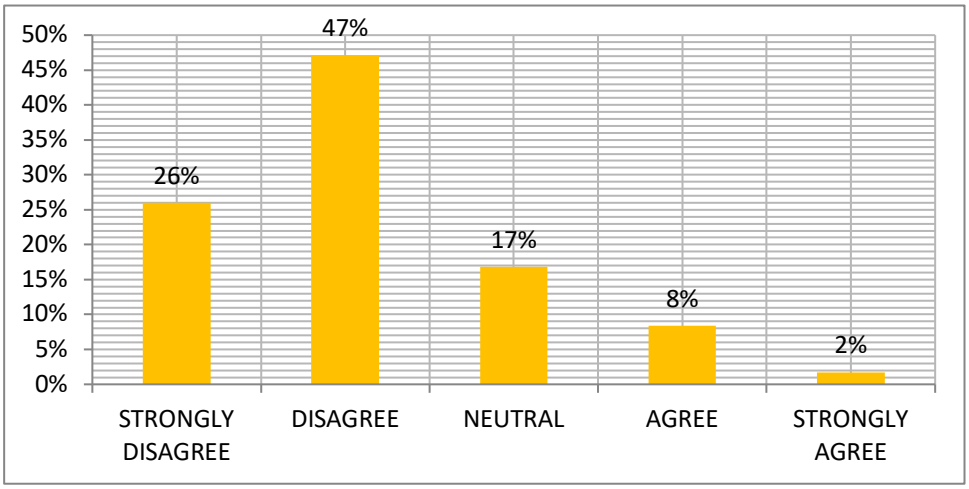


Figure 4.13: Patient safety concerns recurring not addressed proactively (N=416)

Safe staffing levels ensure that nurse managers have **adequate staffing levels to manage patient acuity and the care** required (Wallace, 2013:49). As illustrated in

Figure 4.14, half (f=51%) of the respondents felt staffing levels were not adequate, which could potentially affect patient safety and outcomes. Staffing concerns were also highlighted in Section 4.6.3.1(see Table 4.20), indicating the need to address nurses' perceptions of safe staffing.

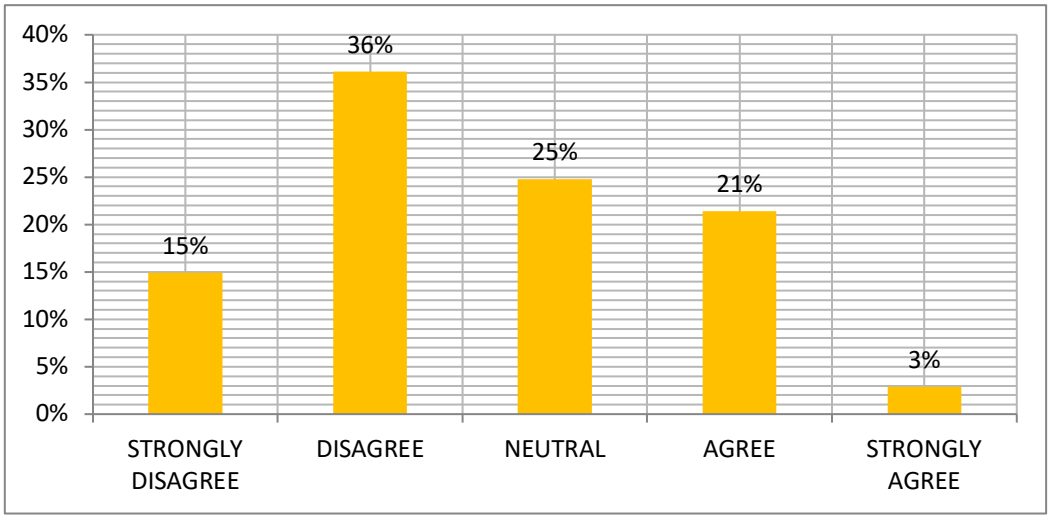


Figure 4.14: Nurse Perception of Staffing adequacy to handle the workload (N=416)

A healthy, positive work environment is one in **which team leaders and members respect and value each other;** an essential for sustaining a safety culture (Twigg & McCullough, 2013:86). The responses in Figure 4.15 indicate that 118 (N=416) nurses did not perceive that they were respected in their workplace, thus negatively affecting their morale. It could also be the reason why safety culture was not being sustained.

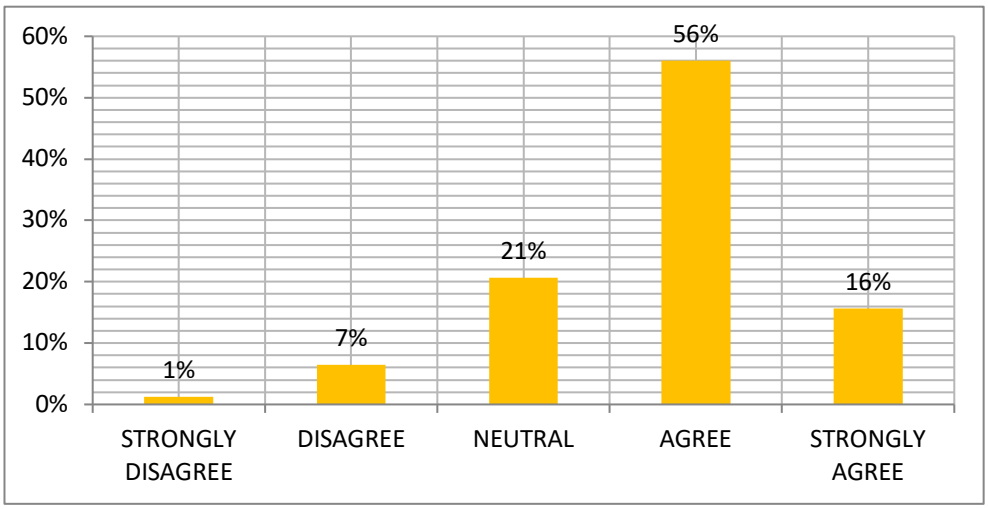
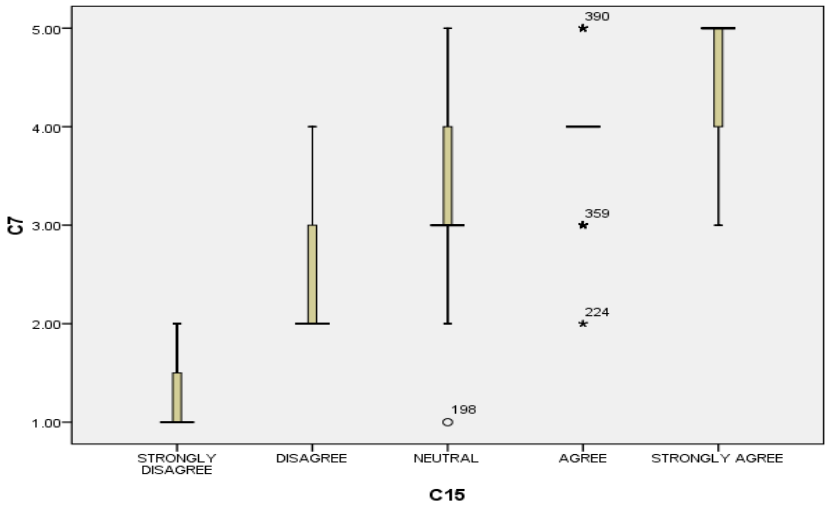


Figure 4.15: Respect among the nursing team (N=416)

In triangulating the data in this question with a similar question from Figure 4.11 the boxplot in Table 4.51 shows a strong correlation that a third of nurses were not involved in process improvement activities.

Table 4.51: Triangulating data Table 50 with Table 58 on nurse participation in process improvement (N=416)



The primary responsibility of the nurse manager is to identify process change to sustain a sound safety culture in the clinical areas. As a result, nurse managers need to be visible in the unit (Golda, 2013:31). As illustrated in Table 4.52, the greater majority of nurse respondents agreed (n=279) that **nurse managers are visible and allocate nurses to a unit based on patient care needs and acuity**. However, there were 134 nurses who disagreed (n=64; f=15.4%) and remained neutral (n=70; f=16.8%), which indicates that nurse managers were not always visible in addressing safe staffing; such behaviour could potentially negatively impact patient safety.

Table 4.52: Nurse Manager visibility to ensure safe staffing (N=413)

	n	f=%
STRONGLY DISAGREE	5	1.2
DISAGREE	59	14.2
NEUTRAL	70	16.8
AGREE	230	55.3
STRONGLY AGREE	49	11.8
Total	413	99.3

In an informed safety culture, the healthcare facility analyses data from audits, errors and reports and then share this information with their nurses (Golda, 2013:31; Reilig, 2012:434; Nordin, 2015:16; Gotval, 2014:24). The data indicates that two-thirds (n=297; f=71.4%) of respondents agreed that **feedback on process improvement is provided** (see Table 4.53), however, a third of the respondents (n=119; f=28.5%) did not perceive their nurse manager to be the one who provided process improvement feedback.

Table 4.53: Feedback on improving processes for patient safety (N=416)

	n	f=%
STRONGLY DISAGREE	6	1.4
DISAGREE	21	5.0
NEUTRAL	92	22.1
AGREE	256	61.5
STRONGLY AGREE	41	9.9
Total	416	100.0

Wilson (2007:19) and Braun, et al. (2012:9) highlight the importance of openness and empowerment in a flexible safety culture as it creates an environment for **nurses to share errors or information about unsafe issues**, as evident for 256 of the respondents who agreed they were able to speak freely. However, 160 (N=416) nurses disagreed or remained neutral, which is of concern as fear of speaking up when unsafe events occur could impact patient safety (see Table 4.54).

Table 4.54: Nurses ability to 'Speak Up' on unsafe issues for patient safety (N=416)

	n	f=%
STRONGLY DISAGREE	6	1.4
DISAGREE	56	13.5
NEUTRAL	98	23.6
AGREE	220	52.9
STRONGLY AGREE	36	8.7
Total	416	100.0

As part of an informed culture of safety and sustainment of safety practices, **it is vital to inform nurses about errors and gaps** in the unit. The negative responses in Table

4.55 indicate that respondents did not perceive that information on errors and gaps were shared as a quarter of the respondents (n=102 of the N=416) disagreed and remained neutral. This is a potential area that affects patient safety, since sharing errors and solutions requires nursing teams' involvement.

Table 4.55: Nurses are informed about errors that happen in this unit (N=416)

	n	f=%
STRONGLY DISAGREE	3	.7
DISAGREE	27	6.5
NEUTRAL	72	17.3
AGREE	264	63.5
STRONGLY AGREE	50	12.0
Total	416	100.0

A flexible safety culture allows support for any **nurse to advocate for patient safety no matter their designation**. As indicated in Table 4.56, the respondents had nearly similar response rates for the agree, disagree and neutral categories. The data indicated the respondents' perception on their nurse manager's ability to engage with nurses and speak up on safety concerns in care practices.

Table 4.56: Nurses ability to question safety decision for those with more authority (N=416)

	n	f=%
STRONGLY DISAGREE	14	3.4
DISAGREE	109	26.2
NEUTRAL	135	32.5
AGREE	137	32.9
STRONGLY AGREE	21	5.0
Total	416	100.0

As part of a 'just safety culture', nurses are accountable for their own behavioural choices in providing safe patient care and reporting system defects that can potentially affect patient safety (Golda, 2013:33). It is of concern (see Figure 4.16), that 163 (N=416; f=39.18%) of nurses perceived that they were not able to **verify care decisions with the nurse manager**. As indicated in the data, nurses did not feel

comfortable to ask the nurse manager's assistance if they were not clear on practice issues, which could have serious implications for patient safety.

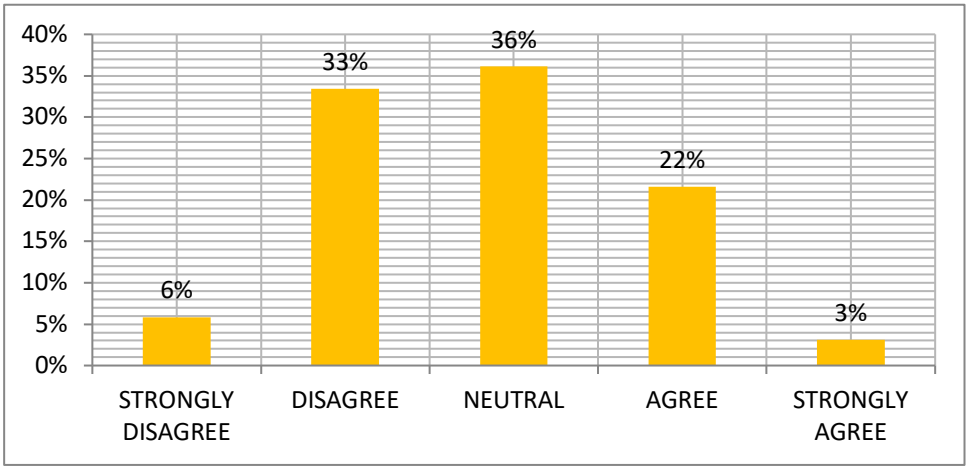


Figure 4.16: Nurses ability to verify patient safety care decisions (N=416)

Emphasis on responsibility and accountability for safety behaviours needs to be cascaded throughout the facility with the aim of making safety a value in a positive work environment. Senior managers are responsible for instilling these behaviours in the nursing team through appropriate strategies and a vision with regards to safety and nurses' responsibility towards a 'just culture' environment (Twigg & McCullough, 2013:86; Golda, 2013:34). As illustrated in Table 4.58, the data revealed that 43% (n=176) of the nurses did not perceive that the **Hospital management was providing a safe climate** that is conducive for patient safety, which could affect patient safety outcomes.

Table 4.58: Hospital management provides a safe work environment (N=416)

	n	f=%
STRONGLY DISAGREE	32	7.7
DISAGREE	42	10.1
NEUTRAL	102	24.5
AGREE	210	50.5
STRONGLY AGREE	30	7.2
Total	416	100.0

The use of appropriate communication processes to hand over patients between units and among nurses and other healthcare providers is essential for patient safety (JCIA,

2016). The data in Figure 4.17 indicate that 204 (N=416; f=49%) of the respondents had a negative perception that the handoff of patients' information is lost between units, during patient transfers, and with shift changes. The data therefore suggests that the handoff policies in place for patient safety were not being adhered to during all patient handoff encounters, which presents a safety concern.

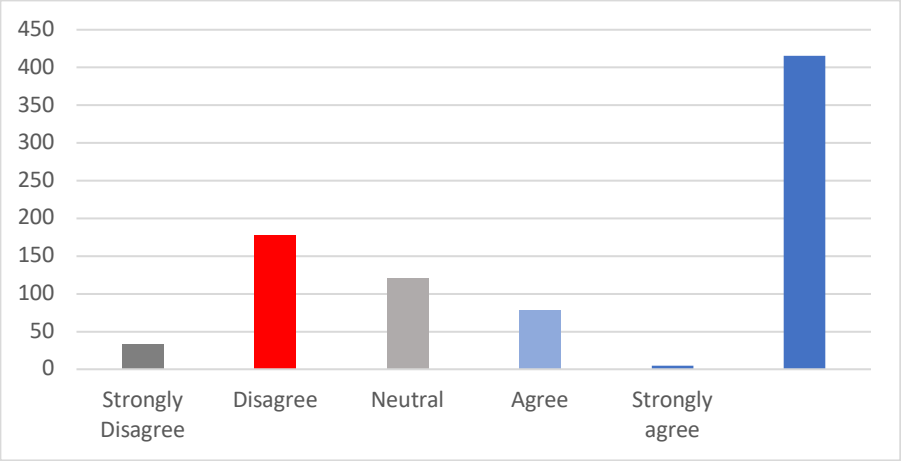


Figure 4.17: Sharing Patient Information between Units/ Transfers and Shift Changes (N=416)

It is the nurse managers' responsibility to ensure that skilful, **competent nurses are recruited** and that appropriate performance management systems are in place to develop a nursing team with nurses allocated based on their skill level (Wallace, 2013:50). Only 15% (n=62.5) of respondents perceived the team to be incompetent (see Figure 4.18).

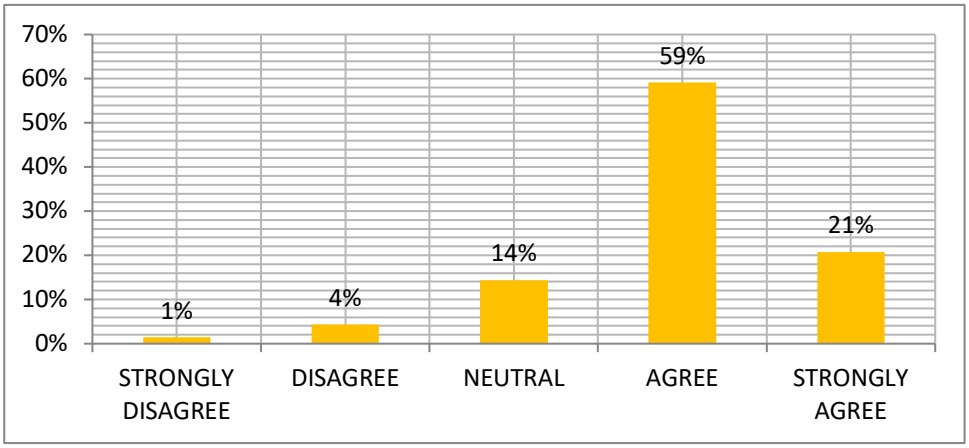


Figure 4.18: Nurses perception of team members' competence in caring for the patients in the unit (N=416)

The nurse managers are responsible for ensuring that a hospital climate is set for adequate staffing resources and **training opportunities are presented to uphold personal and professional competence and development of nursing teams** (McFadden, et al. 2014:2); 61.8% (n=257) of responses were positive. However, as illustrated in Table 4.59, 159 (f=38.2%) of respondents disagreed or remained neutral, revealing the inequity in validating nurses' professional competence that could affect patient safety.

Table 4.59: Nurse manager validates nurse's professional development (N=416)

	n	f=%
STRONGLY DISAGREE	9	2.2
DISAGREE	45	10.8
NEUTRAL	105	25.2
AGREE	212	51.0
STRONGLY AGREE	45	10.8
Total	416	100.0

Adequate staffing resources and fair opportunities are essential to set a hospital climate conducive for patient safety and in the sustainment of practices. Only 237 (f=57%) respondents agreed with this statement (see Figure 4.19). What is of concern is the fact that 179 (f=43%) respondents felt their **requests for education** were not supported by their nurse manager. This could well be the reason why some nurses do not practice safely due to gaps in training opportunities.

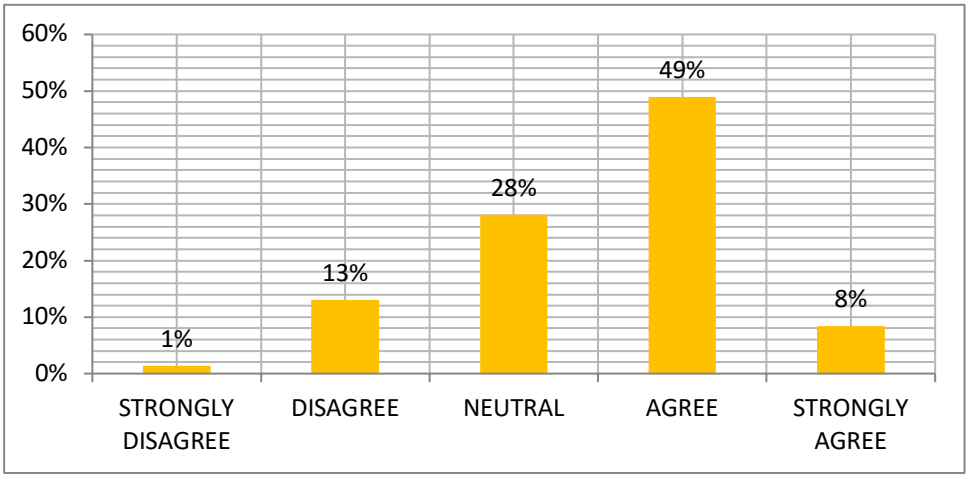


Figure 4.19: Nurses ability to request training when required (N=416)

The nurse manager must ensure that a process is established to continuously assess and share action plans on any nursing performance indicator outcomes data of care delivery (documentation of NAA, HH, HAPUs, and falls) through regular unit meetings and displaying it on the quality board (Holloway, 2012:9). Most respondents (n=287; f=69%) agreed that **nurse managers do use patient safety outcomes data to improve care practices** (see Table 4.60). However, there are still nurses (n=129; f=31%) who remained neutral or disagreed, which could indicate that no structured informational sharing processes were used by the nurse manager.

Table 4.60: Nurses patient safety practices are managed based on patient outcomes data (N=416)

	n	f=%
STRONGLY DISAGREE	4	1.0
DISAGREE	28	6.7
NEUTRAL	97	23.3
AGREE	248	59.6
STRONGLY AGREE	39	9.4
Total	416	100.0

As part of the Corporate Operational Body (SEHA) nurse managers are required to provide monthly performance reviews on nursing-sensitive indicators, i.e. falls, HH, HAPUs and documentation of NAA. As indicated in Table 4.61, nearly a quarter of nurses (n=111; f=26.8%) did not perceive **the nurse manager to audit nurses' performance on NAA, falls, HAPU and HH**. This shows that no structured auditing process is in place to monitor nurses' patient safety performances.

Table 4.61: Nurse managers are auditing nurse's patient safety practices (N=416)

	n	f=%
STRONGLY DISAGREE	4	1.0
DISAGREE	24	5.8
NEUTRAL	83	20.0
AGREE	260	62.5
STRONGLY AGREE	45	10.8
Total	416	100.0

Many hazards and risks can be reduced if the **root causes of incidents and system issues are targeted by the nurses involved in incidents and by the nurse manager** (Cooper & O'Neill, 2015:24); 264 (N=416; f=63%) respondents agreed that they were engaged in root cause analysis. As indicated in Figure 4.20, 38% of respondents (n=155) felt that the nurse manager did not involve them in root cause analysis, which could affect patient safety.

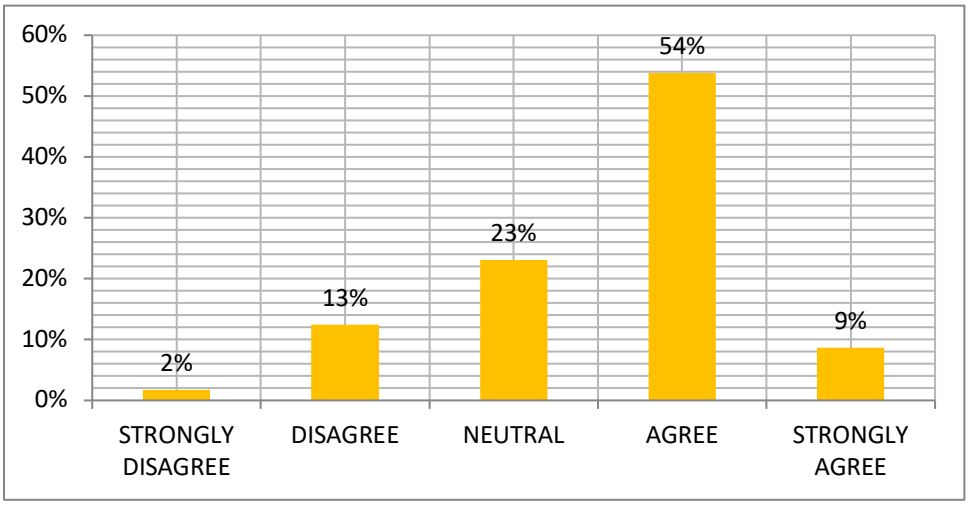


Figure 4.20: Nurse involvement in root cause analysis identify system issues (N=416)

Milosevic, Bass and Combs (2015:2) and Jin, et al. (2013:61) stated that the nurse manager is required to follow the Hospital Safety Management Plan to **proactively reduce risks that affect patient safety.** Of the respondents, 298 (N=416; f=72%) agreed that proactive risk assessments were performed. Some respondents (n=117; f=28%) remained neutral or disagreed that their nurse manager addressed patient safety risk factors proactively (Figure 4.21). It could be perceived that safety concerns are overlooked rather than being proactively addressed.

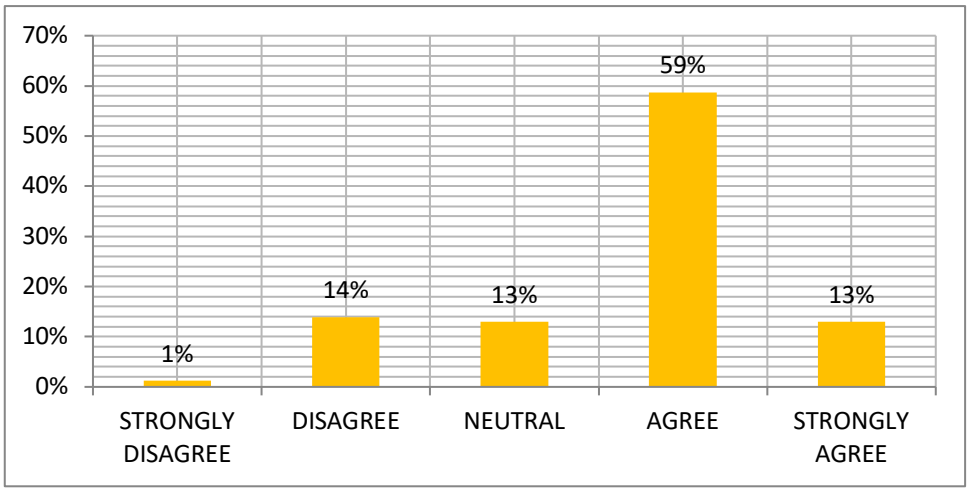


Figure 4.21: Nurse manager proactively address system issues affecting patient safety (N=416)

As illustrated in Table 4.62, the responses regarding recommendations to improve a positive work environment were grouped together using the elements for positive work environments, namely (1) through adequate staffing, (2) resource availability (no response), (3) communication, (4) teamwork, (5) leadership support, (6) patient allocation, (7) nurse manager visibility, (8) nurse recognition programme, and (9) flexible duty scheduling (see Table 4.61). Based on the responses received, adequate staffing, resource availability and flexible duty scheduling were not listed. However, the responses listed in Section 4.6.5 indicated that inadequate resources and inadequate staffing were factors that could affect patient safety.

Table 4.62: Recommendations to improve PWE (N=94)

Theme	Direct quotes underpinning the theme	Number responses= F
Communication	*'we need manager(s) to have effective communication with us'*	82
Teamwork	*'it requires all the nurses to help each other not to affect patient care'*	71
Leadership support	*'our nurse leaders must support safe environment to allow us to speak up on safety concerns'*	43
	'the nurse manager should not hold mistakes on staff as punishment'	10

Theme	Direct quotes underpinning the theme	Number responses= F
	'the nurse manager needs to ensure we follow daily safety huddle, so we can all debrief (the) situation in unit'	20
	'the nurse manager must keep us all accountable for our safety practices'	18
Patient allocation	*'the nurse manager needs to balance workload among nurses'*	73
	'to follow staffing matrix in proper nurse patient ratio'	71
	'ensure that nurses do not float staff other units when our unit not busy as unsafe'	20
Nurse recognition	*'to constantly provide recognition and acknowledgement of our safety practices and good work'*	
Nurse manager visibility	*'to ensure that the nurse manager more frequently on unit to help us with our concerns and issues'*	

4.7 NURSE MANAGERS' SAFETY CULTURE QUESTIONNAIRE

The nurse managers' biographical data, their understanding of their own culture as well as the patients' culture, hospital climate, patient safety, culture of safety and 'just culture' practices are described next. Data will be presented in frequencies and Pearson and ANOVA correlation data is displayed in Appendix H.

4.7.1 Biographical data

According to Hilliard, et al. (2012:885), privacy and gender separation is critical in Islam, and senior nursing management therefore needs to ensure that the unit's female:male nurse managers are assigned to be respectful to the unit's gender profile. As shown in Table 4.63, 34 nurse managers responded to the study, of which eight were males, and 26 were female nurse managers. Their age ranges are presented in Table 4.63.

Table 4.63: Nurse Managers Gender and Age (N=34)

	Age	n	f=%
Female n=26	18-24	0	0
	25-34	1	2.94
	35-44	8	23.52
	45-54	12	35.29
	55-64	5	14.70
Male n=8	18-24	0	0
	25-34	0	0
	35-44	3	8.82
	45-54	4	11.76
	55-64	1	2.94

The age of nurse managers was required to determine if they have the maturity required to lead and influence nurses' safety behaviours as explained by Numminen, et al. (2013:1). Table 4.63 shows that the majority of nurse managers fall in the 45 to 54-years range (n=16; f=47.05%), 11 (f=32.35%) were in the 35 to 44-year range, 6 (f=17.64%) in the 55 to 64-years range, and only one was in the age group the 24 to 35-years (f=2.94%). This data reflects that nurse managers were in the 35 to 64-year age bracket, indicating sound clinical experience and maturity.

The nationality of the nurse managers is an important component as their culture entails an understanding of the unique cultural requirements that working with a diverse team will bring to the work environment (Hofstede, 2011:3). Table 4.64 reflects that 33 nurse managers participated and represented 10 different nationalities. The Jordanian and South Africans were in the majority, with seven each (f=21.21%), followed by 5 (f=21.21%) Philippine and Indian nurse managers, and one (f=3.03%) nurse manager each from Egypt, Finland, New Zealand and Romania. It can thus be concluded that the general behaviours and values exhibited among the nursing managers could strongly be influenced by the cultures of the Jordanian, South African, Philippine and Indian nurse managers. As most patients are Emirati patients (Hospital data, 2017), this could affect effective communication with patients. Nurse managers must ensure that Arabic nurses and translators are available to facilitate safe communication.

Table 4.64: Nationalities of nurse manager (N=33)

NATIONALITY	n	f=%
JORDANIAN	7	21.21
SOUTH AFRICAN	7	21.21
PHILIPINE	5	15.15
INDIAN	5	15.15
BRITISH	3	9.09
EMIRATI	2	6.06
EGYPTIAN	1	3.03
FINISH	1	3.03
NEW ZEALANDER	1	3.03
ROMANIAN	1	3.03

The nurse managers' home language is tied to their own culture, but hospital regulations dictate that the official language in the workplace is English (Anionwu, et al. ([S.a.]:1). As with their nationalities, the home languages of these nurse managers included many different dialects. Ten (f=31.25%) nurse managers spoke Arabic (spoken by the Jordanian, Egyptian, and Emirati nurse managers), followed by six nurse managers who spoke English (f=18.75%) and five who spoke Tagalog (f=15.62%) (see Table 4.64). This illustrates the significant difficulties faced by CNOs as most of the nurse managers' first language is not English, which could affect sustainable practices; nurse managers might not understand and communicate safety practices in English to the diverse team whose first language is also not English (see Table 4.4).

Table 4.65: Home language of nurse manager (N=32)

LANGUAGE	n	f=%
ARABIC	10	31.25
ENGLISH	6	18.75
TAGALOG	5	15.62
AFRIKAANS	3	9.38
MALAYLAM	2	6.25
HINDI	2	6.25
FINISH	1	3.13
ZULU	1	3.13
ROMANIAN	1	3.13

LANGUAGE	n	f=%
KONKANI	1	3.13

As discussed (see Table 4.64), communication across cultural boundaries increases the risk of misunderstanding and it was necessary to determine if **English training** was received on a level other than as a school subject (Mikkonen, Elo, Miettunin, Saarikossi & Kääriäinen, 2017:20). As indicated in Figure 4.22, a total of 32 nurse managers responded, of which 21 (f=62%) said that they had training, and 11 (f=32%) stated that they did not receive English training.

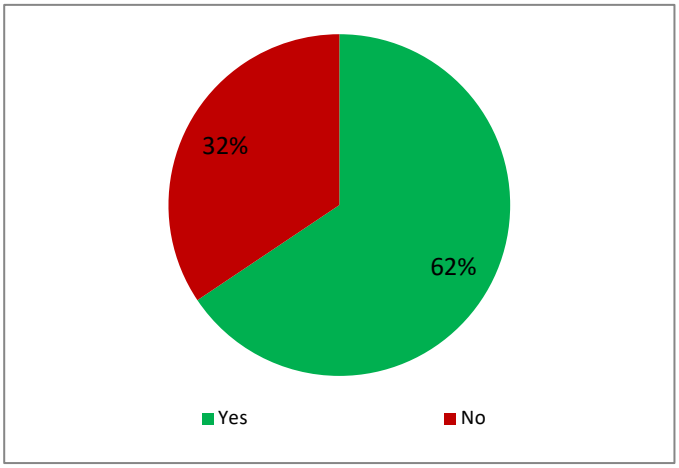


Figure 4.22: English Training received by the nurse manager (N=32)

Similar to the inappropriate answers from nurse respondents as described in Question 6.1, the nurse managers also misunderstood the question. Nurse managers with a mother tongue other than English, were requested to indicate what **English training**, other than as a school subject, they received. The responses provided (see Table 4.66) indicated that 17 (f=50%) nurse managers listed training received at school. It is alarming that seemingly only three of the nurse managers understood and answered this question accurately. Providing direction and instruction with regards to patient care occurs in English. Therefore, this is a concern as English language proficiency can negatively affect patient safety as indicated by Van Rosse, et al. (2016:46) and Wilson (2013:213).

Table 4.66: English Training Received (N=34)

	n	f=%
Home language	3	8.8
School	17	50.0
Nursing school	8	23.5
Country	6	17.6
Total	34	100.0

Nurse managers indicated in an open-ended question on **how English training assisted or could have assisted them when communicating with their diverse nursing team**. Only eight responses were received and open-coded. Five nurse managers mentioned that English training improved their communication, two respondents mentioned the need for non-Arabic nurses to learn the Arabic language, and one was of the opinion that formal training was not required. The data indicated an English proficiency concern as communicating with diverse nursing teams occur in English and could affect communication and direction required from the nurse manager.

All nursing units are required to conduct (1) NAA, (2) risk assessment on skin integrity, (3) risk assessment for fall risk, and (4) prevent infection through HH. These care activities were identified in patient outcomes data from Phase 1 (Section 3.7.2, Chapter 3) as a concern in many care units and it was thus necessary to **determine the work area for nurse managers** to cross-reference whether the nurse managers were from the Medical, Surgical, Paediatrics and Critical Care unit. As indicated in Table 4.67, eight nurse managers work in the Surgical units, 10 nurse managers were from Critical Care units (ICU, CCU, HDU), then the Medical unit (n=5), 4 worked in the Emergency Department, and three in the Paediatric units. This indicates that 30 of the 34 nurse managers represent the units that have patient safety concerns.

Table 4.67: Work Area nurse manager (N=33)

		n	f=%
	Emergency	4	11.8
	Medical	5	14.7
	Surgical	8	23.5
	Paediatrics	3	8.8
	Critical Care	10	29.4
	Administration	3	8.8
	Total	33	97.1

The **nurse managers' current role** was important to illustrate the different category of nurse managers working in the different care units to manage and lead their nursing teams. The hospitals in the SEHA group has certain titles assigned to the nurse managers based on education and years of experience; either Unit Manager or Senior Charge Nurse. As indicated in Table 4.68, 16 (f=47.1%) respondents had the title Senior Charge Nurse and 15 (f=44.1%) had the title of nurse manager. The unit manager and senior charge nurses may be the leaders for the shift to oversee nurses' care practices and manage unit operations and patient safety. Nurse managers were in the most responsible roles, leading nurse safety practices as indicated in Table 4.68.

Table 4.68: Current Position of nurse manager (N=31)

	n	f=%
Nurse Manager	15	44.1
SCN	16	47.1
Total	31	91.2

Establishing the **years of experience** would not only indicate the nurse managers' level of experience but would also indicate the duration they have worked within a diverse team context (Parand, et al. 2014:1). As indicated in Table 4.69, 13 (f=38.2%) nurse managers had between 6-10 years' experience in a leadership role, followed by 3 (f=8.8%) nurse managers who had between 11-15 years, with only one (f=38.2%) who had more than 16 years' experience. Sixteen nurse managers (n=16; f=47.1%) were relatively new in their position as they only had between 1-5 years' experience.

Table 4.69: Years of Experience in Current Position as nurse manager (N=33)

	n	f=%
1-5 YRS	16	47.1
6-10 YRS	13	38.2
11-15 YRS	3	8.8
16 YRS AND ABOVE	1	2.9
Total	33	97.1

The **highest nursing qualification** illustrates the educational background of the nurse managers, thereby indicating their professional skill mix. As illustrated in Table 4.70, 9 nurse managers (f=26.5%) had completed their Master's degree; unfortunately, no doctoral prepared nurse manager formed part of the nurse manager team. As nurse managers are required to be the nurses' clinical resource experts, they have to develop themselves personally and professionally. It is therefore of concern that only 9 (f=26.5%) were in possession of a Master's degree.

Table 4.70: Highest Nursing Qualification (N=33)

	n	f=%
DIPLOMA	8	23.5
BSN	15	44.1
MSN	9	26.5
Total	32	94.1

4.7.2 Effect of nurse managers' culture on patient safety

As discussed in Chapter 2 (Section 2.5), the nursing team needs to be aware of the cultural influences and their role in ensuring culturally congruent care (Loftin, et al. 2013:6; Anionwu, et al. [S.a.]:1).

The nurse managers bring their own cultural perspective into the healthcare environment and understanding the essence of this uniqueness is essential. It is evident in the literature that cultural competence and sensitivity is vital to safe patient care delivery in a diverse nursing team (Renzaho, et al. 2013:269). Figure 4.23 shows that a total of 33 nurse managers responded to this question, of which the greater majority of nurse managers (n=27; f=79%) stated that their **own culture does affect**

patient safety.

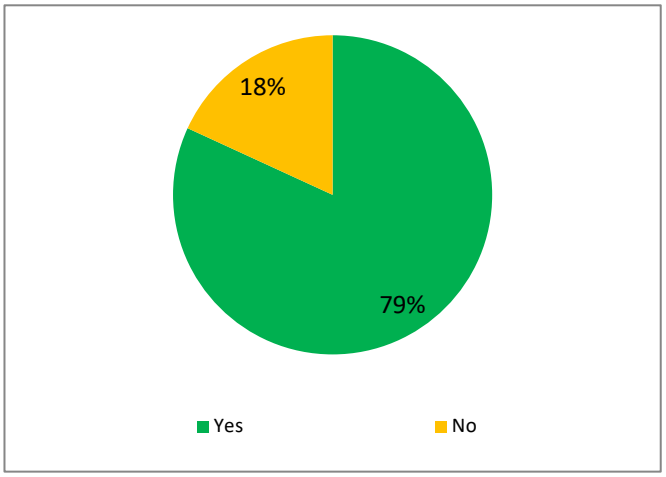


Figure 4.23: Manager's Culture Affects Patient Safety (N=34)

Hilliard, et al. (2012:885) emphasised the importance of gender in nursing care and the principle of privacy required by Islam (see Chapter 2 Section 2.5 for nurse cross-referencing). Six (N=; f=18.18%) male and 21 (N=33; f=63.63%) female respondents perceived that their own culture affected patient safety (see Table 4.71). Determining the impact of gender in managing care units with male nurse managers is essential as it requires careful consideration by the CNO to allocate nurse managers based on Islamic values and beliefs (see Table 4.63).

Table 4.71: Nurse Manager Gender * Own Culture Affect Cross-tabulation (N=33)

		Nurse Manager own Culture Affect patient care				Total
		Yes	Yes	No	No	
		n	f=%	n	f=%	
Gender	Male	6	18.18	2	6.06	8
	Female	21	63.63	4	12.12	25
Total		27		6		33

As indicated in Table 4.72, the majority of nurse managers between the age range 45 to 64-years, perceived that their own culture affects patient safety (n=19 from the N=33; f=57.57%). This illustrates that mature nurse managers perceive their own culture to affect patient safety.

Table 4.72: Nurse Manager Age / Culture Affect Cross-tabulation (N=33)

Age of the nurse manager	Patient Culture Affect patient safety				Total
	Yes	Yes	No	No	
	n=	f=%	n=	f=%	
25-34	1	3.03	0	0	1
35-44	7	21.21	4	12.12	11
45-54	14	42.42	1	3.03	15
55-64	5	14.15	1	3.03	6
Total	27		6		33

Twenty-seven nurse managers provided **reasons why they thought that their own culture affects patient safety**. The answers were open-coded, and two themes emerged, namely (1) cultural competency, as well as (2) patient safety (see Table 4.73). As indicated in the varied responses, this question was not clearly understood by nurse managers, possibly due to their own language not being English as was the case in other misunderstood questions (see Tables 4.66).

Table 4.73: Nurse Manager Culture Affecting Patient Safety

Theme	Direct Quotes underpinning the theme
Cultural competency	*'it forms part of our values and beliefs to care for patients safely'*
	'we are required to employ cultural sensitivity in caring patients from diverse cultures'
	'it was the way we were raised from our culture to care for others'
	'we are required to care with integrity and honesty'
Patient safety	*'it forms part of our work ethic'*
	'it's part of our safety beliefs'
	'a positive work climate ensures patient safety'
	'it is part of our personal learning and development'
	'as it is required by law to provide cultural sensitive care'

Nurse managers provided **reasons for why their culture was not affecting patient safety**. The responses were analysed, and three themes were identified, namely (1) culturally congruent care, (2) patient education, as well as (3) hospital policy. Some responses by nurse managers were: "*culture does not affect patient safety, but acuity and needs do"* (Theme 1); and "*if individuals received appropriate training and*

education patient safety should not be affected" (Theme 2). Provision of a safe care environment and facilitating 'patients' rights' is based on regulatory and accreditation standards, and not the "*traditions and values of the nurse manager*" (Theme 3). It is alarming that this question (similar to previous questions) was not understood by nurse managers, perhaps due to their own language not being English (Appendix D). The study findings this far show that the language barrier might be a severely detrimental factor in facilitating a culture of safety for patients.

4.7.3 The effect of the patient culture on patient safety

As stated in a similar question to nurses in Section 4.6.2.2, this question was aimed at determining the nurse managers' perceptions of whether the patient's culture affects patient safety. As stated in Section 4.6.1, the patients admitted and treated in both study hospitals were from 20 different nationalities. The literature supports (Chapter 2) how the Muslim faith plays a significant role in people's lives. The majority (n=28; f=82.4%) of nurse managers agreed that the patients' culture affects their own safety (see Table 4.74).

Table 4.74: Patients' Culture Affects Patient safety (N=33)

	n	f=%
Yes	28	82.4
No	5	14.7
Total	33	97.1

Cross-tabulation between the managers' age and their responses to a question about whether the patients' culture affects patient safety (see Table 4.75) shows an association related to their age. The majority of 'yes' responses were from managers in the ages ranging between 45 to 64-years (n=16; f=48.48%), followed by 11 (f=33.33%) between 35 to 44-years, and only one between 25 to 34 years. Thus, the more mature nurse manager group perceived that patients' culture affects patient safety.

Table 4.75: Nurse Manager Age / Patient Culture Affect Cross-tabulation (N=28)

Age of the nurse manager	Patient Culture Affect				Total
	Yes	Yes	No	No	
	F=	f=%	F=	f=%	
25-34	1	3.03	0	0	1
35-44	11	33.33	0	0	11
45-54	12	36.36	3	9.09	15
55-64	4	12.12	2	6.06	6
Total	28		5		33

Nationalities were also compared with the perception that the patients' culture does affect safety (see Table 4.76). The South African nurse managers (n=7; f=26.92%), followed by the Philippine nurse managers (n=5; f=19.23%) and one each from Finland, New Zealand and Romania answered in the affirmative. This indicates the need for a structured cultural programme to facilitate culturally congruent care to ensure patient safety.

Table 4.76: Nurse Manager Nationality / Patient Culture Affect Cross-tabulation (N=26)

Nationality of the Nurse Manager	Effect of Patient Culture on Safety				Total
	Yes	Yes	No	No	
	n=	f=%	n=	f=%	
JORDANIAN	4	15.38	3	11.53	7
PHILIPINE	5	19.23	0	0	5
INDIAN	4	15.38	1	3.84	5
SOUTH AFRICAN	7	26.92	0	0	7
EMIRATI	2	7.69	0	0	2
BRITISH	2	7.69	1	3.84	3
EGYPTIAN	0	0	1	3.84	1
FINISH	1	3.84	0	0	1
NEW ZEALANDER	1	3.84	0	0	1
ROMANIAN	1	3.84	0	0	1

Twenty-eight different responses were received to provide a **reason why the nurse manager perceived the patients' culture to affect patient safety**. This open-ended question revealed three themes, namely (1) cultural, (2) educational aspects, and (3) language barriers (see Table 4.77). As indicated in the varied responses, a structured

behaviour-based cultural education programme to ensure culturally congruent care is required.

Table 4.77: Reasons why the patient's Culture affect patient safety (N=28)

Theme	Direct Quotes underpinning the theme
Cultural	*'we have different values and beliefs than the patients'*
	'the gender issues and privacy concerns always are a barrier in providing safe care'
Educational aspects	*'more patient and family education to allow patient and family to understand safety concerns when admitted'*
Language barriers	*'language barriers hindering safe care as no translator always available'*

Twenty-eight nurse managers provided reasons **why they think that the culture of a patient does not affect the care of a patient, and thus patient safety**. The open-ended question revealed two themes, namely: (1) cultural sensitivity, and (2) culture training. Some direct responses listed were that "*patient's beliefs and values should not affect patient care*" (Theme 1), and the "*availability of cultural training programs, legislations and policies that support managing any cultural barriers*" (Theme 2). These responses call for a structured behaviour-based cultural training programme and Arabic conversational training to communicate with Arabic patients (Appendix H).

Nurse managers must be oriented towards culturally congruent care, which requires a structured training programme to address the components of culturally congruent care (Mixer, 2011:4; Murphy, 2011:5). The respondents had to describe **what cultural training** they received, and the 32 responses received were open-coded. As revealed in Table 4.78, the two themes identified were (1) hospital orientation, and (2) formal training. Most nurse managers responded that they received training as suggested by Mixer (2011:4), which shows the need for a structured behaviour-based culturally congruent programme as this might impact culturally congruent safe care.

Table 4.78: Training received on Culture (N=32)

Theme	Direct Quotes underpinning the theme
Hospital Orientation	*'there is different cultural topics during orientation such as Ramadaan, cultural awareness, dress code, culturally offensive gestures, patient rights, cultural communication'*
Formal Training	*'no formal cultural training program available in our hospital'*

The respondents indicated **how the training on culture assisted them in providing culturally congruent care**. After open-coding the 28 answers, two themes were identified, namely (1) communication, and (2) cultural congruent care (see Table 4.79). The responses revealed that it was unclear how the content of training assisted the nurse managers in providing culturally congruent care, but it rather focussed on interactions with patients and patient safety.

Table 4.79: Culture training assisting Nurse Managers in providing Culturally Congruent Care

Theme	Direct Quotes underpinning the theme
Communication	*'the training improved communication with the different cultures coming for care & services'*
Cultural congruent care	*'ensured cultural sensitivity caring different cultures'*
	'allowed better understanding religions and health beliefs of our patients'
	'provided us the knowledge to treat all patients equal'
	'ensure that we respect different cultures'

4.8 PATIENT SAFETY

Similar to Section 4.6.3, patient safety for nurse managers reviewed the processes and structures in units (hospital climate), and sharing safety data with nurses on patient safety (NAA, falls, HH and HAPUs). Data were analysed and themed to explore commonalities and safety opportunities.

4.8.1 Positive Safety Culture contribution of the Nursing Team for Patient Safety

Patient safety focus is the prevention of harm to patients (Bronkhorst, et al. 2018:18). Bronkhorst, et al. (2018:18) and Hecker, et al. (2014:3) iterate the importance for a safe system to ensure care delivery with an emphasis on the fact that nurse managers prevent errors and learn from errors that occur in the clinical setting to facilitate a culture of safety. The nurse managers' responses were open-coded based on the elements of system care delivery, namely (1) prevent errors, (2) learn from errors that occur in the clinical setting, and (3) facilitate a culture of safety that involves the healthcare professional, the organisation, and the patient (see Table 4.80).

Table 4.80: Nursing Teams positive contributions to ensure patient safety

Themes: Element of system care delivery	Direct Quotes underpinning the theme
Prevent errors	*'through improved communication with our teams'*
	'encouraging reporting of incidents and follow up on (corrective) action plans'
	'support structured handover reports'
	'implementing risk prevention programs'
	'apply continuous quality improvement programs to identify system defects'
	'ensure regulatory compliance and licence to practice safely'
	'by implementing the CUSP program in ICU'
Learn from errors	*'by sharing safety information with team'*
	'follow continuous survey readiness approach to close safety gaps'
Facilitate a culture of safety	*'encourage teamwork: collaboration among team'*
	'through implementation of daily safety huddles (debriefings)'
	'through formal evidence-based education programs'
	'by supporting and motivating nurses'
	'implementing Hourly Rounding Principles'
	'ensure nurses follow hospital policies'
	'by involvement and interaction of patients'
	'daily leadership rounds to verify practices'
	'create safe work environment by senior leadership'
	'to observe for safety issues'

Themes: Element of system care delivery	Direct Quotes underpinning the theme
	'by ensuring nurses comply with International Patient Safety Goals (IPSG)'

4.8.2 Positive Work Environment (Hospital climate) and patient safety (structures and processes)

As nurses are working in a diverse environmental context, the nurse manager should determine how the climate (positive work environment) factors were perceived by the nurses; in terms of issues such as teamwork, patient allocation, safe staffing, communication, productivity and duty scheduling, professional development, reward and recognition of nurses, to list only a few as explained by Clarke (2010:554). Responses from the nurse managers were open-coded and five themes emerged, namely (1) safe staffing, (2) improved communication, (3) education, (4) adequate resources, as well as (5) recognition programmes (see Table 4.81 for direct quotations). In comparing the nurse managers' responses to that of the nurses (as explained in Section 4.6.5) the nurse managers did not mention teamwork or patient allocations, which are essential components of a positive work environment (climate).

Table 4.81: Hospital Climate factors that impact on patient safety

Theme	Direct Quotes underpinning the theme
Safe Staffing	*'ensure safe staff allocation and coverage'*
	'to address the skill mix for nurses'
	'provide professional support for caring for patients'
	'conduct recruitment of staff to ensure no shortages'
Improved Communication	*'conduct daily safety Huddles (debriefs)'*
	'provide safety guidelines and workflows'
	'utilize the reporting system to address safety concerns'
	'introduce the Comprehensive Unit Safety Program (CUSP) on all units'
Education	*'provide advanced training to manage patient acuity'*
Adequate Resources	*'ensure that we have the supplies and equipment available'*
	'address the Electronic Medical Record (EMR) system concerns'
Recognition Programmes	*'provide frequent reward and recognition programs to acknowledge our work'*

4.8.3 Communication of patient outcomes data to nurses

To facilitate an environment of transparency and to engage the nursing team in safety, an appropriate method to share performance data on regular intervals is required (NDNQI, 2014). Thirty-three nurse managers provided responses that were open-coded, and five themes emerged, namely (1) meetings, (2) electronic and visual display of data, (3) training programmes, (4) monthly reports, as well as (5) nurse manager support (see Table 4.82). It is troublesome that from the nurse managers' varied responses which were similar to nurses' responses in Table 4.24, no standardised approach was utilised. This could impact nurses' understanding of how their non-compliance to patient safety outcomes could affect patient safety.

Table 4.82: Sharing Patient Outcomes Data

Theme	Direct Quotes underpinning the theme
Meetings	*'it is shared during our monthly meetings'*
	'during our shift huddles (debrief)'
Electronic and Visual Display of Data	*'shared via e-mails to the concerned nurses'*
	'we display it monthly on units Quality Boards'
	'nurses have access to the shared electronic intranet dashboard'
Training Programmes	*'Staff education'*
	'through our Comprehensive Unit Safety Program (CUSP)'
	'dedicated link nurses to train and update staff'
Monthly Reports	*'review and trend incident report data'*
	'update nursing monthly report to demonstrate safety concerns'
	'conduct monthly audit on nursing key performance indicators'
Nurse Manager Support	*'structured daily leadership rounding to identify safety concerns'*

4.8.4 Manage Patient Outcomes Data Compliance (A=HAPU, B=falls, C=HH, D=NAA)

Nurse managers are required by the Corporate Operational Body (SEHA) and other regulatory bodies (JCIA; DoH-AD) to review and manage their nurses' performance to ensure patient safety. There is data available on how healthcare facilities monitor their performance and determine positive patient outcomes (De Oliveria, et al. 2014:4; JCIA, 2016; Hospital Data, 2016).

a) HAPU

The evidence-based literature in Chapter 2 found that it is the responsibility of the nurse manager to ensure strategies are in place to prevent HAPUs (NPUAP, 2014:15; JCIA, 2016). The Braden Skin Integrity Risk Assessment tool is built into the electronic medical record system to identify patients at risk. However, this needs to be supported by policies that indicate the frequency for doing these assessments to initiate prevention strategies (Guy, 2012:16; NPUAP, 2014:8). The responses were open-ended using best practice principles, namely (1) frequency of conducting the Braden Skin Risk Assessments, (2) training, as well as (3) monitoring (see Table 4.83). The varied responses showed that the nurse managers were not consistent in mentioning current skin integrity policy principles to prevent HAPU. This illustrates the need for education and training to ensure that nurse managers direct and lead safety practices with nurses.

Table 4.83: Managing HAPU Patient Outcomes Data

Themes	Direct Quotes underpinning the theme
Frequency of Braden Skin Risk Assessment	*'ensure nurses conduct risk assessment of the patient as stipulated in the Skin Integrity Policy'*
Training	*'annual evaluation and re-training on competence for nurse to enable them to conduct risk assessment & implement preventative measures for HAPU'*
Monitoring	*'by regular checks to determine issues with documenting risks in electronic system'*
	'monthly audit nurse performance assessment and documenting NAA'
	'sharing NAA statistical data in monthly meeting'
	'report nurses that's non-compliant to HR disciplinary actions'
	'use NDNQI nursing assessment data to manage nurse performances'

b) Falls

Chapter 2 (Section 2.4.2.1) illustrated the rationale, frequency, resources and tools required for falls prevention to avoid patient harm (JCIA, 2016; Hospital Policy, 2016). As falls can affect patients of all ages, the Morse and Humpty Dumpty Falls risk identification tools were built into the electronic medical record and is used to guide

nurses on the fall risk aspects that must be assessed and prevention protocols to be applied based on identified risks (Jones, et al. 2013:9). Twenty-six responses were open-coded which resulted in the identification of two themes, namely (1) falls risk assessment, and (2) reactive monitoring (see Table 4.84 for direct quotations). As indicated in Section 4.6.6, the nurses mentioned that mistakes are held against them, therefore the reactive monitoring approach from nurse managers is of concern.

Table 4.84: Managing Falls Outcomes Data

Themes	Direct Quotes underpinning the theme
Falls Risk Assessment	*'ensure nurses conduct Falls risk assessment & apply preventative measures accordingly'*
Reactive Monitoring	*'to investigate and act on non-compliant nurses with counselling'*
	'conduct process review and action plan for reason of falls'
	'coach them when patient falls'

c) HH

Evidence-based practice indicates that the nurse manager should share the importance of HH and the use of '5 moments HH' (Squires, et al. 2014:1515). As identified from the 33 nurse managers' open-coded responses, two themes emerged, namely (1) leadership support, and (2) monitoring (see Table 4.85 for direct quotations). When comparing the data received from the nurse manager respondents with that of the nurse respondents described in Section 4.6.3.4, it was also evident that the nurse managers were not aware of the system concerns mentioned by the nurses. Nurse managers mentioned that they provide leadership support by involving the nurses in their units with infection control (called infection control link nurses) and they provide training and follow-ups on HH practices. However, it is not clear how the nurse managers oversee this training conducted by the particular infection control nurses.

Table 4.85: Managing HH Patient Outcomes Data

Themes	Direct Quotes underpinning the theme
Leadership Support	*'the infection control link nurses conduct training and support on the unit'*
	'the nurse managers rounding on units daily to review practices HH'
Monitoring	*'we conduct frequent HH audit to determine compliance from nurses'*
	'we conduct process reviews based on hand hygiene data'

d) NAA

Conducting an NAA within a 24-hour timeframe is a standard required for all nurses in clinical practice (Hospital Policy, 2016; Joint Commission Assessment of Patient Standards, 2016; Haapoja, 2010:7). As indicated in Chapter 3, the outcomes data indicated non-compliance in completing the NAA within the timeframe. Six responses on how the nurse manager managed the NAA outcomes data were received, which all focussed on reactive monitoring (see Table 4.86). The managers only reflected on the importance of auditing and coaching poor performances in documentation practices that could contribute to the perception of a punitive environment described by nurses in Section 4.6.6; this could affect patient safety.

Table 4.86: Managing NAA Outcomes Data

Theme	Direct Quotes underpinning the theme
Reactive Monitoring	*'we audit documentation practices'*
	'coaching nurses that is non-compliant'

4.9 SAFETY CULTURE IN PRACTICE

In a diverse environmental context such as in the UAE, safety culture requires not only observable behaviours and organisational processes but also the inclusion of the perceptions of daily practices, attitudes and beliefs of the nurse in practice (Cole, et al. 2013:30; Chenhall, 2010:17-18).

In order to facilitate a safety culture, the nurse manager must apply five domains to sustain safety practices (Cole, et al. 2013:30; Chenhall, 2010:17-18). Nurse managers were required to describe the culture of safety in their unit. In the analysis, the culture of safety domains (namely (1) informational culture (2) flexible culture (3) reporting culture, (4) 'just culture' and (5) learning culture) were used as the themes (see Table 4.87 for direct quotations). The responses revealed that none of the nurse managers mentioned two very important domains vital to sustaining a culture of safety, namely reporting culture and the learning cultures.

Table 4.87: Nurse Managers Description of Culture of Safety Domains

Domains as Themes	Direct Quotes underpinning the theme
Informational culture	*'compliance with hospital policies'*
Flexible culture	*'provide safe environment and system through frequent risk assessments'*
	'proactive approach to prevent harm to patients and staff through rounds'
	'adapt and provide care that is based on patient needs and culture'
	'use incidents as opportunity to learn from errors'
Just culture	*'proactively address nurse performance behavior's and attitudes affecting patient safety'*
	'enforce nurse accountability and just culture to ensure safety'
	'Staffs understand concepts of doing things'
Reporting culture	*No quotes*
Learning culture	*No quotes*

Thirty-three responses on **the training received on safety culture** were received and open-coded. Three themes were identified, namely (1) culture of safety training, (2) basic quality methodology training, and (3) TeamSTEPPS training (see Table 4.88 for direct quotations). The varied responses revealed that structured training according to a training programme was not received on a culture of safety, which could impact sustainable safety practices.

Table 4.88: Training received on the Culture of Safety

Themes	Direct Quotes underpinning the theme
Culture of Safety Training	*'we do the Culture of Safety Survey every year'*
	'attended the Culture of safety workshop'
Basic Quality Methodology	*'we had training on how to report incidents electronically'*
	'hospital provided root cause analysis (RCA) training'
	'we were taught Risk Management'
	'awareness sessions during Quality week'
	'implementing Comprehensive Unit Safety Program (CUSP)'
	'ensuring that we remain Continuous Survey Ready (CSR)'
	'ensuring environmental Health and safety (EHS) through rounds'
Team Strategies and Tools to Enhance Performance and Patient Safety Training	*'apply TeamSTEPPS for improved patient safety and team performance'*

As discussed in a similar question for the nurse respondents about the **Hospital managements' support on the culture of safety**, the 33 nurse managers' responses were also open-coded and three themes were identified: (1) structures to support safety, (2) processes in place, and (3) outcomes. The varied responses among the nurse managers indicated that the support provided by Hospital management was very diverse (see Table 4.89 for direct quotations).

Table 4.89: Hospital management support for nurse manager on culture of safety

Themes	Direct Quotes underpinning the theme
Structures to support safety	*'provided advanced technology to facilitate patient safety'*
	'provided policies to guide practices'
	'annual risk assessment to identify gaps affecting safety'
	'quarterly town hall meetings to provide forum to discuss concerns patient safety'
	'enforce mandatory safety training all healthcare providers'
	'prescribe the competency requirements that's unit specific'
Processes in place	*'provided anonymous incident reporting system'*
	'provided access to National Data Nursing Quality Indicators (NDNQI) to evaluate nurse performance against international peers'
	'provided key safety processes like transfusion safety, fire and disaster management as examples'

Themes	Direct Quotes underpinning the theme
	'provided Root Cause Analysis Process to review system defects'
	'robust education and training process to update skills'
	'provide all nurses the ability to attend best practices conferences'
	'encourage Performance Improvement Projects'
Outcomes expectation	*'engaging us in Continuous Survey Readiness (CSR) activities to constantly improve patient care for safety'*
	'provide data on nursing key indicators with action plan to improve'

4.10 'JUST CULTURE' PRACTICES OF NURSE MANAGERS

If nurse managers establish a 'just culture' in clinical practice it will reduce 'at-risk behaviours' among the nurses by removing barriers to safety, removing the rewards for at-risk behaviours, coaching nurses to reduce their tolerance to risk, and encourage a decision-making process that results in the desired safe behavioural choices by nurses (Boysen, 2013:400; van Beuzekom, et al. 2010:40). Nine questions were asked to assess the 'just culture' practices as seen by the nurse manager respondents. A 5-point Likert Scale was utilised to present the answers to the questions (Appendix H). Pearson correlation and ANOVA data are available in Appendix H.

Nurse managers need to have a **process in place to manage nurses' behaviour** that results in harm to patients (Boysen, 2013:400; AONE, [Sa]:3; van Beuzekom, et al. 2010:40). The majority (n=23; f=69.7%) of nurse managers stated that there are adequate human resource policies in place to manage unsafe nurse practices (see Figure 4.24). However, it is of great concern that a third (n=10; f=30.3%) of nurse managers were not aware of hospital disciplinary policies that guide the management of unsafe nurse practices.

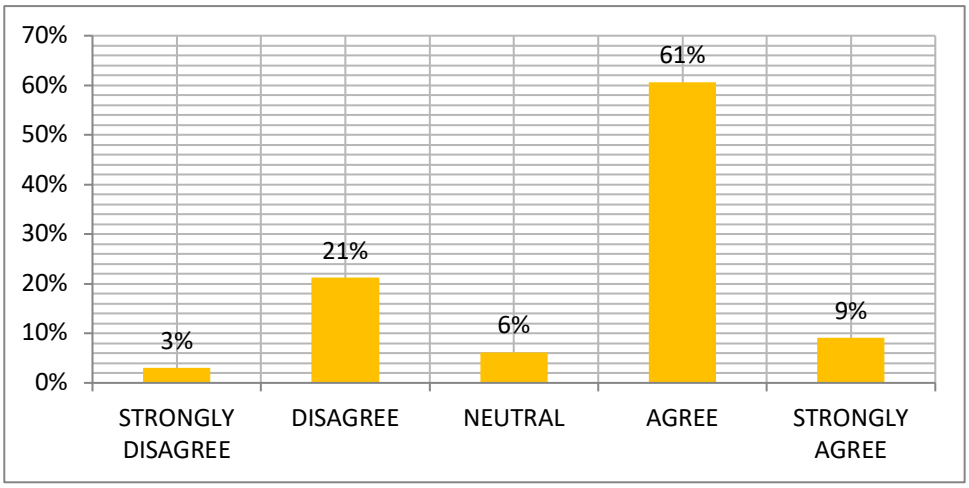


Figure 4.24: Clear disciplinary process to manage nurses' behaviours (N=33)

It is essential that the **system issues that affect care must be proactively addressed** through trending incidents that have happened over time (Mark, 2013:4); 27 (N=33; f=81.8%) nurse managers agreed that this must be done (see Figure 4.25). The responses revealed that only 6 (f=18%) nurse managers did not support a proactive review of the processes that affected care, while 141 nurses (f=33.8%) (see Section 4.6.6) indicated no proactive approach to review system issues which could affect patient safety.

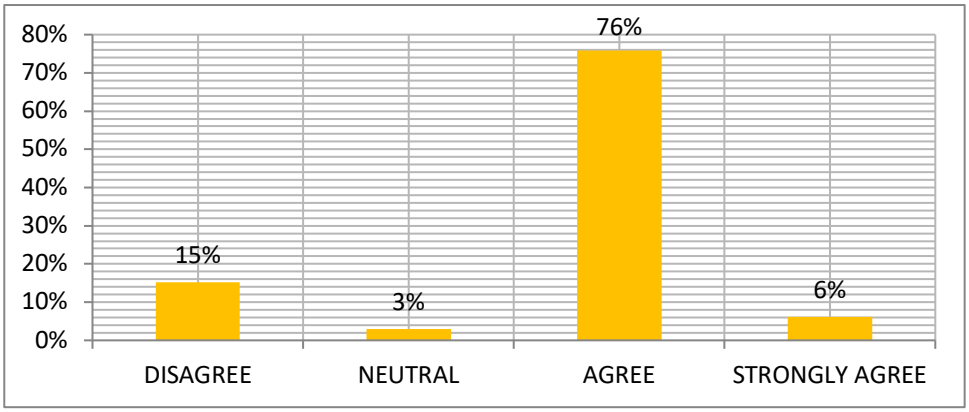


Figure 4.25: Proactive review of Systems affecting patient safety (N=33)

The nurse manager should ensure that **structured processes to continuously review** (Groves, 2014:71) any **nursing performance indicators of care delivery** (documenting NAA within the 24-hour timeframe, HH compliance, HAPU and falls prevention) are in place. A total of 28 of the 33 nurse managers agreed that a structured process to review systems is used to manage system concerns that might

impact patient safety (see Figure 4.26). The nurse responses (see Section 4.6.6) said that the nurse managers did not proactively address system concerns that affect patient safety.

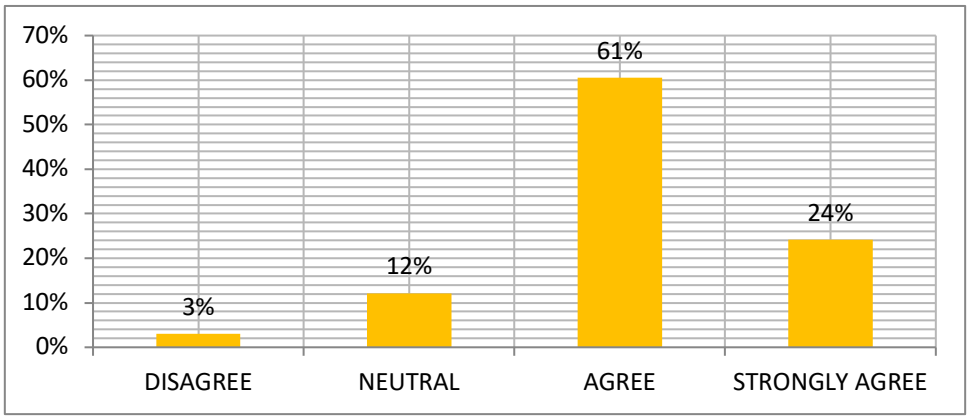


Figure 4.26: Structured Process Reviews used to manage system defects (N=33)

Human resource policies require that nurse managers **regularly assess the nurses' performances** to identify behavioural or educational gaps in practice to prevent patient safety concerns (SEHA HR Policy, 2016). As illustrated in Figure 4.27, 28 (N=33; f=82%) of the nurse managers agreed with this statement, while 5 (f=18%) did not. As the majority (n=16) of nurse managers are new in their position (see Section 4.6.1), Parand, et al. (2014:1) indicated that inexperience could lead to inappropriately managed performance that could affect safety.

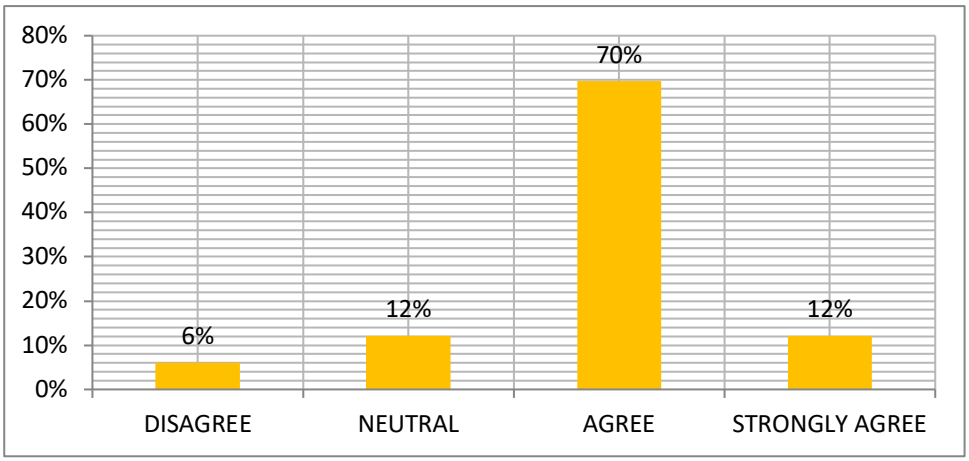


Figure 4.27: Structured Performance Reviews used to manage nurse's safety behaviours (N=33)

The hospitals **incident report data must provide reports on safety events** to allow better control over unsafe practices. Nurse managers play an important role to embed patient safety within the nurse practices. Unsafe events or system defects must not be ignored (OSHAD, 2017). The nurse manager must discuss safety with the nursing team daily and mitigate risks as they occur (Golda, 2013:34); this was indicated by 28 (f=85%) of the nurse managers (see Figure 4.28). Of concern is the 5 (f=15%) nurse managers who remained neutral or disagreed.

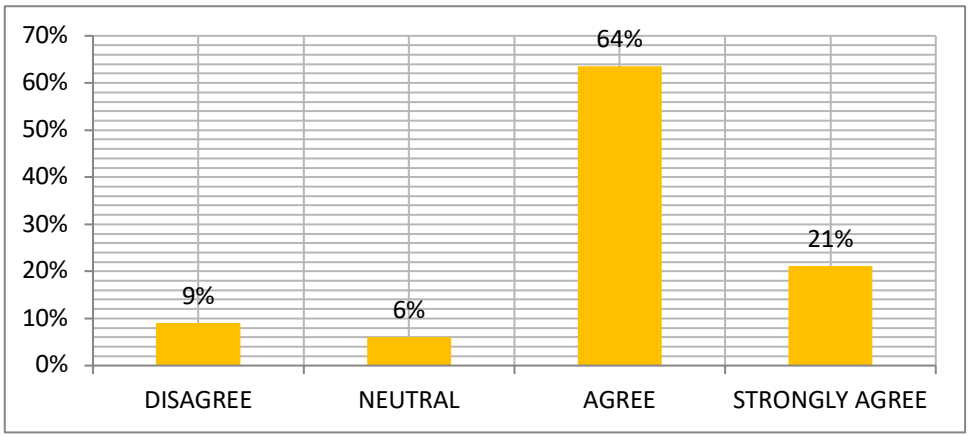


Figure 4.28: Reporting System provides data to do an analysis of safety events (N=33)

Regulation, Accreditation and Operational Bodies (SEHA; JCIA & DoH-AD) expect the CEO to approve the organisations' safety management plan regularly, and to act on reports on the quality and patient safety programme. In addition, the CEO is required to sell the vision of the hospital and engage different levels of management to personally commit to a culture of safety and the strategic goals to be achieved. As evident in Figure 4.29, two-thirds (n=25; f=63%) of the nurse managers agreed that **support on a culture of safety is provided by hospital management**. However, a third (n=8; f=27%) of the nurse managers did not agree that hospital management supports a culture of safety. Nurses, on the other hand (n=176; f=43%), perceived that hospital management did not provide a safe climate that is conducive for patient safety (see Section 4.6.6).

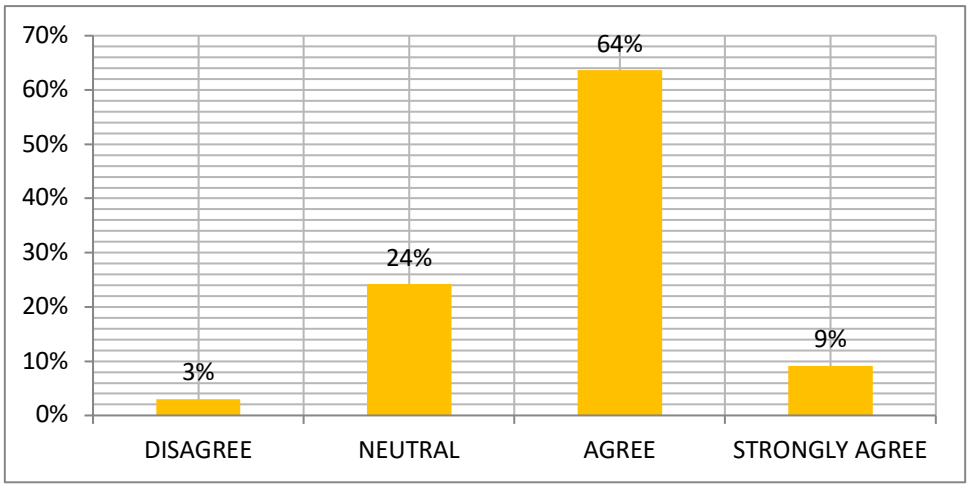


Figure 4.29: Hospital Management supports reducing system issues (N=33)

Nurse managers are accountable to initiate safety initiatives to investigate, analyse and trend these near-misses and errors, through the **use of the PDCA (Plan, Do, Check, and Act) process improvement cycle, root cause analysis (RCA) and other quality tools** (Mahajan, 2010:70). Figure 4.30 shows that 28 of the nurse managers (f=85%) agreed that they use quality tools for patient safety. Contradictory to what was indicated by the nurse managers, the nurses were of the opinion (n=117; f=28% see Section 4.6.6) that the nurse managers did not use basic quality tools to proactively address safety concerns that could affect patient safety.

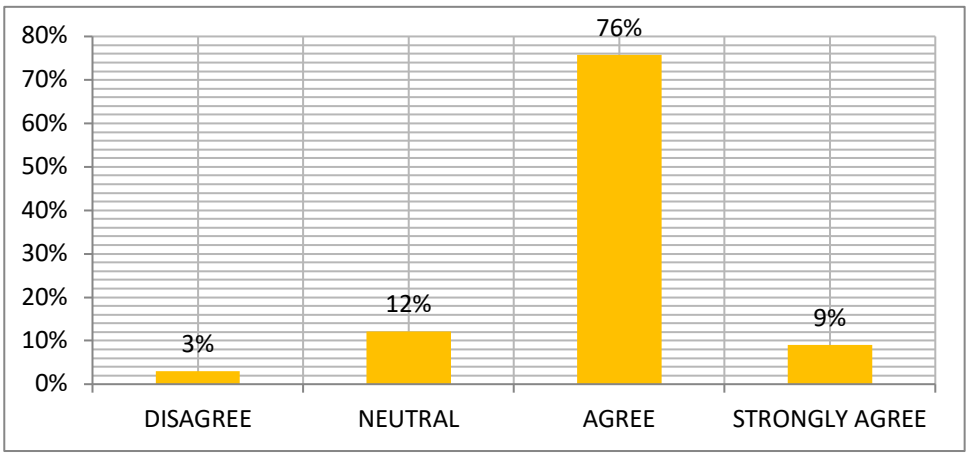


Figure 4.30: Use of Quality Methodologies to manage incidents. (N=33).

Nurse managers should proactively measure nurses' successful performance, provide feedback on the safety audit, trend (establish connections between incidents) and follow up on incident reports regarding safety issues (Golda, 2013:33; Cunningham, et al. 2011:1). The majority (n=29; f=88%) of the nurse managers indicated that they

did manage unsafe nurse behaviours immediately (see Figure 4.31). Contradictory to the nurse managers' responses, the nurses' responses in Section 4.6.6 showed that a third of nurses (n=129; f=31%) felt that the nurse manager did not manage unsafe practice behaviours. A structured formal feedback process may assist in ensuring that both the nurses and the nurse managers understand safety behaviour expectations to avoid patient harm.

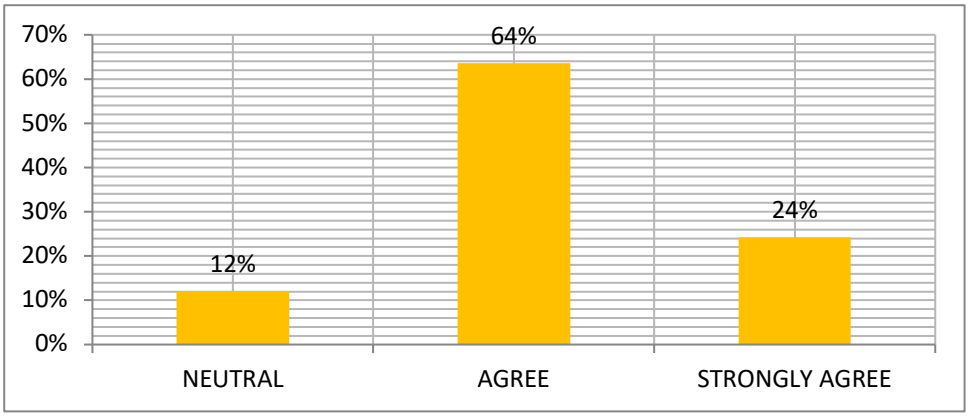


Figure 4.31: Immediate management of unsafe nurse behaviours (N=33).

The **nurse managers are responsible to track, and trend** (establish connections between incidents) **near-misses and incidents reported** to learn what is required to improve patient safety in their units (Mahajan, 2010:70). Twenty-eight (f=83%) of the nurse managers indicated that it is done in this way. The disagree and neutral responses (see Figure 4.32) were few, which is an indication that not all nurse managers review incident report data.

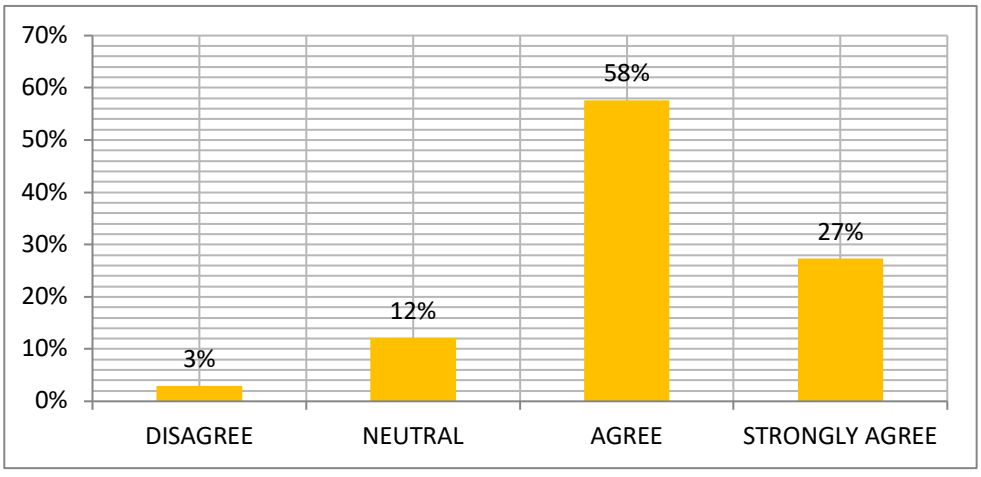


Figure 4.32: All incidents are reviewed for patient safety (N=33)

It is essential for nurse managers to apply 'just culture' principles in practice to eliminate patient safety concerns, to address system issues, and to manage the unsafe practices among the nurses (Boysen, 2013:400; van Beuzekom, et al. 2010:40). Twenty-eight nurse managers responded to an open-ended question on **how 'just culture' could be improved**. The responses were open-coded, and three themes were identified, namely (1) human resource policy, (2) safe systems, and (3) monitoring performances (see Table 4.90 for direct quotations). The inconsistencies in the nurse managers' responses are of concern; it could affect them in applying 'just culture' principles to ensure a culture of safety is sustained.

Table 4.90: Nurse Manager Recommendation for a 'Just Culture'

Themes	Direct quotes underpinning the theme
Human Resource Policy	*'the need for the Human Resource Department effective response to nurse's non-compliance'*
	'to develop mentoring programs'
	'to have a robust reward and recognition program for nurse'
Safe Systems	*'managers must keep staff accountable'*
	'to conduct regular rounding on patients and staff'
	'ensure resources are available'
	'must drive standardised care practices'
	'investigating system issues'
	'to develop action plans for gaps identified'
	'Nurse Manager Support in clinical setting'
	Communicate performance issue
Monitoring Performances	*'provide regular feedback on gaps in practices'*
	'to monitor practices daily'
	'provide on-going education when gaps in practice identified'

4.11 RECOMMENDATIONS BASED ON DATA

The data were gathered in an attempt to described (1) the nursing team's safety culture practices that affected patient safety; (2) nursing team's climate factors that affected patient safety; (3) the challenges of nurses regarding safety culture practices that influenced patient safety; (4) the nursing teams' opportunities regarding safety culture practices that influenced patient safety; as well as (5) the nurse managers' perception of how they were managing the behavioural choices of the nurses to ensure

positive patient outcomes. A very short summary of the data and the recommendations for use in Phase 3 is provided in Table 4.91.

Table 4.91: Recommendations for Phase 3 Draft Action Plan Development

Theme	Data Analysis Results	Recommendation/s
Nurse respondents		
Biographical data	Gender: N=416 Female: n=345; f=82.9% Male: n=67; f=16.1%	Staffing plan to address female and male nurse ratios to ensure culturally congruent care
	Age: N=416 18- 24 years: n=9; f=2.2% 25-34 years: n=147; f=35.3% 35-64 year: n=258; f=62%	
	Nationality: N=416 Philippine: n=164; f=39.4% Indian: n=155; f=37.3% Arabic: n=73; f=17.5%	Develop a structured behaviour-based cultural programme to ensure that culturally congruent care can be delivered
	Language: N=416 Tagalog the dialect for the Philippine: n=165; f=39.5% Malayalam and Hindi the dialect for the Indians: n=155; f=37.3% Arabic dialect: n=73; f=17.5% English as home language: n=24; f=5.88% therefore English proficiency is a concern. Qualitative data revealed the need for additional Arabic conversational training.	Assess English proficiency to ensure effective communication between the nursing team and between nurses and patients. Arabic communication training required to enhance effective communication.
Culture	Nurse culture affect patient safety (N=416) n=325 (f=78%).	- Develop a structured behaviour-based cultural orientation programme - Audit nurses' compliance in patient satisfaction

Theme	Data Analysis Results	Recommendation/s
	Patient's culture affect patient safety (N=416) n=339 (f=81.5%)	-Engage the nursing team to develop a clear policy to list the behavioural expectations from the nursing team to apply culturally congruent care - Identify culture-specific needs in each individual patient care plan
	Cultural Training: N=416 Qualitative data (n=273; f=66%) revealed one theme: programme content must include categories such as: Basic Arabic phrases Cultural Gestures Dress Code Ramadaan Patient rights & responsibilities	- Develop a structured and standardised cultural orientation programme supported with nursing theory. - Share the culturally congruent care expectations and consequences with nurses - Audit nurses' performances on culturally congruent care
Patient Safety		
NAA	NAA conducted within timeframe: N=413 Yes: n=400 (f=96.8%) No: n=10 (f=2.4%) Patient outcomes data in Chapter 3 reflects non-compliance with completing the NAA within the timeframe	Develop a Standardised and Structured Behaviour-Based Training Programme that is supported with nursing process theory for NAA to be sustained at 100%
	Necessity to share compliance data: (N=416) Yes: n=268 (f=65%) No: n=144 (f=35%)	Provide structured words (scripting) to ensure nursing teams' awareness of data being shared
	Qualitative responses (n=295; f=71%) from nurses for reasons why they need to complete NAA within the timeframe (N=416): One theme emerged 'for	- Implement and monitor the structured behaviour-based training programme - Assess nurses' competence

Theme	Data Analysis Results	Recommendation/s
	improvement' of documentation practices that had multiple direct quotation categories, namely: - Missed assessments - Policy requirement - Required as part of the audit team. It is of concern that no participant mentioned that NAA is required to ensure that patient care needs were appropriately assessed for the safe care plan	
	Two reasons emerged why nurses not being able to complete the NAA, namely: - Adequate staffing - Electronic system concerns	- Assess and address staff workload and electronic medical record concerns proactively
	Two themes emerged on how NAA performance data were shared: - Timing (ward meetings, shift handover, during performance appraisal) - Medium (written and verbally).	- Provide a structured and standardised approach - Use standardised and specific wording (scripting) when sharing data.
Falls	Despite 405 (f=97.3%) who did the fall risk assessment, 162 falls were reported (Section 3.7.3).	- Develop a structured process to allow nurses to identify and describe the reason for patient falls in units.
	Frequency for fall risk assessment: two broad themes emerged, namely: - Incorrect fall risk assessment - Correct fall risk assessment Only 110 out of 1194 direct quotations listed correct fall risk assessment	- Develop a standardised and structured behaviour-based fall risk training programme - Develop fall prevention protocols - Validate nurse competence on fall risk assessment

Theme	Data Analysis Results	Recommendation/s
	Reasons for patient falls: two themes were identified namely: - patient condition - lack of falls training	- Develop a standardised staffing matrix - Assign nurses based on patient acuity and care needs
	Fall prevention measures – N=417 (n=396; f=95%): 10 themes with varied responses were received (see Section 4.6.3.2)	- Apply and monitor fall prevention protocols used
	Falls awareness: N=416 Yes: 226 (f=54.3%) No: 190 (f=45.7%)	Use standardised and specific wording (scripting) when sharing data
HAPU	Two themes were identified on reasons for performing Braden Skin Integrity Assessment: - Assessing the Braden Risk Elements - Multiple factors (not part of Braden Risk Elements)	- Develop a standardised and structured behaviour-based skin risk integrity training programme - Develop HAPU pathway
	Frequency for Skin Risk Assessment – N=417 (n=358; f=86%): four themes emerged: (1) on admission, (2) during every shift change, (3) when there is a change in the patients' condition, (4) after patient has been transferred between units	- Apply standardised HAPU pathway - Validate nurse competence on Braden Risk Tool usage and application of risk assessment frequency
	HAPU incidence awareness (N=416) Yes: 133 (f=31.9%) No: 281 (f=67.1%)	Use standardised and specific wording (scripting) when sharing data
	HAPU prevention strategies – N=417 (n=340; f=81.53%): inconsistency in the seven themed responses: (1) skin risk assessment (as well as assessing the	- Implement the standardised and structured behaviour-based skin risk integrity training programme to prevent HAPU - Audit Skin Integrity Risks with prevention strategies applied

Theme	Data Analysis Results	Recommendation/s
	temperature of the skin, oedema and pain), (2) nutritional assessment and dietary supplements (3) position changes, (4) managing moisture and friction, (5) continence management, (6) using protective barriers (7) to support surfaces through pressure reduction resources	
	Staging pressure ulcers (N=417): Yes: 331 (f=79.4%) No: 86 (f=20.6%) Ninety-six HAPU incidents were reported in Chapter 3's patient outcomes data (Section 3.7.5)	Include staging of pressure ulcers in training programme
HH	Use '5 moments in HH' – (N=416) Yes: 404 (f=96.9%) No: 12 (f=3.1%)	- Develop a standardised and Structured Behaviour-Based HH Training Programme to use the '5 moments' appropriately
	Inconsistency in describing '5 moments of HH': (1) the moment before touching a patient, (2) before performing aseptic and clean procedures, (3) after being at risk of exposure to blood and body fluids, (4) after touching a patient, (5) after touching a patient's surroundings. HH compliance rate between 85.4 - 94% for patient outcomes (Section 3.7.4)	- Assess nurses' competence with HH - Apply a structured audit approach to monitor compliance to the '5 moments of HH'

Theme	Data Analysis Results	Recommendation/s
	Three reasons provided for not being able to apply the '5 moments of HH': - lack of HH resources, - staff shortages, - reactions to cleaning agents	- Assess staffing and HH resource concerns proactively - Facilitate a reporting culture to follow up concerns as soon as possible - Conduct Risk Assessments on system concerns affecting HH
	Awareness of HH Compliance Rate - N=416 (n=323; f=77.6%) with two themes: (1) numerical description (in percentages) (2) word description (good, satisfactory, compliant, etc.)	- Use standardised and specific wording (scripting) when sharing data. - Involve nurses in process improvement activities
	Wearing gloves versus HH (N=416) Yes: 103 (f=25%) No: 313 (f=75%)	- Include the importance of glove use in the training programme - Audit nurses' compliance with the correct use of gloves
	Engaging other healthcare professionals and patients' HH compliance: inconsistency in three themes (1) HH education provided to patient or relatives, (2) display of HH visual posters (3) through HH awareness campaigns	- Develop a structured process to validate HH compliance for others and patients - Provide visual cues on the proper way to wash hands and HH posters to aid in education efforts
Team safety culture practices	Safety culture practices within the team: five essential themes were inconsistently listed (1) Informed Culture (2) Flexible Culture (3) Reporting Culture (4) Just Culture (5) Learning Culture Of concern was that no consistency was found in the	(1) Develop the following structured training programmes: - Culture of safety - Comprehensive Unit Safety Program (CUSP) - Basic Quality Methodology (Plan Do Check Act – PDCA / Root Cause analysis – RCA / Process Improvement - PI)

Theme	Data Analysis Results	Recommendation/s
	use of a culture of safety elements essential to sustain patient safety and improve patient outcomes.	(2) List the expectations and consequences clearly to the team (3) Use structured wording (scripting) to communicate performance data (4) Engage nurses in process improvement activities (5) apply a proactive risk assessment process to address system concerns (6) Implement TeamSTEPPS (Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe communication practices among the nursing team to ensure appropriate handoff of patient care to ensure patient safety (7) Involve nurses in determining reasons for unsafe events for NAA/ HH/ HAPU/ patient harm from falls (8) Use a reporting system
Positive work environment - hospital climate	Positive work environment: Nine essential themes were inconsistently listed: (1) adequate staffing (2) resource availability (3) communication (4) teamwork (5) support from leadership (6) patient allocation (7) nurse manager visibility (8) nurse recognition programmes (9) flexible duty scheduling.	- Develop a a structured and standardised positive work environment process to include the nine essential elements. - Integrate patient outcomes data to focus on improving nurse performance evaluations - Apply nurse duty scheduling guidelines to ensure flexibility and safe staffing - Apply a process to enable nurses to speak freely on patient safety concerns

Theme	Data Analysis Results	Recommendation/s
	The inconsistency in the nurses' responses indicated that no structured process used in the units that could affect patient safety.	- Acknowledge achievements and reward employees - Nurse manager visibility through rounding with a purpose - Structured process for nurse attendance to professional development activities.
Nurse Manager Responses		
Biographical data	Gender: N=34 Female: 26 (f=76.5%) Male: 8 (f=23.5%)	Staffing plan to address female and male assignments to address cultural aspects
	Age: N=34 25-34 year: 1 (f=2.9%) 35-64 years: 33 (f=97.1%).	
	Nationality: N=34 Jordanian: 7 (f=20.6%) South African 7 (f=20.6%) Philippine: 5 (f=14.7%) Indian: 5 (f=14.7%).	Develop a structured cultural orientation programme to ensure that culturally congruent care is delivered.
	Language: N=34 Arabic from Jordanian, Emirati, Egyptian: n=10 (f=29.4%) Tagalog the dialect for the Philippine: n=5; (f=14.7%). English as home language: n=6 (f=17.6%) therefore English proficiency is of a concern Qualitative data revealed the need for additional Arabic conversational training.	- Assess English proficiency to ensure effective communication between the nurse manager and the nurses and patients - Arabic communication training required to enhance effective communication.
Culture	Nurses' culture affect patient safety (N=34) n=27 (f=79.4%). Patients' culture affect patient safety (N=34) n=28 (f=82.3%)	- Develop a structured behaviour-based cultural orientation programme - Audit nurses' compliance in patient satisfaction

Theme	Data Analysis Results	Recommendation/s
	Cultural Training: N=34 Qualitative data (n=32; f=94.1%) revealed one theme namely program content, with multiple direct quotations as categories similar to previous comments such as: (1) Basic Arabic phrases (2) Hospital Orientation (3) Formal Training	- Develop a structured behaviour-based cultural orientation programme - Audit nurse compliance in patient satisfaction - Share expectation and consequences for not applying culturally congruent care.
Patient Safety		
Positive work environment - hospital climate	Positive work environment: N=34 5 themes namely: (1) safe staffing, (2) improved communication (3) education (4) adequate resources (5) recognition programmes	Develop a structured and standardised positive work environment process to include the nine essentials elements. - Monitor nurse satisfaction
Communicate outcomes data	Sharing of outcomes data (N=33): 5 varied themes listed namely: (1) meetings (2) electronic and visual display of data (3) training programmes (4) monthly reports (5) nurse manager support	- Use of a structured and standardised approach with specific wording (scripting) to share performance data - Evaluate the nurses' understanding and use of performance data to improve practices
NAA	Managing non-compliance NAA: Qualitative data revealed one theme namely reactive monitoring. Of concern is the perception of nurses: 179 (N=416; f=33%) agree that mistakes are held against them, with a third (n=135; f=33%) being neutral, which is suggestive of a punitive environment	- Audit nurse performance to ensure that NAA outcomes sustained at 100% - Assess nurses' competence on completing the NAA within the timeframe - Involve nurses in process improvement activities

Theme	Data Analysis Results	Recommendation/s
Falls	Manage fall prevention programme: Qualitative data revealed two themes: (1) fall risk assessment (2) reactive monitoring	- Use structured programme to assess fall risk and apply prevention measures - Identify reasons for patient falls with corrective action measures. - Assess nurses' competence in fall risk assessments
HAPU	Manage HAPUs: Qualitative data revealed three themes: (1) frequency of conducting the Braden Skin Risk Assessments (2) training (3) monitoring	- Identify the reason for HAPU in units. - Assess nurses' competence on Braden Skin Risk Assessment & frequency of risk assessment
HH	Manage HH non-compliance: Qualitative data revealed two themes: (1) leadership support (2) monitoring	- Develop a structured process to identify non-compliance with '5 moments of HH'. - Assess nurses' competence on '5 moments of HH' - Use patient outcomes data to improve practices
Safety Culture		
Perception of safety culture	Culture of Safety (N=33): Qualitative data with five themes (1) informational culture (2) flexible culture (3) reporting culture (4)'just culture' (5) learning Of concern was that no responses were provided on reporting and learning cultures	- Develop a Standardised and Structured Behaviour-Based Culture of Safety Training Programme - Specify importance of reporting incidents - Use incidents and events as learning opportunities - Use patient outcomes data to improve practices - Communicate patient safety concern to management - Participate in process improvement activities
Training receive safety culture	Training received on culture of safety: three themes emerged namely: - culture of safety training	

Theme	Data Analysis Results	Recommendation/s
	- basic quality methodology training - TeamSTEPPS training The responses from the nurse managers indicated that no structured training programme was available.	
Management support safety culture	Management support for the culture of safety: Qualitative data revealed three themes: (1) structures to support safety (2) processes in place (3) outcomes	
JUST CULTURE PRACTICES	Awareness of Hospital disciplinary processes (N=33) Yes: n=24 (f=72.7%) No: n=10 (f=30.3%)	- Share culture of safety process unit meetings - Share expectations and consequences of safety performances required
	Review of systems through incidents reported (N=33) Yes: n=28 (f=82%) No: n=6 (f=18%)	- Identify trends in incidents reported and provide feedback – Engage nurses in process improvement activities
	A proactive approach to address system concerns (N=33) Yes: n=29 (f=85%) No: n=5 (f=15%)	- Apply Hourly Rounding Principles - Assess nurse compliance with Hourly Rounding Principles
	Proactive process to address nurses` performance (N=33): Yes: n=29 (f=85%) No: n=5 (f=15%)	- Use basic quality methodology training principles in process improvement activities - Involve nurses in process improvement activities
	Incident Reports used to manage safety concerns (N=33): Yes: n=29 (f=85%) No: n=5 (f=15%)	- Proactive risk assessments - Identify commonalities in incidents reported for training purposes

Theme	Data Analysis Results	Recommendation/s
	Support Hospital management on safety concerns (N=33): Yes: n=26 (f=78.8%) No: n=8 (f=24.2%)	- Follow-up action plans for safety culture - Share patient safety concerns
	Additional Recommendation to improve 'just culture': Qualitative data revealed three themes (1) human resource policy (2) safe systems (3) monitoring performances	Develop a Standardised and Structured Behaviour-Based Culture of Safety Training Programme

4.12 CONCLUSION

In this chapter, the methodology for the mixed method study was discussed. Data were analysed, interpreted, and recommendations were made.

Recommendations were based on the three sections of the nurse safety culture questionnaire: namely, the biographical data and culture, patient safety and hospital climate, and safety culture (see Table 4.91 for details). The recommendations for the nurse manager safety culture questionnaire were based on the four sections namely: biographical data and culture, patient safety, climate and culture of safety, and 'just culture' practices (see Table 4.91 for details).

In the next chapter, Phase 3 – the literature review on action plan and development of the e-Delphi, will be discussed.

CHAPTER 5
PHASE 3: LITERATURE REVIEW ON ACTION PLAN DEVELOPMENT

5.1 INTRODUCTION

Chapter 5, as illustrated in Table 5.1, consists of a description of Phase 3, thus the literature review on action plan development as well as the development of the draft action plan.

Table 5.1: Progress of the study

Chapter	Content
1	Orientation to the study
2	Literature review (1) safety culture, (2) hospital climate, (3) patient safety outcomes and (4) managing 'just culture' based on Reason's and Ekenedo's Safety Culture Framework.
3	Phase 1: Research methodology, data gathering and interpretation of outcomes data
4	Phase 2: Research methodology, data gathering and interpretation of questionnaires
5	Phase 3: Literature review on action plan development as well as the development of the draft action plan and the validation assessment instrument
6	Phase 4: Research methodology, data gathering and validation of the action plan
7	Conclusions, limitations and recommendations

5.2 AN ACTION PLAN

According to the AHRQ, an action plan is a documented number of predetermined steps that must be taken to achieve a specific goal (AHRQ, Webpage 2017). It is essential for facilities, such as hospitals, to have processes and tools, like action plans, built into their continuous improvement plans to ensure that these improvements are

guided by clear, purposeful direction and focus (Sorra, Nieva, Gray, Streagle, Famolaro, Yount & Behm, 2016:1). In this context, the goal would be to develop an action plan to sustain patient safety outcomes.

The quality improvement literature discusses the work of Deming and Juran, who were quality gurus from the fifties who developed quality improvement tools to enable hospitals to develop action plans when gaps are identified. These tools are employed by following a methodological process like the PDCA format and the Pareto Principle (Monnappa, 2017:2; Neyestani, 2017:15). The development of an action plan will require that the principles for action plan development are taken into consideration.

5.2.1 Action plan principles

One of the first principles that need to be considered is that (1) the footprint of the organisation needs to be understood (ConocoPhillips, [Sa]:1). It is also important to (2) engage the stakeholders in the development of the action plan to involve experts in the field of inquiry (ConocoPhillips, [Sa]:1). ConocoPhillips ([Sa]:1) states that (3) it is vital to understand operational and project management, and (4) be able to manage risk and opportunities by engaging externally and capacity building as required steps to develop a sustainable action plan. Morris and Bardiche (2012:5) has similar steps as ConocoPhillips but explain the need for (5) a clear strategy to engage healthcare teams to sustain practices early and often, thereby creating value. It requires (6) nurse leaders to set the vision that is required for future actions (Morris & Bardiche, 2012:5; AONE, 2017:1), and (7) the CEO is required to understand the Safety Management Plan and the Strategic Objectives from the Corporate Operational Body and set clear goals to direct teams' safety practices. Ensuring that action plan development includes principles of (8) setting manageable steps, the 'go no go' audits, being transparent and measuring success, is vital for any action plan (The Advisory Board, 2014).

It requires that the Senior Management Council (SMC) (9) determines the standards and expectations for the goal setters like JCIA, DoH-AD, and OSHAD to be included in the plans. To test actions, a (10) standardised process improvement methodology is required, with (11) regular follow-up on the key performance indicators (KPIs) and trends in incident reports with the Corporate Operational Board to determine whether it is still appropriate and valid to be monitored.

Then, the CEO needs to (12) ensure that clear processes are in place to share performance data with the healthcare team to align improvement efforts listed in the action plan (Morris & Bardiche, 2012:5). As mentioned, the key to process improvements lies with the CEO, and therefore (13) the CEO needs to include the strategies required for educating and training on quality methodology for healthcare teams.

Howard, Sugarman, Christian, Lindholm-Leary and Rogers (2007:2) developed their guiding principles for linguistics action plans into seven strands. They address those scopes essential for programme planning and implementation as (*a) assessment and accountability, (b) curriculum, (c) instruction, (d) staff quality and professional development, (e) programme structure, (f) family and community and (g) support and resources.* Senior nurse leadership is responsible for keeping the nursing team (14) accountable to align safety practices with the requirements established by standard setters like the Joint Commission International, Department of Health Abu Dhabi (DoH-AD), OSHAD, and others. The nursing department also needs to ensure that the nursing teams are (15) educated to apply basic process improvement tools and methodologies, and other skills in clinical practice to monitor performance and develop action plans.

To ensure patient involvement in care decisions and satisfaction, the healthcare team needs to implement this DoH patient safety standard. It is required for the nursing team to (16) do daily, weekly and monthly inspections and audits to determine how the nursing team is performing on patient safety standards and KPIs. If gaps in safety standards and KPIs are identified, then the nursing team should develop action plans to correct the gaps (Hospital Policy, 2017).

Another important principle addresses the (17) structure of the action plan to ensure that it can be implemented. It must contain (a) an explanation of the criteria required to reach a specific goal, and (b) if it is essential and important for patient safety, (c) formulate a timeline for when specific tasks need to be completed, and (d) determine the most responsible person to manage the tasks in order to improve a process, system or to achieve a specific outcome (Mehdrad, Farzad, Jerris, Morteza & Omid, 2007:240; Sorra, et al. 2016:1; WHO, 2016:1).

These principles are vital for developing action plans to improve system and process issues affecting patient safety. It is also recommended that specific steps need to be followed by the nursing team when an action plan needs to be developed.

5.2.2 Action plan steps

The first step to action plan development is to set SMART goals. Action statements must therefore be very specific to the problem to be solved. It needs to be measurable, achievable, realistic and timelines need to be set (AHRQ, Webpage 2017). This will contribute to the understanding by the nursing team to ensure that all actions are sequential and directed to close items identified as gaps.

Pennsylvania University [s.a.] describes the following seven steps of action plan development:

5.2.2.1 Step one – define the problem

The first step must always be to define the problem, and in this study context data from the hospital, nurses and nurse managers provided evidence that safety culture practices are not being sustained (Hospital Data, 2013; Thorpe, et al. 2012). Although the two study hospitals provided multiple development, planning, and education projects on standards of care and safety practices, the nursing-sensitive performance indicators reflected variances that have a negative impact on patient outcomes (Hospital Data, 2013). The hospitals demonstrated that they achieve the safety standards required by the accreditation bodies (i.e. JCIA or DoH-AD). However, during the audit in Phase 1 of the study, and based on Internal Continuous Survey Readiness audits, the data reflects that safety standards were not sustained after an inspection by Joint Commission International (Hospital Data, 2014). According to the patient outcomes data for the NAA within 24 hours, fall rate, HH compliance rate and HAPU incidents have not been sustained for the period 2016 (Hospital Data 2016).

5.2.2.2 Step two - collect and analyse the data

Data from both study hospitals were collected and analysed from the Patient Outcomes data in Phase 1 (Appendix F), as well as the data in Phase 2 (Appendix G & H).

5.2.2.3 Step three - clarify and prioritise the problem(s)

The hospitals' outcomes data in Phase 1 revealed that patient safety data for NAA, fall risk, HAPU rates HH compliance are not being sustained. The data in Phase 2 revealed that nurses and nurse managers who are from diverse backgrounds require behaviour-based training programmes to align teams and safety practices with regards to culture, safety and the hospital climate affecting patient safety.

5.2.2.4 Step four - Write a goal statement for each solution

The researcher provided a rationale for developing the strategic goal to illustrate that the data were used to set a goal for each area in the strategic action plan. Based on the results and recommendations from Phases 1 and 2 (see Chapter 4, Table 4.91), four broad themes must be included in the draft action plan. These four themes listed the essential and important aspects to sustain safe patient care: (a) Cultural aspects of the nursing team and patient, (b) Patient safety that addressed leadership and behaviour-based training for (1) NAA, (2) fall risk, (3) HAPU, and (4) HH practices from Ekenedo's Framework, (c) Positive work environment (Hospital climate), and (d) Safety culture that addressed the (1) informed, (2) flexible, (3) reporting, (4) just, and (5) learning culture based on Reason's framework. To demonstrate the diversity of the panel experts, it was necessary to include the participants' biographical data. Once the goal statement was set it required the responsible person to be identified and the timeframe to conduct the action to be specified.

5.2.2.5 Step five - Implement possible solutions: the draft action plan

The draft action plan was developed with the purpose to provide possible solutions to every action statement after all the concerns were identified in Phases 1 and 2. Prior

to involving the panel experts, the e-Delphi Round Draft was built into the SurveyMonkey™ domain and tested to determine technical concerns and goals understood by a diverse group of nursing team members. Based on the feedback from the nursing team (not part of the panel experts), changes were made to the draft e-Delphi action plan to be clear to the panel experts. After approval, the draft action plan was sent to the panel experts via SurveyMonkey™ to initiate the different rounds required to gain 80% consensus.

5.2.2.6 Step six - Monitor and evaluate the draft Action plan

The e-Delphi method was used to enable consensus among the panel experts through various rounds until 80% consensus was reached. The data from Round One of the e-Delphi were analysed, and those action statements under each theme that did not have an 80% consensus for being essential and important for patient safety, the responsible person and timeframe, were included into the Round Two e-Delphi. The Round Two data were then analysed again, and the analysis indicated an 80% consensus among the panel experts.

5.2.2.7 Step seven - Implement the action plan

In Chapter 7, the final **Action Plan to enhance a Sustainable Culture of Safety to Improve Patient Outcomes** is presented and should be implemented by the study hospitals.

5.2.3 Development of the draft action plan

After the thorough literature review on how an action plan should be developed, the principles to be applied as well as the steps to be followed from the analysed data from Phases 1 and 2 (see detail description in Chapter 3 Section 3.7 and Chapter 4 Sections 4.6 & 4.7) were applied to develop the draft action plan (see Table 5.9). To validate the action plan it was important to develop a validation assessment instrument to be embedded into the draft action plan (see Table 5.9) at the same time.

It is important to note that it is not possible to totally separate the development of the draft action plan from the e-Delphi validation instrument as the two are inseparable. The assessment instrument had to be embedded in the draft action plan (see Table 5.9) to ensure a rigorous validation process. **The e-Delphi validation instrument will therefore also be discussed in this chapter.**

5.2.3.1 Introductory section

An introductory section was written to explain the purpose of the study, and the concepts used in the action plan were clarified. It was explained how the participants could get access to the plan (via the link provided), what their role as panellist was, how the data and their comments would be incorporated, and how consensus would be determined. The introductory session also included instructions to the panellists (Appendix L).

5.2.3.2 Biographical information

A section that contains biographical information was attached to the action plan to provide data on the area of expertise of the panellists involved in the validation of the action plan.

5.2.3.3 The actual draft action plan

The content of the draft action plan was organised into the four broad themes identified from the data of Phases 1 and 2, as well as the literature that supported the essential and important themes to sustain safe patient care. Under every theme, important action items were described. The four themes included in the draft action plan were:

1. Culture (10 action items)
2. Patient safety (18 action items)
3. Positive Work Environment - Hospital climate (8 action items)
4. Safety Culture (20 action items)

The development of the draft action plan is presented in multiple steps to clarify the process followed and to indicate how the recommendations from Phases 1 and 2 were incorporated into the development.

a) Goals

The American Healthcare Quality and Research (AHRQ) mentioned that goals need to be set and understood by a team to allow a clear vision and understanding of what must be improved (AHRQ, Webpage 2017). As discussed in Section 5.2.1, the principles for developing an action plan mandate that goals be set to direct attention to what is required under each section of the plan based on the results from Phase 2 of the study. How a goal was written for each statement as required according to Step 4, is illustrated in Table 5.2 with 'Theme 1: Culture' as the example.

Table 5.2: Example of Goal setting for the Draft Action Plan

Theme 1 - Culture: Participants in Phase 2 identified a lack of knowledge of how culture affects patient safety; how to deliver culturally congruent care; proficiency in English as questions were interpreted differently than intended due to the different dialects of the nursing team; and nurse comments that prevent them from communicating with patients in Arabic. **Proposed Strategic Action Goal:** Develop and implement a structured, behaviour-based education programme that supports nurses in cultural competence, proficiency in English and conversational Arabic.

b) Action statements

To incorporate the recommendations obtained from Phases 1 and 2, action statements were developed to achieve every specific goal (see Section 5.2.3.3). The action statements allowed the panellists to comment on each action statement (see Table 5.3 for example of action statement).

Table 5.3: Example of Action Statement for the Draft Action Plan

1. Develop a standardised and structured behaviour-based cultural orientation programme that is supported by a theory.

c) Time frames and Responsible persons

A specific timeframe within which to reach the goal, as well as the persons responsible, were included in the draft plan to comply with the principle in Section 5.2.2.3, point 17. It is vital for the nursing team to stipulate who is responsible to engage the team in process improvement activities and a reasonable timeframe in which to achieve the goals (see Table 5.4 for an example of timeframe and responsible person). Drop-down boxes were provided for the panel to choose from.

Table 5.4: Timeframe and responsible Person/s for Action Plan

Responsible person (choose appropriate role/s that is required to enact this action statement)	
Nurse manager	
Nurse educator (CRN)	
Registered Nurse (Staff/ Charge Nurses)	
Nursing Team (Nurse Manager, Clinical Resource Nurse, Charge and Staff Nurse)	
Time frame- select the most appropriate timeframe for this action statement	
14 days	
30 days	
60 days	

d) Importance of action statements

It was necessary to determine from the nursing team whether the action statement is (a) essential to ensure patient safety and satisfaction, (b) important to ensure patient safety and satisfaction, or (c) not important to ensure patient safety and satisfaction by ranking each action statement (see Section 5.2.2.3). This data allowed the researcher to determine the basis of consensus regarding which action statements should be included in the final draft action plan. It was thus part of the validation process to validate responses (see Table 5.5).

Table 5.5: Example of Ranking of Draft Action Statement for Patient Safety and Satisfaction

Essential to ensure patient safety and satisfaction (3)	Important to ensure patient safety and satisfaction (2)	Not important to ensure patient safety and satisfaction (1)

e) Individual opinions

The last aspect that was included in the draft action plan was space for individual participants (see Section 5.2.3.3) to comment on how each action statement can be improved (see Table 5.6).

Table 5.6: Example of a Comment to improve Action Statement for Draft Action Plan

Comment: Recommendations to improve action statement

The assessment instrument for the draft action plan was embedded within the action plan. This provided the panellists with an action plan that complied to all the principles of an action plan, but with the opportunity to comment on the action statements. The draft action plan is as illustrated in Table 5.9.

Table 5.7: Example Layout Draft Action Plan

Theme 1 - Culture:

Participants in Phase 2 identified a lack of knowledge of how culture affects patient safety; how to deliver culturally congruent care; proficiency in English as questions were interpreted differently than intended due to the different dialects of the nursing team; and nurse comments that prevented them from communicating with patients in Arabic.

Proposed Strategic Action Goal: Develop and implement a structured, behaviour-based education programme that supports nurses to cultural competence, proficiency in English and conversational Arabic

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose	**Time frame:** select the	**Essential** to ensure patient	**Important** to ensure patient	**Not important** for patient	**Comments:** recommendations

	appropriate role/s that is required enact the action statement)	most appropriate timeframe to develop, implement and monitor action statement	safety and satisfaction (3)	safety and satisfaction (2)	safety and satisfaction (1)	to improve action statements

5.3 METHODOLOGY FOLLOWED

The research design, the population of e-Delphi panellists, sampling of the panellists, rigour, the e-Delphi method and rounds, ethical considerations, and pre-testing of the draft action plan with the incorporated validation assessment instrument are discussed next.

5.3.1 Design

A mixed method approach (see Chapter 3) was used to collect data from a panel of experts (Avella, 2016:306) in order to validate the action plan.

5.3.2 Population

The population of experts were seen as the clinical resource nurses, the charge nurses, staff nurses and nurse managers (also called senior charge nurses). They were competent in wound care, infection control, and had knowledge in physical, skin and fall risk assessments as these were vital in the selection process and formed part of the research context (Chapter 3). The CNO from both study hospitals provided a combined list with 20 names that formed part of the panel experts.

5.3.3 Sample

Choosing the panel experts was an important aspect to consider before embarking on using the e-Delphi method (Tariq & Woodman, 2013:1; Avella, 2016:316). Purposive sampling, a non-probability sampling method as defined by Polit and Beck (2012:276), was therefore used to select the experts. Based on the CNOs' judgement, the panel

that was most appropriate to include as experts within the context – based on their expertise and knowledge about safety culture and patient safety practices – were included. The rule of thumb on the number of participants in e-Delphi studies have been described by Holloway (2012:347), Green, Duan, Gibbons, Hoagwood, Palinkas and Wisdom (2015:2) and Avella (2016: 315), to be between 15 and 30 members, but for this panel 18 panellists were selected. Nine nurses – namely, three clinical resource nurses, three charge nurses, three staff nurses – and nine nurse managers from both study hospitals formed part of the sample. The CNOs in both Hospitals A and B were the gatekeepers who selected the sample of experts.

5.3.4 The e-Delphi technique

The e-Delphi method was first introduced in the fifties by Dalkey as part of a military strategy (Holloway, 2012:347; Donohoe, et al. 2013:39; de Mello Pereira & Alvim, 2015:176; Nworie, 2011:24). It is described as an iterative procedure to gather and filter conclusions using a series of data collection and analysis techniques to improve processes (Nworie, 2011:24 de Mello Pereira & Alvim, 2015:176; Chang, Cheng, Wu & Liao, 2016:4). This method is most suitable to discuss issues that have not been explored in-depth and it is based on the principle of involving resource experts' clinical knowledge and expertise to gain consensus (Chang, et al. 2016:4; Avella, 2016:305).

The e-Delphi method allows a multi-phase approach for panel experts to reach consensus, facilitate anonymity, and allow controlled feedback and statistical aggregation to ensure nursing group responses (Avella, 2015:307). As indicated by Tariq and Woodman (2013:1), the researcher must address five important factors required for the success of the e-Delphi method: (1) a purposefully selected panel of nursing experts to inform the draft action plan, (2) anonymity of the panel nursing experts, (3) multiple reiterative rounds of questioning, (4) controlled feedback, and (5) merging data to consensus.

Different types of Delphi methods or techniques have emerged over the last decade (Nworie, 2011:24; de Mello Pereira & Alvim, 2015:176; Davidson, 2013:56), but the e-Delphi was used in this phase (Nworie, 2011:24; de Mello Pereira & Alvim, 2015:176; Davidson, 2013:56; Holloway, 2012:347).

The e-Delphi technique was employed to direct the complex set of questions via electronic means to the purposefully selected expert nurses and nurse managers. There are a number of Web Survey methodologies that can be utilised for e-Delphi, i.e. SurveyMonkey™ and Palo Ato, as it is easy to upload Word documents and convert results into Excel spreadsheets and PDF format (Halloway, 2012:349).

Culley (2011:272) describes that SurveyMonkey™ is an online survey tool that enables the researcher to (1) use a web browser to create a questionnaire based on research aims to be achieved, (2) design the questionnaire to describe the study purpose and consent to participate, allowing options through the use of rating scales and providing options for free text, (3) send out a link to the survey via e-mail to panel experts, (4) track who responds and send out reminders, (5) set cut-off dates for each survey round, (6) ensure that the researcher sets a restricted access password to allow confidentiality, (7) view results (including graphs and charts of the data) as soon as they are collected, and (8) export the results from each round to a workable spreadsheet, such as Excel.

The e-Delphi method allowed the researcher to construct an online questionnaire to pose questions to prompt and gain consensus on how to sustain processes and improve patient outcomes (see Appendix L for the draft action plan with six columns for validation). As suggested by Nworie (2011:24) and Cox, Bailey, Jorm, Reavley, Templer, Parker, Rikwood, Bahr and Robinson (2016:7), the draft action plan and strategic goal for each section were provided to the panel experts (nurse and nurse manager) to select action statements that are essential and important for patient safety. They also had to choose who should be responsible for the action statement and the timeframe in which to complete the action statement. A comments section was included to give participants an opportunity to advise how the action statement should be changed.

In order to utilise the e-Delphi for validation, the validation assessment instrument had to accompany the draft action plan and was an embedded part of the draft action plan as described in Section 5.2.3.3.

5.3.5 The assessment instrument for validation by e-Delphi

The development process for the draft action plan was discussed in Section 5.2.3. Careful considerations were required with the construction of the questions to validate the draft action plan (Halloway, 2012:348) and ensure success; thus, relevant and constructive feedback from the panellists were essential. All the questions were based on the content of the draft action plan (see Table 5.9). The multiple rounds established for the study allowed the panellists to validate the draft action plan by means of the embedded assessment instrument in the e-Delphi. The data were analysed, and the draft action plan questions were changed to incorporate panellist feedback between the rounds, thereby ensuring validation of the instrument.

5.3.6 Rigour

Hasson, Keeney and McKenna (2011:1695) describe the importance of methodological rigour in e-Delphi studies and the researcher is responsible for facilitating methodological processes to ensure dependable results (in quantitative studies this is referred to as reliability and validity). The choice of the instrument (in this study, the embedded e-Delphi validation assessment instrument) to answer the research objectives, the selection of the panel and seeking consensus is vital in establishing qualitative data rigour (Hasson, et al. 2011:1696). The researcher developed the draft action plan based on the data from Phases 1 and 2 (Appendix F, G & H) as well as the literature reviews conducted. Rigour was further ensured as the panel experts were chosen by their CNOs based on their knowledge on NAA, falls, HAPU and HH (Appendix L).

Once approval was received from the Ethics Committee of the Department of Health Studies at UNISA, the e-Delphi Draft Action Plan Validation Assessment Instrument was built in the SurveyMonkey™ Domain. The draft e-Delphi validation assessment instrument was tested by five nurses and five clinical resource nurses who did not form part of the panel of experts who contributed to the validation process. Polit and Beck (2012:195) describe a pilot as the testing phase designed to evaluate the questionnaire. In this study context, the e-Delphi validation assessment instrument was pilot tested to ensure it measured what it was intended to measure.

The researcher invited five nurses and five clinical resource nurses by means of a recruitment letter via e-mail (which were provided by the CNO) to conduct a pre-test of the embedded assessment in the e-Delphi draft action plan validation assessment instrument. The pre-test was conducted to determine if the nursing team understood the embedded assessment questions and whether changes should be made. The recruitment letter contained a link to the e-Delphi Draft Action Plan in SurveyMonkey™. A period of two weeks was provided, with multiple reminders to complete the pre-test.

The suggested recommendations by the six participants (from N=10) were implemented in the draft action plan validation instrument (see Table 5.8 for a summary of recommendations).

After the pre-test, the draft action plan with the embedded validation instrument was adapted and built in the SurveyMonkey™ Domain. The system was tested to ensure all technological concerns with the e-Delphi draft action plan, with the embedded validation instrument, were addressed.

Table 5.8: Summary of the e-Delphi recommendations from the Pre-test Group

Items addressed	Recommended changes made
Grammatical issues	Language editor edited the draft action plan (see CV attachment)
Action Statement 3 Was: Develop a cultural resource toolkit to assist nurses in decision making in the clinical setting	Develop a person-centred interview framework to assist nurses in eliciting relevant information to engage appropriately with patients and their families and guide decision making in the clinical setting
Action Statement 4	Implement a person-centred interview framework to assist nurses in eliciting relevant information to engage appropriately with patients and their families and guide decision making in the clinical setting
Action Statement 5	Develop and implement an audit tool to monitor that the person-centred, theory-based interview assessment is used 100% of the time

Items addressed	Recommended changes made
Action Statement 6	Audit compliance with applying person-centred, theory-based interview assessment 100% of the time
Action Statement 8	Conduct audits to determine if culturally congruent care policies are applied to clinical practice and act to address gaps
Action Statement 9	Identify and act on culture-specific needs in each individual patient care plan
Action Statement 32	Implement the minimum safe, evidence-based staffing and skills mix guidelines for units to support safe patient staffing levels
Action Statement 33	Monitor, through incident reports, whether nurse:patient allocations resulted in safety issues for: 1. NAA within the timeframe; 2.Falls 3. HAPU rates to zero 4. and HH compliance
Duplication of action statement	Action Statement 19 removed
Ranking of Action Statement	Essential for patient satisfaction and safety Important for patient satisfaction and safety Not important for patient satisfaction and safety
Responsibility	Responsible person (choose appropriate role/s that is required to develop, implement and sustain action)
Timeframe	Time frame – select the most appropriate timeframe to develop, implement, monitor and sustain action statement
Comments	Changes adapted in each section Section 1: Comment: provide recommendations on how to improve action statement Section 2: Comments: recommendations if do not agree with all elements of actions statement 14,19, 23, 26 please list what to add or delete to improve Action Statements Section 3: Comments: recommendations if do not agree with all elements of actions statement 36, 37, 38 please list what to add or delete to improve Action Statements Section 4: Comments: recommendations if do not agree with all elements of actions statement 41, 42, 44, 45, 46, 47, 51, 55 please list what to add or delete to improve Action Statements

The e-Delphi in Section 5.5 describes the three rounds required for the panel experts to establish rigour by reaching an 80% consensus that the action statement is essential and important for patient safety, choosing the responsible person and establishing the timeframe for achieving the action statement.

5.4 ETHICAL PRINCIPLES

The general ethical principles (beneficence, freedom from harm, the principle of justice, and human dignity) discussed in Chapter 3, were adhered to. Approval was received from the Ethics Committee of the Department of Health Studies at UNISA (Appendix I), and the two hospitals' Institutional Ethics Review Boards (Appendix J & K). Implied consent was applicable for all respondents who opened the link to access the SurveyMonkey™ Domain and thus volunteered to participate as described (see Section 3.3.4). The only aspects that specifically need to be emphasised in Phase 3 are the freedom from exploitation, the principle of human dignity, confidentiality and anonymity.

5.4.1 Freedom from exploitation

The researcher-participant relationship should not be exploited (Polit & Beck, 2012:153), and the nurse and nurse managers in this phase of the study were protected from adversarial situations as the researcher only received e-mail addresses for the prospective experts. The recruitment letter was only sent via e-mail (Appendix L & N). The unidentifiable aggregated data were received back via SurveyMonkey™, where access to raw data was restricted to only the researcher, who had a special login password. The participants were not asked to provide identifiable data that could have been retrieved at any point.

5.4.2 Principle of human dignity

Human dignity, according to Polit and Beck (2012:77), pertains to the right to self-determination and full disclosure. Only self-determination will be discussed as it also covers full disclosure in this phase.

5.4.2.1 Right to self-determination

Polit and Beck (2012:78) describe the right to self-determination in that the prospective participants should not be coerced into taking part in the study. Nurses and nurse managers had the right to decide whether to participate without incurring any penalty. Nurses and nurse managers were approached through emails, which were provided by the CNOs from Hospitals A and B who selected them as possible panel experts. All identified experts received the recruitment letter (Appendix L & N) with detail pertaining to their role and a link to open the draft action plan e-Delphi. No remuneration was offered and completing the e-Delphi validation instrument online implied that the respondent consented to participate in the study and that they received the information leaflet.

5.4.3 Confidentiality

The following precautions were used to ensure confidentiality in this phase of the study:

- The e-Delphi validation instrument was posted online (SurveyMonkey™) with a unique access code only available to the researcher.
- The e-Delphi validation instrument did not require identifiable data from individuals as the data were transferred to spreadsheets that enabled statistical analysis. Only the researcher, supervisor and statistician had access to the raw data.
- The data were therefore kept confidential.
- The research questions did not pose an ethical dilemma for the nurses and nurse managers. The action items in the validation instrument were phrased in such a way to determine the factors affecting a safety culture to be sustained to ensure positive patient outcomes.
- Confidentiality of the participants was maintained as the data were received back as raw data via the electronic software program (SurveyMonkey™).

5.4.4 Anonymity

Anonymity is ensured when there is no link between the data and the participants (Polit & Beck, 2012:150; Babbie, 2007:65). The implied consent and the research technique, namely an e-Delphi using a software program such as SurveyMonkey™, allowed for anonymity to be established.

5.5 THE E-DELPHI VALIDATION PROCESS

To provide direction on how to utilise the e-Delphi technique it was necessary to establish a process to illustrate the different rounds in the validation proses (see Figure 5.1). As the embedded e-Delphi draft action plan validation assessment instrument needed to be validated, a test group were selected (see Section 5.5). As illustrated in Table 5.8, the feedback from the test group was incorporated into the draft action plan.

The absolute level of agreement among the panel experts could range between 51% and 85% (Holloway, 2012:347; de Mello Pereira & Alvim, 2015: 176; Davidson, 2013:56). As illustrated in Figure 5.1, three e-Delphi rounds were anticipated on each aspect in the draft action plan, or until 80% consensus was reached. The consensus was determined by 80% of the participants selecting that the action statement was either essential and or important for patient safety, identifying the responsible person and listing the timeframe to achieve the action statement (Section 5.2.3).

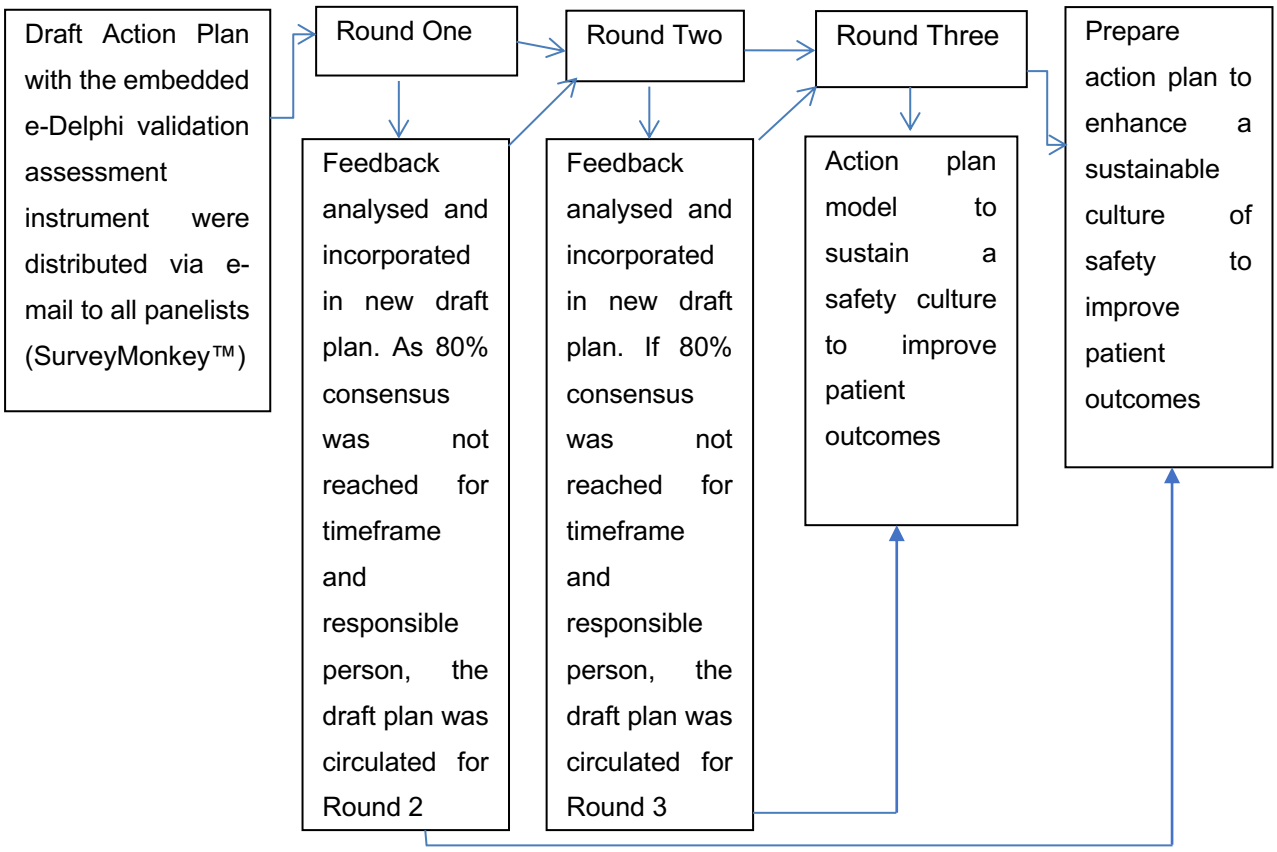


Figure 5.3: General Schema e-Delphi Action Plan for Nurses/Nurse Manager Panel Experts

5.5.1 Reliability of the draft action plan validation assessment instrument

As data collection methods vary in quality, the researcher ensured that the captured data reflected the concepts that were relevant, accurate, truthful and sensitive (Wood & Ross-Kerr, 2011:209-219). Reliability of the e-Delphi draft action plan validation instrument was enhanced as the panel experts did not meet face-to-face; this eliminated group bias and thinking, and the size of the panel and number of rounds also increased the e-Delphi tool's reliability. Pre-testing the draft action plan validation instrument through the test group was another method to determine the reliability of the questionnaire.

Polit and Beck (2012:596) describe the importance of transparency in qualitative research, and to ensure this, the researcher shared the results and interpretation from the test group with the principal investigator to obtain different views on establishing the draft action plan

5.5.2 Validity of the draft action plan validation assessment instrument

The literature (Wood & Ross-Kerr, 2011:209) iterates that validity is the degree to which an instrument measures what it is supposed to measure. According to Wood and Ross-Kerr (2011:331), testing the draft action plan embedded assessment validation instrument's validity is not proved, but rather supported by an accumulation of the evidence. There are three types of validity: self-evident measures (face, content validity), pragmatic measures (concurrent and predictive validity), and construct validity. For the purpose of this phase of the study, face, content and construct validity were applicable (Wood & Ross-Kerr, 2011:205-209).

The first step 'conceptual and construct validation' was achieved by providing an introductory section explaining the study, what to do and the definitions of certain concepts to avoid confusion among panellists. The second step, face validation of the e-Delphi validation instrument's action items was established on testing the draft action to ensure subjective data were obtained from panel experts with the logical flow of the questionnaire that had four sections. The last step focussed on the content validation of the draft action plan validation instrument through literature review and the panel experts chosen to participate (Alumrana, Houa, Xiang-Yu & Hurst, 2012:223; De Leon & Huertas, 2012:222; Shariff, 2014:4). Tarrant, Angel, Baker, Boulton, Freeman, Wilkie, Jackson, Wobi and Ketleyet (2014:2) stress the importance of formatting the changes based on pilot group feedback (see Table 5.8).

5.6 DRAFT ACTION PLAN

Illustrated in Table 5.9 is the adapted and embedded draft action plan, and the validation assessment instrument recommended by the pre-test participants. The changes were built in the SurveyMonkey™ domain to initiate Round One of the e-Delphi technique (see Chapter 6). The embedded e-Delphi validation assessment instrument provided drop-down boxes for the panellists to make an appropriate selection. A snapshot of action statement 1, illustrating the drop-down choices for the responsible person/s to develop this training (see Figure 5.2), and then the timeframe to complete this development (see Figure 5.5), are provided.

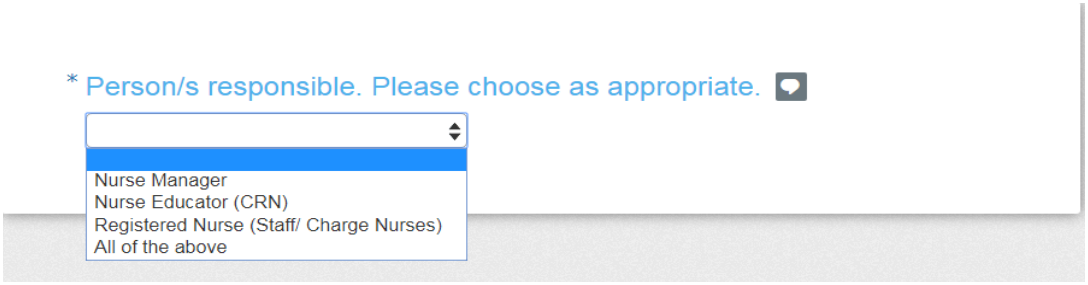


Figure 5.2: Snapshot of Person/s Responsible

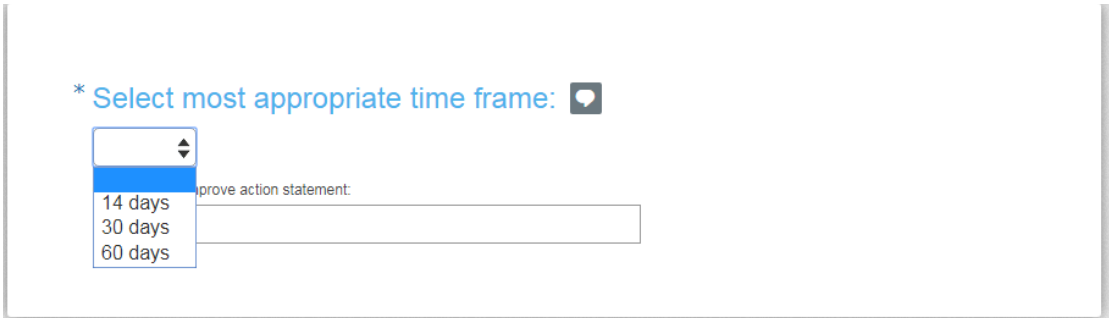


Figure 5.3: Snapshot of Timeframe to complete actions

An outline of the e-Delphi draft action plan validation instrument is illustrated in Table 5.9.

Table 5.9: Draft Action Plan and embedded e-Delphi validation instrument

BIOGRAPHICAL DATA **Please indicate your answer to the following questions with a tick in the appropriate box.**
1. What is your gender? Male □ Female □
2. Indicate your age 18-24 years □ 25-34 years □ 35-44 years □ 45-54 years □ 55-64 ears □
3. Please specify your Nationality: Emirati □ Jordanian □ South African □ Philippine □

Indian □

English □

Other _____

4. Where do you currently work:

Medical □

Surgical □

Peads □

Critical Care (ICUs, Step Down/ Telemetry etc) □

5. **Please indicate your specific position in the institution:**

Unit Manager □

Senior Charge Nurse □

Clinical Resource Nurse □

Charge Nurse □

Staff Nurse □

6. How long have you been in this current position?

1-5 years □

6-10 years □

11-15 years □

16 years and above □

1. Please indicate your highest level of nursing education

Diploma in Nursing □

Bachelor's Degree □

Master's Degree □

Any Others: Please specify _____

Theme 1 - Culture:

Participants in Phase 2 identified a lack of knowledge of how culture affects patient safety; how to deliver culturally congruent care; proficiency in English as questions were interpreted differently than intended due to the different dialects of the nursing team; and nurse comments that prevented them from communicating with patients in Arabic.

Proposed Strategic Action Goal: Develop and implement a structured, behaviour-based education programme that supports nurses to cultural competence, proficiency in English and conversational Arabic

Please read through the action statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required for the action statement)	**Time frame:** select the most appropriate timeframe for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
1. Develop a standardised and structured Behaviour-Based Cultural Orientation Programme that is supported by a theory	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge Nurses) □	60 days □				
	All of the above □					
2. Implement the standardised and structured Behaviour-Based Cultural Orientation Programme to ensure patient satisfaction is at 95% for culturally congruent care	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					
3.Develop a person-centred interview framework to assist nurses to elicit relevant	Nurse manager□	14 days□				
	Nurse educator (CRN) □	30days □				

information to engage appropriately with patients and their families, and guide decision making in the clinical setting	Registered Nurse (Staff/ Charge Nurses) □	60 days □				
	All of the above □					
4. Implement a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting	Nurse manager □	Every Shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					
5. Develop and implement an audit tool to monitor that the person-centred, theory-based interview assessment is used 100% of the time	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge Nurses) □	Monthly □				
	All of the above □	Quarterly □				

6. Audit compliance to applying person-centred, theory-based interview assessment 100% of the time	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge Nurses) □	Monthly □				
	All of the above □	Quarterly □				
7. Involve the nursing team through unit meetings in the development of a clear policy which describes the behavioural expectations for the application of culturally congruent care for patient safety and satisfaction.	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurses (Staff/Charge Nurses) □	Monthly □				
	All of the above □	Quarterly □				
8. Conduct audits to determine if culturally congruent care policies are applied in clinical practice, and act to address gaps.	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge Nurses) □	Monthly □				
	All of the above □	Quarterly □				

9. Identify and act on culture-specific needs in each individual patient care plan	Nurse manager □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □	Weekly □				
		Monthly □				
10. Identify English proficiency through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English	Senior Nurse Leadership (Chief Nursing Officer and Assistant Director of Nursing) □	During application Interview □				
	Human Resource Department □	Joining the hospital □				
	Nurse manager □					
11. Provide basic Arabic language training to improve conversational Arabic for patient safety.	Senior Nurse Leadership (Chief Nursing Officer and Assistant Director of Nursing) □	30days □				
	Human Resource Department	60 days □				
	Nurse manager □	90 days □				
Theme 2 – Patient Safety: Participants in Phase 1 identified that NAA, falls, HAPU, and HH compliance was inconsistent. Participants in Phase 2 identified a lack of knowledge and consistency among the nursing team in conducting NAA within the 24-hour timeframe, preventing falls and HAPU, and HH compliance to prevent hospital-acquired infections. Additionally, system issues were listed that affect patient safety.						

Proposed Strategic Action Goal: Develop and implement structured, standardised behaviour-based training programmes for NAA, falls prevention, HAPU and HH. Develop a clear policy to ensure compliance with NAA, falls and HAPU prevention, and HH practices. Annual competency re-validation linked to compliance audit results for NAA, falls, HAPU, and HH. Conduct and share performance audit data in a structured process with teams on NAA, falls, HAPU, HH compliance and system defects being addressed.

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact the action statement)	**Time frame:** select the most appropriate timeframe required for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
12. Develop a Standardised and Structured Behaviour-Based Training Programme that is supported by the Nursing Process Theory	Nurse manager□	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge Nurses) □	60 days □				
	All of the above □					
13. Implement the Standardised and Structured Behaviour-Based Training Programme that is supported by the Nursing Process Theory in order for NAA to be sustained at 100%	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					

14. Assess the nurses' competencies regarding: 1. Patient health assessment on admission. 2. Development of an appropriate individualised nursing care plan. 3. The parameters required within the Admission Assessment Policy.	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					
15. Ensure an evidence-based, acuity-driven nurse:patient ratio that will positively influence compliance with regards to patient care activities.	Nurse manager □	Every shift □				
	Registered Nurse (Staff/ Charge Nurses) □	Daily □				
	All of the above □	Change in patients' condition □				
16. Educate nurses to perform a risk assessment on the electronic medical record to identify and report	Nurse manager □	Immediate when issue identified □				
	Registered Nurse (Staff/ Charge) □	Next shift □				
	All of the above □	All the above □				

connectivity systems issues affecting compliance with completion of the NAA within the specified timeframe						
17. Develop an evidence-based behavioural fall - risk programme that incorporates the Morse and Humpty Dumpty algorithm to support standard practice.	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge Nurses) □	60 days □				
	All of the above □					
18. Implement the standardised and structured behaviour-based Falls training programme to ensure that all nurses comply with the falls prevention algorithm to prevent falls.	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					
19. Assess the nurses' competencies regarding: 1. Morse & Humpty Dumpty Scoring	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				

2. Fall risk assessment 3. Use of preventative safety measures based on risks identified. 4. Verbalisation on frequency for conducting fall risk assessments. 5. Application of visual cues to alert others to fall risk. 6. The application of the Fall Prevention Policy in practice.	Registered Nurse (Staff/ Charge) □					
	All the above □					
20. Ensure a nurse:patient ratio of 1:1, 1:2 or 1:3 based on patient acuity	Senior Nurse Leadership (Chief Nursing Officer & Assistant Director of Nursing) □	Every shift □				
	Nurse manager □	Daily □				
	Charge Nurse □	Change patient's condition □				
	All the above □					

21. Develop a standardised and structured behaviour-based skin risk integrity training programme that is supported by a theory.	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge) □	60 days □				
	All the above □					
22. Implement the standardised and structured behaviour-based skin risk integrity training programme to reduce HAPUs.	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □					
	All the above □					
23. Assess nurses' competency on: 1. The use of the Braden Skin Risk Assessment tool. 2. The interpretation of the Braden scoring to identify skin risk. 3. The implementation of the appropriate pressure reduction	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □					
	All the above □					

measures based on risk. 4. Frequency for conducting Braden Risk Assessment. 5. Appropriate referral to physician and dietician when skin risk is high. 6. Staging pressure ulcers 7. The application of the Skin Integrity Policy in practice.						
24. Develop a standardised and Structured Behaviour-Based HH Training Programme that is supported by a theory.	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge) □	60 days □				
	All the above □					
25. Implement the standardised and Structured Behaviour-Based HH Training Programme in clinical setting to reduce hospital-acquired infections.	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □	Every patient encounter □				
	All the above □					

26. Assess nurses' competency on: 1. The application of the '5 moments of HH' 2. Demonstrate aseptic hand washing technique. 3. Educating others on HH. 5. Appropriate use of gloves before and after a procedure. 6. HH in bundle compliance to prevent infections. 6. The application of the HH Policy in practice.	Nurse manager □	Every Patient Encounter □				
	Nurse educator (CRN) □	Every shift □				
	Registered Nurse (Staff/ Charge) □					
	All the above □					
27. Educate nurses to conduct a risk assessment to determine if the hand wash stations are appropriately placed in the unit to ensure that nurses are able to wash their hands	Nurse manager □	Immediate when identified no hand wash station □				
	Nurse educator (CRN) □	Next shift □				
	Registered Nurse (Staff/ Charge) □	Unit Meetings □				
	All the above □					

28. Report skin irritations incurred from hand washing solutions so an alternative can be found	Nurse manager □	Immediate after irritations are experienced □				
	Nurse educator (CRN) □	Next shift □				
	Registered Nurse (Staff/ Charge) □					
	All the above □					
29. Communicate to the nursing team the behavioural expectations required to comply with NAA, falls, HAPU, HH processes in order to avoid consequences	Nurse manager □	During educational sessions □				
	Nurse educator (CRN) □	Daily Safety Debrief Meetings (Huddles) □				
	Registered Nurse (Staff/ Charge) □	Monthly unit meetings □				
	All the above □					

Theme 3 – Positive Work Environment (Hospital Climate): Participants in Phase 2 identified the absence of a standardised, structured process to proactively assess system issues and identify resource needs, such as: nurse manager visibility and support, team work, scheduling, patient allocations and communication. These were identified as gaps to ensuring patient safety.

Proposed Strategic Action Goal: Establish a standardised and structured positive work environment process to improve the work environment to be supportive of patient and staff safety to illustrate leadership, support and guidance, teamwork, staff scheduling and patient allocation clearly listed for teams to refer to when required.

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact the action statement)	**Time frame:** select the most appropriate timeframe for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
30. Develop a structured and standardised Positive Work Environment Process (based on elements listed in Strategic Action Goal) to ensure nurses' safe care practices.	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge) □	60 days □				
	All the above □					
31. Implement the structured and standardised Positive Work Environment Process to ensure a work environment conducive for nurses to perform safe care.	Nurse manager □	Every shift □				
	Registered Nurse (Staff/ Charge) □	Daily □				
	All the above □	When change is introduced □				
32. Use the patient outcomes data	Nurse manager □	Every shift □				

to ensure that individual nurse performance evaluations for NAA within the 24-hour timeframe is at 100%, falls and HAPU rates are at zero, and 100% HH compliance is directed towards the improvement of patient safety.	Nurse educator (CRN) □	Monthly □				
	Registered Nurse (Staff/ Charge) □	Quarterly □				
	All the above □	During Performance Appraisal (iPerform only) □				
33. Implement the minimum safe, evidence-based staffing and skills mix guidelines for the unit to support safe patient staffing levels.	Senior Nurse Leadership (Chief Nursing Officer & Assistant Director of Nursing) □	Every shift □				
	Nurse manager □	Daily □				
	Registered Nurse (Staff/ Charge) □	Changes in patient acuity □				
	All the above □					
34. Monitor through incident reports whether nurse: patient allocations resulted in:	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				

1.NAA within timeframe 2.Falls rates to zero 3. HAPU rates to zero 4. and HH compliance	Registered Nurse (Staff/ Charge) □	Monthly □				
	All the above □					
35. Provide a structured guideline for communication channels in units to: 1. Report if patient-related issues are experienced that might affect patient safety. 2. Request assistance from team members when required. 3. Speak up if another healthcare provider compromises patient safety.	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □	When safety concern identified □				
	All the above □					
36. Establish a process for nurse managers' visibility and participation to include:	Nurse manager □	Daily □				
	Charge Nurses □	During shift changes □				

1. Intentional rounding on all new patients to determine if there are any issues with care provided. 2. Rounding with a purpose on all staff - every shift to identify resource deficits and needs. 3. Environmental monitoring to identify patient safety risks.	All the above □	Weekly □				
37. Establish a structured process to: 1. Acknowledge nurses' patient safety achievements. 2. Enforce professional development activities. 3. Identify individual nurses' professional development needs 4. Share the performance management data.	Senior Nurse Leadership (Chief Nursing Officer & Assistant Director of Nursing)	14 days □				
	Nurse manager □	30 days □				
	Registered Nurses (Staff/ Charge) □	Annually □				
	SNL & Nurse Manager □					

5. Provide feedback on performance.						

Theme 4 – Safety Culture has five distinct sections which will be discussed individually (1. INFORMED CULTURE/ 2. FLEXIBLE CULTURE/ 3. REPORTING CULTURE/ 4. JUST CULTURE / 5. LEARNING CULTURE)

Participants in Phase 2 identified the general absence of awareness of a safety culture and their own roles and responsibilities

Proposed Strategic Action Goal: Develop and implement a Structured and Standardised Behaviour-Based Culture of Safety Education Programme that supports nurses to integrate safety principles into general nursing practice

Please read through the statements and then click ok to continue

4.1 Informed Culture: - Results from Phase 2 of the study identified that there is no standardised and structured process used by nurse managers to share and communicate safety information with nurses to sustain practices and align nurses' safety efforts.

Proposed Strategic Action Goal: Engage nurses in process improvement activities through structured processes to address factors that affect patient safety and sustainment of patient safety practices, based on regular data analysis from audits, errors, near-misses and incident report data

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact the action statement)	**Time frame:** select the most appropriate timeframe for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
38. Share the performance management data (HAPU/HH/ falls/ NAA) through:	Nurse manager □	Daily when issue identified □				
	Registered Nurse (Staff/ Charge) □	Weekly □				

1. Unit meetings to engage nurses in process improvement activities required for change. 2. Quality boards as visual reminders on pending process improvement actions. 3. Daily safety huddles to alert nurses to safety concerns. 4. Individual nurse coaching if practice gaps are identified	All the above □	Monthly Unit Meetings □				
39. Utilise a structured process to facilitate: 1. That corrective actions identified are completed to ensure process improvement is implemented for a culture of safety. 2. Ensure that the Comprehensive Unit Safety	Senior Nurse Leadership (Chief Nursing Officer & Assistant Director of Nursing) □	Daily □				
	Nurse manager □	Weekly □				
	All the above □	Monthly □				

Programme (CUSP) is implemented in the unit to sustain practices.						
40. Identify trends in reported incidents and provide feedback to nurses to facilitate process improvement and education activities	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurses (Staff/ Charge) □	Monthly □				
	All the above □					

4.2 Flexible Culture: - Results from Phase 2 of study identified no standardised and structured process to assist nurses to adapt to changes brought about in the ever-changing healthcare environment.

Proposed Strategic Action Goal: Develop and implement a structured and standardised communication process to allow nurse managers and nurses to adapt and change in emergent situations to ensure that an immediate decision can be taken to prevent harm to a patient

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required enact the action statement)	**Time frame:** select the most appropriate timeframe for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement

41. Implement structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe handoff of patient care	Nurse manager □	During every Shift change □				
	Nurse educator (CRN) □	During break times □				
	Registered Nurse (Staff/ Charge) □	Transfer of patients □				
	All the above □	All the above □				
42. Promote active participation of nurses in audits to monitor compliance with: 1. Handoff of patient practices to ensure patient continuity of care. 2. Team briefing (Huddles) as a tool to align the team on patient care concerns. 3. Use the situation, background, assessment recommendation (SBAR) handoff tool during shifts and break times to communicate	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge) □	Monthly □				
	All the above □					

patient information in a structured way						
43. Develop a structured process to involve the nursing team in: 1. Unit risk assessment to involve nurses in improving system gaps. 2. Root cause analysis when incidents are reported that affect patient safety	Nurse manager □	Annually □				
	Nurse educator (CRN)	When safety concern identified □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					

4.3 Reporting Culture: - Results from Phase 2 of the study indicate that there is a punitive environment that exists within units that stops nurses from reporting incidents that affect patient safety.

Proposed Strategic Action Goal: Apply a structured and standardised positive work environment process in which the nursing team feels safe and are prepared to report their errors and near-misses to ensure patient safety

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact the action statement)	**Time frame:** select the most appropriate timeframe for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement

44. Communicate the Culture of Safety Process in unit meetings to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls	Nurse manager □	Daily shift Debrief (Huddles) □				
	Nurse educator (CRN) □	Monthly Unit Meetings □				
	Registered Nurse (Staff/ Charge) □	All the above □				
45. Apply the positive work environment process as a guide for nurses to: 1. Report behavioural practices of others affecting patient safety. 2. Report system defects affecting patient safety	Nurse manager □	Every time safety concern identified □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					

4.4 Just Culture: -

Results from Phase 2 of the study identified a punitive environment, system issues not being proactively addressed, and nurses' behavioural practices not being managed in a safe and just manner.

Proposed Strategic Action Goals:

(a) Ensure a standardised safety-supportive system of shared accountability where nurse managers are accountable for the systems they have designed and for responding to the behaviours of their nursing staff in a fair and just manner. Also apply processes to facilitate behavioural management of safety.

(b) Ensure nurses' accountability for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact action statement)	**Time frame:** select the most appropriate timeframe for the action statement)	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
46. Develop a structured Risk Assessment Programme to proactively avoid patient harm	Environment and Safety Department □	Annually □				
	Nurse manager □	When new risk for patient safety identified □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					
47. Implement the structured Risk Assessment Programme to: 1. Identify system defects 2. Involve nurses in the unit's Environment Risk Assessment	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	When safety change in environment identified (Air conditioning system, Water leaks, electricity or equipment concerns etc.) □				

3. Mitigate identified risks	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					
48. Assess nurses' competence with patient Hourly Rounding Principles for: 1.Explanation of the principles of Hourly Rounding to patient/family 2. Use of drafted wording (script) in every patient encounter to ensure the patient hears the same message from all the nurses. 3. Ensure that nurses physically check to determine if the five "P's" are addressed (Position, Potty, Pain, Possessions, and IV Pump) to avoid HAPU, falls, and ensure patient satisfaction. 4. Use the whiteboard as a	Nurse manager □					
	Nurse educator (CRN) □					
	Charge Nurse □					
	All the above □					

tool to communicate the five “P’s” to patients 5. Informing patients based on drafted wording (script) what is next in terms of returning to their room and care activities						
49. Audit nurses’ compliance in applying Hourly Rounding Principles	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge) □	Monthly □				
	All the above □					
50. Implement action plans for gaps identified in safety culture results to prevent patient safety concerns for NAA/ HH/ HAPU/ patient harm from falls.	Nurse manager □	Daily □				
	Registered Nurse (staff/ Charge) □	Weekly □				
	All the above □	Monthly □				
51. Apply structured processes to	Nurse manager □	Every shift □				

communicate patient safety expectations to nurses: 1. Ensure the nurse understands responsibility and accountability for safe practice behaviours affecting sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls 2. Ensure that the nurse reports system issues affecting patient safety.	Clinical Resource Nurse (CRN) □	During Annual Competency Assessment □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					

<u>4.5. Learning Culture</u>: - Results from Phase 2 of the study identified that equal training opportunity for all nurses, and not just some, is necessary. There is no standardised and structured process for professional and career development to ensure nurses are competent and skilled to perform safely. Additionally, based on patient safety results, there is a lack of knowledge and consistency in performing key nursing activities listed for NAA/ falls/ HAPU/ HH.

Proposed Strategic Action Goals: Develop and implement a structured and standardised process to identify learning and training needs supported by reviews and analyses of safety-related data reports and incidence reported. Ensure training is behaviour-based to allow expectations and consequences to be clearly understood and supported by a theory to apply the hospital safety management plan

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact the action statement)	**Time frame:** select the most appropriate timeframe for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
52. Develop a Standardised and Structured Behaviour-Based Culture of Safety Training Programme to align nurses' safety efforts to sustain patient safety practices.	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge) □	60 days □				
	All the above □					
53. Implement the Standardised and Structured Behaviour-Based Culture of Safety Training Programme to align team safety efforts to sustain patient safety practices.	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Every patient encounter □				
	Registered Nurse (Staff/ Charge) □	When safety concern identified □				
	All the above □	All the above □				
54. Implement standardised training programmes on basic quality	Nurse manager □	During annual competency assessments □				

methodologies to: 1. Conduct Plan Do Check Act (PDCA) to improve process gaps 2. Perform a Root Cause analysis (RCA) if incidents identified affect patient safety 3. Respond and act by conducting Process Improvements (PIs) to allow the nursing team to identify gaps in performance for NAA, falls incidence, HAPU rates and HH compliance based on set targets	Nurse educator (CRN) □	When safety risk is identified □				
	Registered Nurse (Staff/ Charge) □	Monthly Unit Meetings □				
	All the above □	All the above □				
55. Implement training programmes to conduct standardised performance audits for: 1. NAA within timeframe, 2. Falls,	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Annually during competency assessment □				
	Registered Nurse (Staff/ Charge) □	Monthly □				

3. HAPU, 4. HH.	All the above □	All the above □				

5.7 CONCLUSION

In this phase, the researcher provided a literature review on action plan development and explained how the draft action plan, as well as the e-Delphi validation assessment instrument, was developed.

In Chapter 6 the researcher will discuss the validation of the draft action plan as Phase 4 of the study.

CHAPTER 6
PHASE 4: VALIDATION OF THE ACTION PLAN

6.1 INTRODUCTION

In Phase 4 of the study, purposefully selected nurses and nurse managers participated in e-Delphi to validate the Action Plan to Sustain Patient Safety and Improve Patient Outcomes. As indicated in Table 6.1, the e-Delphi process, and the analyses and interpretation of the e-Delphi rounds will be highlighted.

Table 6.1: Study Progress

Chapter	Content
1	Orientation to the study
2	Literature review (1) safety culture, (2) hospital climate, (3) patient safety outcomes and (4) managing 'just culture' based on Reason's and Ekenedo's Safety Culture Framework.
3	Phase 1: Research methodology, data gathering and interpretation of outcomes data
4	Phase 2: Research methodology, data gathering and interpretation of questionnaires
5	Phase 3: Literature review on action plan development as well as the development of the draft action plan and the validation assessment instrument
➡ 6	Phase 4: Research methodology, data gathering and validation of the action plan
7	Conclusions, limitations and recommendations

6.1 METHODOLOGY FOLLOWED

As discussed in Chapter 5, the e-Delphi technique was utilised as a qualitative data gathering method in Phase 4 of the study, to determine the validity of the action plan.

6.2.1 Population

The population refers to the entire population in which the researcher is interested. Therefore, the expert nurses and nurse managers identified by the CNOs at Hospital A and Hospital B formed the population.

6.2.2 Sample

A purposive sampling method, explained by Polit and Beck (2012) as a non-probability sampling method, was used to include the nurses and nurse managers who were nominated by their respective CNOs in the study. A total of nine nurses and nine nurse managers were chosen (five nurse managers and five nurses from Hospital A; four nurse managers and four nurses from Hospital B), based on their expertise in wound care, infection control, competency and knowledge in physical, skin and fall risk assessments.

Nine nurse managers completed the e-Delphi within the stipulated two-week period, thus a 100% response rate was achieved. Only three nurses participated within the scheduled two weeks and reminders were sent out. Reminder emails were positively received as the other six participants provided their responses within three weeks, thus a 100% response rate was achieved after more time was allowed. During the second round, all 18 respondents participated within the two-week period, resulting in a very good response rate since N=18 of N=18 is satisfactory according to the literature (Sharrif, 2014:2).

6.2.3 Validation assessment instrument

Based on the recommendations from the pre-test group (see Chapter 5, Section 5.3.6) the draft action plan, including the validation assessment instrument, was compiled. Once the approval was obtained from the Health Research Ethics Committee of the Department of Health Studies at UNISA (Appendix I), the questionnaire was built in the SurveyMonkey™ Domain. Rigorous testing was completed to ensure that no technical issues were identified.

6.2.4 Reliability

The reliability of the e-Delphi process and validation assessment instrument was enhanced as the panel of experts did not meet face-to-face; this eliminated group bias and thinking (Wood & Ross-Kerr, 2011:209-219). The sample size of nine panel experts from each hospital, and three rounds – or 80% consensus – also increased the e-Delphi validation assessment instrument's reliability.

6.2 ETHICAL CONSIDERATIONS

The ethical considerations as explained in Chapter 5 were adhered to.

6.4 DATA GATHERING

SurveyMonkey™ is an online survey tool that the researcher used to gather data for validation of the draft action plan. The draft e-Delphi action plan with validation instrument was sent to the panel experts using the recruitment letter via SurveyMonkey™ through their individual emails. The raw data were extrapolated in a spreadsheet received by the researcher via SurveyMonkey™; it was then analysed. The first round of feedback was received from all panellists three weeks after initiating the e-Delphi.

6.5 E-DELPI DATA ANALYSIS

The draft action plan, with the embedded validation instrument to address each strategic goal for each section, was analysed. The eighteen panellists were expected to respond to the action statements in deciding whether they are essential and important for patient safety, who should be responsible for the action statement, and the timeframe for completing the action statement (see Chapter 5, Section 5.2.3 for an example). A 'comments' section allowed participants to advise how to change the action statement. The responses from panel experts in both rounds were analysed, and those action statements not listed as essential or important were changed. If no consensus was reached for the responsible person and timeframe, they were adapted,

and feedback was requested from experts through a second round until consensus of 80% was reached (see Figure 5.1 in Chapter 5 for the e-Delphi process).

6.6 THE VALIDATION PROCESS

For each aspect in the draft action plan, the researcher anticipated three e-Delphi rounds. The consensus was determined when 80% of the participants indicated that the action statement was either essential and/or important for patient safety, identified the same responsible person, and listed the same timeframe to achieve the action statement (see Chapter 5, Section 5.2.3).

The responses from panel experts in each round were analysed, interpreted and changes were made on the responsible person/s and timeframe action items as 80% consensus was not met. Consensus was met when the ranking scores were no more than one scale point. Consensus for questions in the four themes for each construct was determined by calculating the percentage of agreement among the panel. An interrater agreement level of 80% was required to reach consensus on both the essential and important scale to retain or modify an action statement.

The data ratings in the action levels were: ‘Essential for patient safety’ were given the highest score of 3, followed by ‘Important for patient safety’ a score of 2 and if not important, a score of 1 was assigned. The essential action statements were chosen consistently by 13 panellists (f=72%), important action statements were selected five times (f=28%), and not important were not chosen at all, thereby indicating interrater agreement. A 100% consensus was reached that the action statement was essential and important for patient safety in Round One, and was thus included in the action plan. As described by Culley (2011:274) and Sousa and Tuttini (2012:2), stability can be calculated for items that did not reach the criteria for consensus. The researcher used this to analyse the results from the different rounds for the e-Delphi.

6.7 FINDINGS – ROUND ONE

6.7.1 Biographical data

6.7.1.1 Gender of panellists

The majority (15) of the participants (n=15; f=83.33%) were females and three (f=16.67%) were males (see Table 6.2).

Table 6.2: Participants Gender (N=18)

Gender	n	f=%
Female	15	83.33
Male	3	16.67

6.7.1.2 Age of panellists

The majority of the participants were between 45 and 54 years old (n=10; f=55.56%), which was indicative of experienced panellists (see Table 6.3).

Table 6.3: Participants age (N=18)

Age	n	f=%
18- 24 years	0	0
25 -34 years	1	5.56
35 – 44 years	3	16.67
45 – 54 years	10	55.56
55 – 64 years	4	22.22

6.7.1.3 Panellists nationality

As indicated in Table 6.4, six different nationalities participated in the study. Of these, seven (f=38.89%) were South Africans, one was English and one was an Emirati participant (n=1; f=5.56%). The staff data record from both hospitals indicated that 52 (N=1643; f=3.2%) of the nurses were from South Africa, of which 13 (N=52; f=25%) were nurse managers and 39 (N=52; f=75%) were nurses.

Table 6.4: Panellist Nationality (N=18)

Nationality	n	f=%
South African	7	38.89
Jordanian	4	22.22
Philippine	3	16.67
Indian	2	11.11
Emirati	1	5.56
English	1	5.56

6.7.1.4 Current work area of panellist

Six experts were from the Surgical units (N=18; f=33.33%), 5 (N=18; f=27.87%) from the Medical and five from the Critical Care units (N=18; f=27.87%), and two from the Paediatric units (N=18; f=11.11%) (see Figure 6.1). The experts who participated in the e-Delphi were from the work areas where patient outcome issues were identified in Phase 1's patient outcomes data (see Chapter 3).

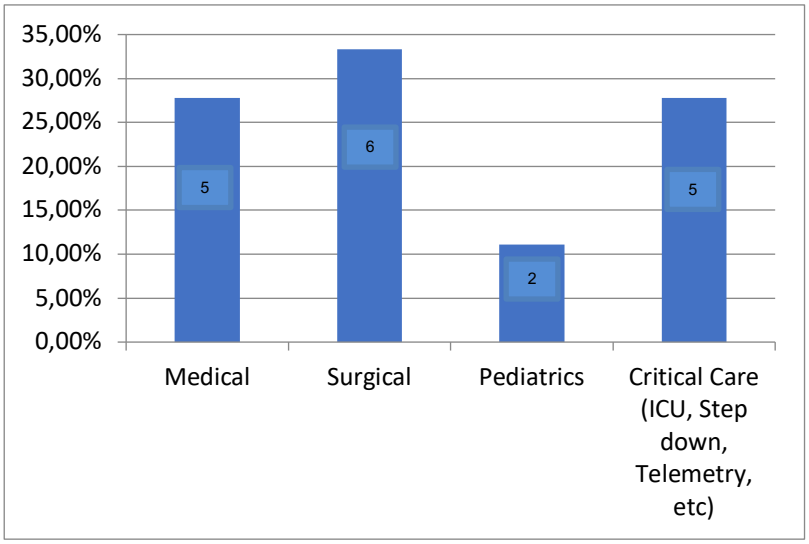


Figure 6.1: Current work area (N=18)

6.7.1.5 Panellist Specific position in the institution

It was necessary to have fair representation among the resource experts as recommended by the CNOs. As indicated in Figure 6.2, 6 (f=33.33%) of the participants were nurse managers, 2 (f=11.11%) were senior charge nurses who

manage and lead operational and clinical practices, 3 (f=16.67%) were clinical resource nurses, 5 (f=27.78%) were charge nurses, and 2 (f=11.11%) were staff nurses responsible for direct care.

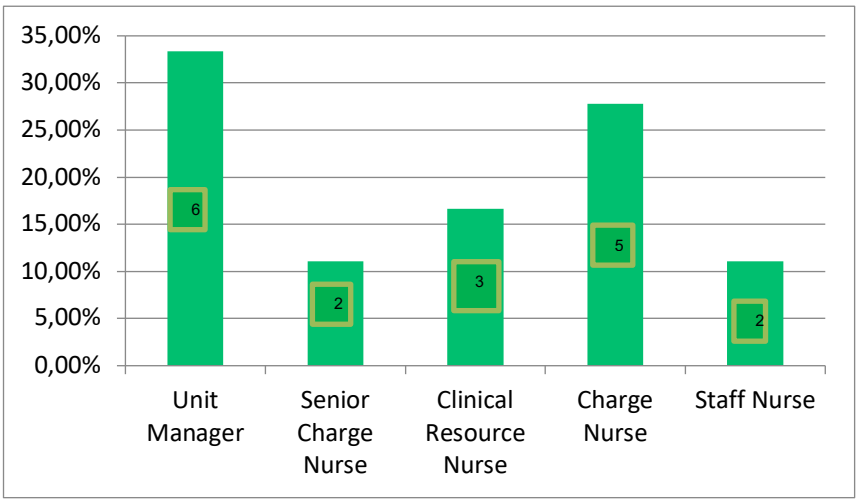


Figure 6.2: Position in hospital (N=18)

6.7.1.6 Duration in current position

It is clear from the findings that experienced nurses and nurse managers were selected by the CNOs. Most had 6-16 years (n=15; f=83.33%) experience in the field (see Figure 6.3).

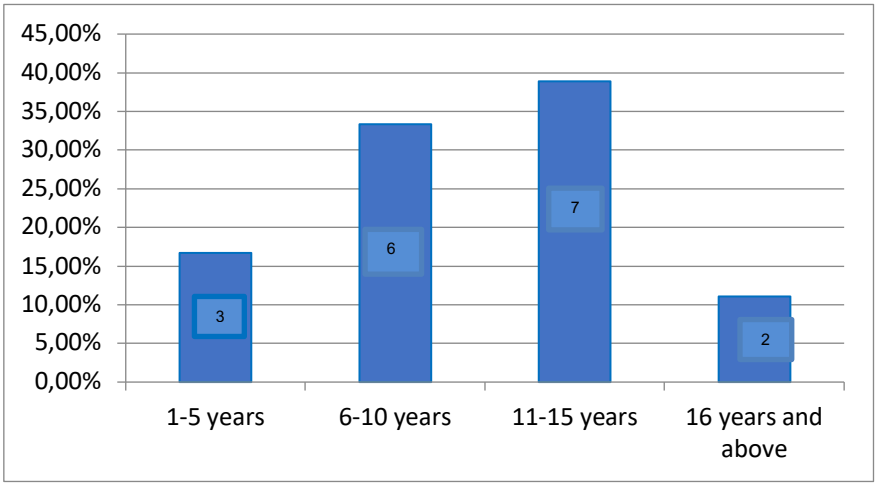


Figure 6.3: Duration in current position (N=18)

6.7.1.7 Highest level of nursing education

As indicated in Figure 6.4, most of the participants had either a Bachelor's degree (n=8; f=44.44%) or a Master's degree (n=5; f=27.78%), which illustrates sound educational background and the expertise expected from them.

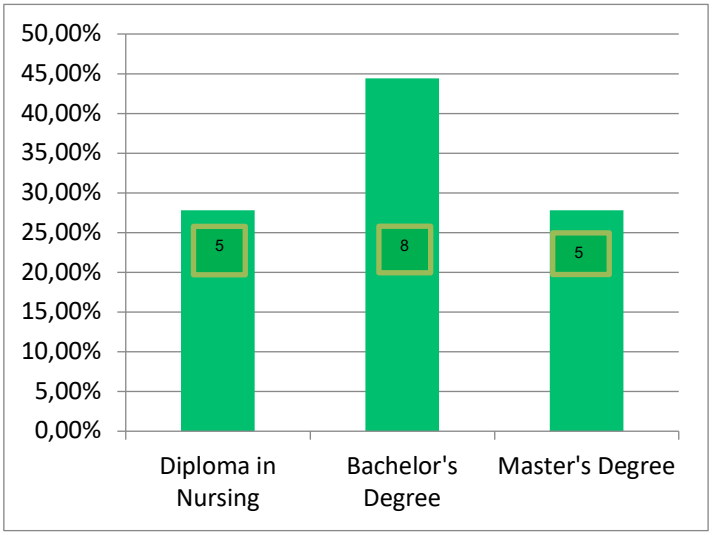


Figure 6.4: Highest level of nursing education (N=18)

The findings will be discussed according to the themes as illustrated in the draft action plan (see Chapter 5, Section 5.6). Theme 1 will be discussed in detail as an example of how each theme was analysed.

6.7.2 Theme 1: Culture

Action Statement 1: Develop a standardised and structured Behaviour-Based Cultural Orientation Programme that is supported by a theory

As illustrated in Table 6.5, 100% agreement was reached that a structured cultural orientation programme that is supported by theory is required to sustain safety practices and must be included in the action plan (f=72.22% essential; f=27.78% important). A consensus was not reached regarding who should be responsible for the development thereof, nor on the timeframe for its development. The comments received did not suggest how to improve the action statement (Appendix M).

Table 6.5: Develop a Standardised and Structured Behaviour-Based Cultural Orientation Programme (N=18)

1. Develop a standardised and structured Behaviour-Based Cultural Orientation Programme that is supported by a theory			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	72.22%	13	**YES**
Important for patient safety & satisfaction	27.78%	5	
Not important for patient safety & satisfaction	0.00%	0	
Responsible Person for Action			
Nurse Manager	11.11%	2	**NO**
Nurse Educator (CRN)	11.11%	2	
Registered Nurse (Staff/ Charge Nurses)	5.56%	1	
All of the above	72.22%	13	
Timeframe to achieve action statement			
14 days	16.67%	3	**NO**
30 days	44.44%	8	
60 days	38.89%	7	

Action Statement 2: Implement the standardised and structured Behaviour-Based Cultural Orientation Programme to ensure patient satisfaction is at 95% for culturally congruent care

As illustrated in Table 6.6, 100% agreement was reached that implementing a structured cultural orientation programme is required to sustain safety practices and should be included in the action plan (f=88.89% essential; f=11.11% important). However, consensus was not reached on who the responsible person was to implement the statement, neither on the timeframe required to complete the action statement. This action statement was thus included in Round Two. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.6: Implement the Standardised and Structured Behaviour-Based Cultural Orientation Programme (N=18)

2. **Implement the standardised and structured Behaviour-based Cultural Orientation Programme to ensure patient satisfaction is at 95% for culturally congruent care**			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	88.89%	16	**YES**
Important for patient safety & satisfaction	11.11%	2	
Not important for patient safety & satisfaction	0%	0	
Responsible Person for Action			
Nurse Manager	0%	**0**	**NO**
Nurse Educator (CRN)	22.22%	4	
Registered Nurse (Staff/ Charge Nurses)	11.11%	2	
All of the above	66.67%	12	
Time frame to achieve action statement			
Every shift	66.67%	12	**NO**
Daily	33.33%	6	

Action Statement 3: Develop a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting

Hundred per cent (f=66.67% essential; f=33.33% important) consensus was reached that developing a structured person-centred interview framework is vital to sustaining safety practices and must be included in the action plan (see Table 6.7). Consensus was not reached on who the responsible person to develop this interview framework must be, or the specific timeframe wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.7: Develop a person-centred interview framework (N=18)

3. Develop a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	66.67%	12	**YES**
Important for patient safety & satisfaction	33.33%	6	
Not important for patient safety & satisfaction	0.00%	0	
Responsible Person for Action			
Nurse Manager	22.22%	4	**NO**
Nurse Educator (CRN)	16.67%	3	
Registered Nurse (Staff/ Charge Nurses)	16.67%	3	
All of the above	44.44%	8	
Time frame to achieve action			
14 days	11,11%	2	**NO**
30 days	61.11%	11	
60 days	27.78%	5	

Action statement 4: Implement a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting

The data in Table 6.8 illustrate that 100% agreement was reached that developing a structured person-centred interview framework is vital to sustain safety practices and should be included in the action plan (f=61.11% essential; f=38.89% important). However, consensus was not reached on who the responsible person was to implement the framework, neither on the timeframe required to complete the action statement; thus, it was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.8: Implement the person-centred interview framework (N=18)

4. Implement a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	61.11%	11	**YES**
Important for patient safety & satisfaction	38.89%	7	
Not important for patient safety & satisfaction	0%	**0**	
Responsible Person for Action			
Nurse Manager	11.11%	2	**NO**
Nurse Educator (CRN)	16.67%	3	
Registered Nurse (Staff/ Charge Nurses)	16.67%	3	
All of the above	55.56%	10	
Time frame to achieve action statement			
Every shift	55.56%	10	**NO**
Daily	44.44%	8	

Action Statement 5: Develop and implement an audit tool to monitor that the person-centred, theory-based interview assessment is used 100% of the time

As illustrated in Table 6.9, 100% agreement was reached that developing an audit tool to monitor the person-centred interview framework is vital to sustain safety practices and will be included in the action plan (f=66.67% essential; f=33.33% important). Consensus was not reached on who the responsible person was to develop the audit tool and the timeframe to complete the action statement. The statement was included in Round Two of the e-Delphi. Comments received did not mention how to improve the action statement (Appendix M).

Table 6.9: Develop an audit tool to monitor that the person-centred, theory-based interview assessment (N=18)

5. Develop and implement an audit tool to monitor that the person-centred, theory-based interview assessment is used 100% of the time			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	66.67%	12	**YES**
Important for patient safety & satisfaction	33.33%	6	
Not important for patient safety & satisfaction	0.00%	0	
Responsible Person for Action			
Nurse Manager	38.89%	7	**NO**
Nurse Educator (CRN)	16.67%	3	
Registered Nurse (Staff/ Charge Nurses)	0%	0	
All of the above	44.44%	8	
Time frame to achieve action statement			
Daily	11.11%	2	**NO**
Weekly	27.78%	5	
Monthly	44.44%	8	
Quarterly	16.67%	3	

Action statement 6: Audit compliance to applying person-centred, theory-based interview assessment 100% of the time

As illustrated in the data (see Table 6.10), 100% agreement was reached that auditing the person-centred interview framework is vital to sustain safety practices and will be included in the action plan (f=61.11% essential; f=38.89% important). However. consensus was not reached on who the responsible person to audit compliance must be, or what the specific timeframe is to complete the action statement. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.10: Audit compliance to person-centred, theory-based interview assessment (n=18)

6. Audit compliance to applying person-centred, theory-based interview assessment 100% of the time			
	Responses		**Consensus**
	f=%	**n=**	
Importance for including the action statement			
Essential for patient safety & satisfaction	61.11%	11	**YES**
Important for patient safety & satisfaction	38.89%	7	
Not important for patient safety & satisfaction	0%	0	
Responsible Person for Action			
Nurse Manager	27.78%	5	**NO**
Nurse Educator (CRN)	22.22%	4	
Registered Nurse (Staff/ Charge Nurses)	11.11%	2	
All of the above	38.89%	7	
Time frame to achieve action statement			
Daily	11.11%	2	**NO**
Weekly	11.11%	2	
Monthly	66.67%	12	
Quarterly	11.11%	2	

Action statement 7: Involve the nursing team through unit meetings in the development of a clear policy which describes the behavioural expectations for the application of culturally congruent care for patient safety and satisfaction

As illustrated (see Table 6.11), consensus was reached that the nursing team should be involved in unit meetings to develop a policy on the expectations for delivering culturally congruent care that is vital to sustain safety practices (f=72.22% essential; f=27.78% important). Consensus (f=88.89%) was also reached on the specific timeframe, however, consensus was not reached for who the responsible person was to conduct this action; it was thus included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.11: Involve nursing team in developing policy on expectations for delivering culturally congruent care (N=18)

7. Involve the nursing team through unit meetings in the development of a clear policy which describes the behavioural expectations for the application of culturally congruent care for patient safety and satisfaction			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	72.22%	13	**YES**
Important for patient safety & satisfaction	27.78%	5	
Not important for patient safety & satisfaction	0.00%	0	
Responsible Person for Action			
Nurse Manager	38.89%	7	**NO**
Nurse Educator (CRN)	0%	0	
Registered Nurse (Staff/ Charge Nurses)	5.56%	1	
All of the above	55.56%	10	
Time frame to achieve action statement			
Daily	0%	0	**YES**
Weekly	0%	0	
Monthly	88.89%	16	
Quarterly	11.11%	2	

Action statement 8: Conduct audits to determine if culturally congruent care policies are applied in clinical practice, and act to address gaps

The panel had 100% (f=72.22% essential; f=27.78% important) consensus that auditing culturally congruent practices is required to sustain patient safety and satisfaction, and will be included in the action plan (see Table 6.12). Consensus was not reached on who the responsible person was to audit compliance, neither on the timeframe required to complete the action statement; these factors were thus included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.12: Conduct audits to determine if culturally congruent care policies are applied in clinical practices (N=18)

8. Conduct audits to determine if culturally congruent care policies are applied in clinical practice, and act to address gaps			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	72.22%	13	**YES**
Important for patient safety & satisfaction	27.78%	5	
Not important for patient safety & satisfaction	0.00%	0	
Responsible Person for Action			
Nurse Manager	50.00%	9	**NO**
Nurse Educator (CRN)	22.22%	4	
Registered Nurse (Staff/ Charge Nurses)	5.56%	1	
All of the above	22.22%	4	
Time frame to achieve action statement			
Daily	11.11%	2	**NO**
Weekly	16.67%	3	
Monthly	55.56%	10	
Quarterly	16.67%	3	

Action statement 9: Identify and act on cultural-specific needs in each individual patient care plan

Consensus was reached (f=66.67% essential; f=33.33% important) that charge and staff nurses (f=94.44%) need to identify and act on cultural-specific needs for patient care plans to sustain patient safety and satisfaction; it will be included in the action plan (see Table 6.13). Consensus was not reached for the timeframe to complete the action statement, and it was thus included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.13: Identify and act on cultural-specific need in the patient's care plan (N=18)

9. Identify and act on cultural-specific needs in each individual patient care plan			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	61.11%	11	**YES**
Important for patient safety & satisfaction	38.89%	7	
Not important for patient safety & satisfaction	0.00%	0	
Responsible Person for Action			
Nurse Manager	5.56%	1	**YES**
Nurse Educator (CRN)	0%	0	
Registered Nurse (Staff/ Charge Nurses)	94.44%	17	
All of the above	0%	0	
Time frame to achieve action statement			
Daily	77.78%	14	**NO**
Weekly	11.11%	2	
Monthly	11.11%	2	

Action statement 10: Identify English proficiency through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English

The panel agreed 100% (f=66.67% essential; f=33.33% important) that testing nurses' English proficiency is vital to sustain patient safety and satisfaction, and it will be included in the action plan (see Table 6.14). However, consensus was not reached on who the responsible person was to identify English proficiency, nor on the timeframe required to complete the action statement. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.14: Identify nurses' English proficiency through certified testing (N=18)

10. Identify English proficiency through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	66.67%	12	**YES**
Important for patient safety & satisfaction	33.33%	6	
Not important for patient safety & satisfaction	0.00%	0	
Responsible Person for Action			
Senior Nurse Leadership	33.33%	6	**NO**
Human Resource Department	66.67%	12	
Nurse Manager	0%	0	
Time frame to achieve action statement			
During Interview Application	55.56%	10	**NO**
Joining the Hospital	44.44%	8	
90 days	0%	0	

Action Statement 11: Provide basic Arabic language training to improve conversational Arabic for patient safety

Consensus was reached (f=61.11% essential; f=38.89% important) that the Human Resource Department (f=94.44%) needs to provide Arabic training to improve conversational Arabic to sustain safety practices; it will be included in the action plan (see Table 6.15). However, consensus was not reached for the timeframe to complete the action statement and it was thus included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Table 6.15: Provide basic training to improve conversational Arabic (N=18)

11. Provide basic Arabic language training to improve conversational Arabic for patient safety			
Importance for including the action statement	**Responses**		**Consensus**
	f=%	**n=**	
Essential for patient safety & satisfaction	61.11%	11	**YES**
Important for patient safety & satisfaction	38.89%	7	
Not important for patient safety & satisfaction	0.00%	0	
Responsible Person for Action			
Senior Nurse Leadership	5.56%	1	**YES**
Human Resource Department	94.44%	17	
Nurse Manager	0.00%	0	
Time frame to achieve action statement			
30 days	27.78%	5	**NO**
60 days	5.56%	1	
90 days	66.67%	12	

Every theme, as well as the importance of every individual statement, the responsible person/s, as well as the timeframe, were analysed as explained and presented in Section 6.7.2.
To prevent duplication and to streamline the presentation, a summary of the other themes, all other action statements, responsible persons and timeframes follow.

6.7.3 Theme 2: Patient Safety

Action statement 12: Develop a Standardised and Structured Behaviour-Based Training Programme that is supported by the Nursing Process Theory

The data illustrate that 100% (n=13; f=72.22% essential; n=5; f=27.78% important) consensus was reached that developing a structured behaviour-based training programme supporting nursing process theory is required to sustain nursing assessment practices, and will be included in the action plan. Consensus was not reached on who the responsible person was to develop the training programme, neither on the timeframe required to complete the action statement. These two aspects

were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 13: Implement the Standardised and Structured Behaviour-Based Training Programme that is supported by the Nursing Process Theory in order for NAA to be sustained at 100%

The panel reached 100% (n=12; f=66.67% essential; n=6; f=33.33% important) consensus that it is essential to implement the Standardised and Structured Behaviour-Based Training Programme to sustain safe assessment practices; it will be included in the action plan. Consensus was not reached on who the responsible person was to implement the training programme, or the specific timeframe wherein to complete the action statement. These were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 14: Assess the nurses' competencies regarding: (1) Patient Health Assessment on Admission, the (2) Development of an appropriate individualised nursing care plan, and (3) The parameters required within the Admission Assessment Policy

The data illustrated that 100% agreement was reached that assessing nurses' competency on patient assessments is essential to sustain safe assessment and documentation practices, and will be included in the plan (n=14; f=77.78% essential; n=4; f=22.22% important). Consensus was not reached for the responsible person to validate nurses' competence, or for the timeframe to complete this action statement. These statements were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 15: Ensure an evidence-based, acuity-driven nurse: patient ratio that will positively influence compliance with regards to patient care activities

As illustrated in the data, 100% (n=14; f=77.78% essential; n=4; f=22.22% important) agreement was reached that an evidence-based acuity-driven nurse:patient ratio is vital to sustain safe nursing assessment and documentation practices, and will be included in the action plan. Consensus was not reached on the responsible person to ensure safe staffing levels, or the specific timeframe wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 16: Educate nurses to perform a Risk Assessment on the electronic medical record to identify and report connectivity systems issues affecting compliance with completion of the NAA within the specified timeframe

As indicated in the data, 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) was reached that performing a risk assessment on the electronic medical record is vital to sustain patient safety, and therefore should be included in the action plan. Consensus was not reached for the responsible person to provide education on this aspect, or the timeframe for this action; these were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 17: Develop an evidence-based behavioural Falls risk programme that incorporates the Morse and Humpty Dumpty algorithm to support standard practice

Hundred per cent of the panel agreed (n=14; f=77.78% essential; n=4; f=22.22% important) that developing an evidence-based falls programme is vital to sustain patient safety, and therefore should be included in the plan. Consensus was not reached on who the responsible person to develop the training programme must be, or what the specific timeframe is for the action statement to be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 18: Implement the Standardised and Structured Behaviour-Based Falls Training Programme to ensure that all nurses comply with the Falls Prevention Algorithm to prevent falls

As illustrated in the data, consensus was reached (n=16; f=88.89% essential; n=2; f=11.11% important) that the Structured Behaviour-Based Falls Programme needs to be implemented every shift (n=16; f=88.89%) as it is vital to sustain patient safety practices, and will thus be included in the action plan. Consensus was not reached for who the responsible person is to implement the training programme, and it was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 19: Assess the nurses' competencies regarding: (1) Morse & Humpty Dumpty Scoring, (2) Falls risk Assessment, (3) Use of preventative safety measures based on risks identified, (4) Verbalisation on frequency for conducting fall risk assessment, (5) Application of visual cues to alert others to fall risk, (6) The application of the Fall Prevention Policy in practice

As illustrated, the panel agreed 100% (n=14; f=77.78% essential; n=4; f=22.22% important) that assessing nurses' competency on the fall prevention programme is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person to validate this competence must be, or the specific timeframe in which the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 20: Ensure a nurse: patient ratio of 1:1, 1:2 or 1:3 based on patient acuity

As illustrated in the data, the panel had 100% agreement (n=14; f=77.78% essential; n=4; f=22.22% important) that safe staffing ratios, based on patient acuity, is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached for the responsible person to ensure safe staffing and the timeframe

required for this action statement. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate on how to improve the action statement (Appendix M).

Action statement 21: Develop a Standardised and Structured Behaviour-Based Skin Risk Integrity Training Programme that is supported by a theory

As illustrated in the data, 100% consensus was reached (n=12; f=66.67% essential; n=6; f=33.33% important) that developing a Structured and Standardised Behaviour-Based Skin Integrity Training Programme is vital to sustain patient safety practices and will be included in the action plan. However, consensus was not reached on who the responsible person to develop this training programme must be, or what the specific timeframe is for the action statement to be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve action the statement (Appendix M).

Action statement 22: Implement the Standardised and Structured Behaviour-Based Skin Risk Integrity Training Programme to reduce HAPUs

As illustrated in the data, 100% consensus was reached (n=15; f=83.33% essential; n=3; f=16.67% important) that implementing the Structured and Standardised Behaviour-Based Skin Integrity Training Programme is vital to sustain patient safety practices, and it will be included in the action plan. Consensus was not reached on who the responsible person to implement this training must be, or timeframe wherein to complete the action statement. Thus, these statements were included in Round Two of the e-Delphi. Comments received did not indicate on how to improve the action statement (Appendix M).

Action statement 23: Assess nurses' competency on: (1) The use of the Braden Skin Risk Assessment tool, (2) The interpretation of the Braden scoring to identify skin risk, (3) The implementation of the appropriate pressure reduction measures based on risk, (4) Frequency for conducting Braden Risk Assessment, (5) Appropriate referral to physician and dietician

when skin risk is high, (6) Staging Pressure Ulcers, (7) The application of the Skin Integrity Policy in practice

The panel had 100% agreement (n=12; f=66.67% essential; n=6; f=22.22% important) that an assessment of nurses' competency on skin integrity risk prevention is critical to sustain patient safety practices, and will thus be included in the action plan. Consensus was not reached on who the responsible person to validate competency must be, or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 24: Develop a Standardised and Structured Behaviour-Based HH Training Programme that is supported by a theory

The data showed 100% agreement (n=14; f=77.78% essential; n=4; f=22.22% important) that developing a Structured Behaviour-Based HH Training Programme is vital to sustain patient safety practices, and it will be included in the action plan. Consensus was not reached on who the responsible person to develop the training program must be, nor the timeframe in which to complete this action statement. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 25: Implement the Standardised and Structured Behaviour-Based HH Training Programme in the clinical setting to reduce hospital-acquired infections

As illustrated in the data, 100% agreement (n=15; f=83.33% essential; n=3; f=16.67% important) was reached that implementing the Structured Behaviour-Based HH Training Programme is vital to sustain patient safety practices, and will be included in the action plan. However consensus was not reached on who the responsible person to develop this training program must be, or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two

of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 26: Assess nurses' competency on: (1) The application of the '5 moments of HH', (2) Demonstrate aseptic hand washing technique, (3) Educating others on HH, (4) Appropriate use of gloves before and after a procedure, (5) HH in Bundle Compliance to prevent infections, (6) The application of the HH Policy in practice

As illustrated in the data, 100% agreement (n=15; f=83.33% essential; n=3; f=16.67% important) was reached that nurses' competence should be validated to sustain patient safety practices, and consensus (n=15; f=83.33%) was reached that the nursing team (nurse manager, clinical resource nurse and nurses) should be the responsible for validating competence; these statements will be included in the action plan. Consensus was not reached on the timeframe wherein to complete this action statement and it was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 27: Educate nurses to conduct a Risk Assessment to determine if the hand wash stations are appropriately placed in the unit to ensure that nurses are able to wash their hands

As illustrated in the data, 100% agreement (n=14; f=77.78% essential; n=4; f=22.22% important) was reached that educating nurses to conduct a risk assessment on hand wash stations' placement is vital to sustain patient safety practices, and will be included in the action plan. However, consensus was not reached on who the responsible person to conduct education must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 28: Report skin irritations incurred from hand washing solutions so an alternative can be found

Consensus was reached (n=14; f=77.78% essential; n=4; f=22.22% important) that reporting skin irritations is vital to sustain patient safety practices and there was agreement for the timeframe to be immediate when skin irritation is experienced (n=17; f=94.44%); it will be included in the action plan. Consensus was not reached who the responsible person must be to report the matter; it was thus included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 29: Communicate to the nursing team the behavioural expectations required to comply with NAA, Falls, HAPU, HH processes in order to avoid consequences

The panel had 100% agreement (n=14; f=77.78% essential; n=4; f=22.22% important) that communicating the behavioural expectations required to comply with NAA, Falls, HAPU, and HH processes in order to avoid consequences is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person to develop this framework must be or what the specific timeframe is wherein to complete the action statement. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

6.7.4 Theme 3: Hospital Climate (Positive Work Environment)

Action statement 30: Develop a structured and standardised Positive Work Environment Process (based on elements listed in Strategic Action Goal) to ensure nurses' safe care practices

Consensus was reached (n=13; f=72.22% essential; n=5; f=27.78% important) that developing a structured and standardised positive work environment process is vital to sustain patient safety practices, and will be included in the action plan. However, consensus was not reached who the responsible person to develop the training

programme must be, or the timeframe wherein this action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 31: Implement the structured and standardised Positive Work Environment Process to ensure a work environment conducive for nurses to perform safe care

Consensus was reached (n=14; f=77.78% essential; n=4; f=22.22% important) that implementing the positive work environment process is required to sustain patient safety and will be included in the action plan. The panellist agreed (n=16; f=88.89%) that the nursing team (nurse manager, clinical resource nurse and the nurses) is responsible for implementing the positive work environment process, thus it will be included in the action plan. Consensus was not reached on the timeframe wherein to complete this action statement. It was thus included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 32: Use the patient outcomes data to ensure that individual nurse performance evaluations for NAA within the 24-hour timeframe are at 100%, Falls and HAPU rates are at zero, and 100% HH compliance is directed towards the improvement of patient safety

The panel had 100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) that using the patient outcomes data to ensure individual nurse performance is vital to sustain patient safety practices, and will be included in the action plan. However, consensus was not reached on who the responsible person to share the outcomes data must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 33: Implement the minimum safe, evidence-based staffing and skills mix guidelines for the unit to support safe patient staffing levels

As illustrated in the data,100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) was reached that implementing the minimum safe, evidence-based staffing and skills mix guidelines is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached regarding who the responsible person to implement safe staffing levels must be, and the timeframe wherein this action statement must be completed; thus, both were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 34: Monitor through incident reports whether nurse:patient allocations resulted in: (1) NAA within timeframe; (2) Falls rates to zero, (3) HAPU rates to zero and (4) HH compliance

The panel had 100% agreement (n=15; f=83.33% essential; n=3; f=16.67% important) that monitoring through incident reports whether nurse:patient allocations resulted in patient safety for care activities is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person to monitor incidents reported must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 35: Provide a structured guideline for communication channels in units to (1) report if patient-related issues are experienced that might affect patient safety, (2) request assistance from team members when required, and (3) speak up if another healthcare provider compromise patients safety

The panel had 100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) that communicating structured guidelines to report and act on safety concerns is vital to sustain patient safety practices, and will be included in the action plan. However,

consensus was not reached who the responsible person to provide the guideline must be, and the timeframe wherein this action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 36: Establish a process for nurse managers' visibility and participation to include (1) intentional rounding on all new patients to determine if there are any issues with the care provided, (2) rounding with a purpose on all staff - every shift to identify resource deficits and needs, and (3) environmental monitoring to identify patient safety risks

As illustrated in the data, consensus was reached (n=15; f=83.33% essential; n=3; f=16.67% important) that establishing a process for nurse managers' visibility is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 37: Establish a structured process to (1) acknowledge nurses' patient safety achievements, (2) enforce professional development activities, (3) identify individual nurses' professional development needs, (4) share the performance management data, and (5) provide feedback on performance

As illustrated, 100% agreement (n=11; f=61.11% essential; n=7; f=38.89% important) was reached that establishing processes to share achievements and performances is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on the responsible person to acknowledge performance, or the timeframe in which this action must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

6.7.5 Theme 4: Culture of safety (informed, flexible, reporting, just and learning)

6.7.5.1 Informed culture

Action statement 38: Share the performance management data (HAPU/HH/ Falls/ NAA) through (1) unit meetings to engage nurses in process improvement activities required for change, (2) quality boards as visual reminders on pending process improvement actions, (3) daily safety huddles to alert nurses to safety concerns, and (4) individual nurse coaching if practice gaps identified

The panel had 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) that sharing the performance data with the nursing team is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person to share performance data must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 39: Utilise a structured process to facilitate (1) that corrective actions identified are completed to ensure process improvement is implemented for a Culture of Safety, and (2) ensure that the Comprehensive Unit Safety Programme (CUSP) is implemented in unit to sustain practices

As illustrated, 100% agreement (n=8; f=47.37% essential; n=10; f=52.63% important) was reached that utilising a structured process to follow up on action plans and safety programmes is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person to utilise structured follow-up processes must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 40: Identify trends in reported incidents and provide feedback to nurses to facilitate process improvement and education activities

As illustrated, 100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) was reached that identifying trends from incident reports and providing feedback to nurses is vital to sustain patient safety practices, and will be included in the action plan. However, consensus was not reached on who the responsible person is to identify the trends, or the timeframe wherein this action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

6.7.5.2 Flexible culture

Action statement 41: Implement structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe handoff of patient care

The panel had 100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) that implementing a structured communication process (TeamSTEPPS) is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person to implement the communication process must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 42: Promote active participation of nurses in audits to monitor compliance with (1) handoff of patient practices to ensure patient continuity of care, (2) team briefing (Huddles) as a tool to align the team on patient care concerns, and (3) use the SBAR handoff tool during shifts and break times to communicate patient information in a structured way

The data illustrated 100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) and consensus (n=15; f=83.33%) that the responsible persons is the

nursing team (nurse manager, clinical resource nurse and nurses), and actively involving nurses is required to sustain patient safety practices; it will be included in the action plan. Consensus was not reached on the timeframe wherein to complete this action statement, thus it was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 43: Develop a structured process to involve the nursing team in (1) unit risk assessment to involve nurses in improving system gaps and (2) root cause analysis when incident are reported that affect patient safety

The data illustrated that 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) was reached that developing a structured process to involve nurses in risk assessments and root cause analyses is vital to sustain patient safety practices; this will be included in the action plan. However, consensus was not reached on who the responsible person is to involve nurses in process improvement, or what the specific timeframe is wherein to complete the action statement. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

6.7.5.3 Reporting culture

Action statement 44: Communicate the Culture of Safety Process in unit meetings to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls

The data illustrated 100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) and consensus (n=15; f=83.33%) that the responsible person to communicate the culture of safety process in unit meetings is the nurse manager; it is vital to sustain patient safety practices and will be included in the action plan. Consensus was not reached for the timeframe wherein the action statement must be completed and this was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

6.7.5.4 Just culture

Action statement 45: Apply the positive work environment process as a guide for nurses to (1) report behavioural practices of others affecting patient safety, and (2) report system defects affecting patient safety

The data illustrated 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) and consensus (n=15; f=83.33%) for the timeframe (every time safety concerns are identified and daily). Respondents agreed that applying positive work environment processes is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person must be to apply the process, and this was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 46: Develop a structured Risk Assessment Programme to proactively avoid patient harm

The data illustrated 100% agreement (n=14; f=77.78% essential; n=4; f=22.22% important) and consensus (n=17; f=94.44%) for the timeframe (when new risk identified and annually), and that developing a structured Risk Assessment Programme is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached on who the responsible person to develop this programme must be and this was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 47: Implement the structured Risk Assessment Programme to (1) identify system defects, (2) involve nurses in the Unit's Environment Risk Assessment, and (3) mitigate identified risks

There was 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) and consensus (n=17; f=94.44%) for the timeframe (every shift and when safety change in environment identified) to implement the structured Risk Assessment Programme. Respondents agreed that the programme is vital to sustain patient safety practices

and it will thus be included in the action plan. Consensus was not reached for who the responsible person must be to implement the risk assessment, and this was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 48: Assess nurses' competence with patient Hourly Rounding Principles for (1) explanation of the principles of Hourly Rounding to patient/family, (2) use of drafted wording (script) in every patient encounter to ensure the patient hears the same message from all the nurses, (3) ensure that nurses physically check to determine if the five "P's" are addressed (Position, Potty, Pain, Possessions and IV Pump) to avoid HAPU, falls and ensure patient satisfaction, (4) use of the whiteboard as a tool to communicate the five "P's" to patients, and (5) informing patients based on drafted wording (script) what is next in terms of returning to their room and care activities

The data illustrated 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) and consensus (f=100%) that the nursing team (nurse manager, clinical resource nurse and nurses) is responsible for the assessment of nurse competency on Hourly Rounding Principles, which is vital to sustain patient safety practices, and will be included in the action plan. Consensus was not reached for the timeframe wherein this action statement must be completed, and it was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 49: Audit nurses' compliance in applying Hourly Rounding Principles

The data illustrated 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) and consensus (n=16; f=88.89%) that the nursing team (nurse manager, clinical resource nurse and nurses) is responsible for auditing nurses' compliance in applying Hourly Rounding Principles, which is vital to sustain patient safety practices and will be included in the action plan. Consensus was not reached for the timeframe wherein the action statement must be completed, and this was included in Round Two

of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 50: Implement action plans for gaps identified in Safety Culture Results to prevent patient safety concerns for NAA/ HH/ HAPU/ patient harm from falls

The data illustrated 100% agreement (n=14; f=77.78% essential; n=4; f=22.22% important) and consensus (n=15; f=88.33%) that the nursing team (nurse manager, clinical resource nurse and nurses) is responsible to implement action plans for gaps identified in safety culture results to prevent patient safety concerns. This is required to sustain patient safety practices and thus will be included in the action plan. Consensus was not reached on the specific timeframe wherein the action statement must be completed and this aspect was included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 51: Apply structured process to communicate patient safety expectation to nurses to (1) ensure the nurse understands responsibility and accountability for safe practice behaviours affecting sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls, and (2) ensure that nurse reports system issues affecting patient safety

There was 100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) that applying structured processes to communicate patient safety expectations are vital to sustain patient safety practices; thus, it will be included in the action plan. Consensus was not reached on who the responsible person to apply processes for safety expectation must be, or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

6.7.5.5 Learning culture

Action statement 52: Develop a Standardised and Structured Behaviour-Based Culture of Safety Training Programme to align nurses' safety efforts to sustain patient safety practices

As illustrated in the data, 100% agreement (n=13; f=72.22% essential; n=5; f=27.78% important) was reached that developing a Standardised and Structured Behaviour-Based Culture of Safety Training Programme is vital to sustain patient safety practices and thus will be included in the action plan. Consensus was not reached on who the responsible person to develop this must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 53: Implement the Standardised and Structured Behaviour-Based Culture of Safety Training Programme to align team safety efforts to sustain patient safety practices

The data illustrated 100% agreement (n=13; f=72.33% essential; n=5; f=27.78% important) that implementing the Structured Culture of Safety Programme is vital to sustain patient safety practices and thus will be included in the action plan. Consensus was not reached on who the responsible person to implement this must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 54: Implement standardised training programmes on basic quality methodologies to: 1. Conduct Plan Do Check Act (PDCA) to improve process gaps, 2. Perform a Root Cause analysis (RCA) if incidents identified affecting patient safety, 3. Respond and act by conducting Process Improvements (PIs) to allow the nursing team to identify gaps in performance for NAA, Falls Incidence, HAPU Rates and HH compliance based on set targets

The panel had 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) that implementing standardised basic quality methodology training is vital to sustain patient safety practices and thus will be included in the action plan. However, consensus was not reached on who the responsible person to implement the programme must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

Action statement 55: Implement training programmes to conduct standardised performance audits for (1) NAA within timeframe, (2) falls, (3) HAPU and (4) HH

The panel had 100% agreement (n=12; f=66.67% essential; n=6; f=33.33% important) that implementing training programmes to conduct standardised performance audits for (1) NAA within the specified timeframe, (2) falls, (3) HAPU and (4) HH is vital to sustain patient safety practices and thus will be included in the action plan. Consensus was not reached on who the responsible person to conduct this training must be or what the specific timeframe is wherein the action statement must be completed. These two aspects were included in Round Two of the e-Delphi. Comments received did not indicate how to improve the action statement (Appendix M).

6.8 ROUND TWO DRAFT ACTION PLAN

Based on the compilation and analysis of all answers from the panel, the researcher selected the consensus responses to initiate the next set of questions for the second round. As in Round One, drop-down boxes were provided for the responsible person/s and timeframes. The validation assessment instrument and second draft action plan were built in the SurveyMonkey™ Domain (see Table 6.16 as an example and Appendix N for the complete second round draft action plan and e-Delphi validation assessment instrument). The completed instrument was then distributed to the panellist via the recruitment letter, similar to the one from Round One (Appendix N).

Table 6.16: Example of Draft Action Plan Round 2

Theme 1 - Culture: **Strategic Action Goal**: Develop and implement a Structured, Behaviour-Based Education Programme that supports nurses to practice cultural competence, proficiency in English and conversational Arabic.		
Action statement	**Responsible person** – indicate whether you agree that below persons is appropriate to sustain action and motivate answer.	**Time frame-** select only one that is the most appropriate timeframe for each action statement
1. Develop a standardised and structured Behaviour-Based Cultural Orientation Programme that is supported by a theory.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____ _____ _____ _____	Please indicate your choice of timeframe for completion of the development of this Programme 30 Days ◯ 60 Days ◯
2. Implement the Standardised and Structured Behaviour-Based Cultural Orientation Programme to ensure patient satisfaction is at 95% for culturally congruent care	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____ _____ _____ _____	Please indicate your choice of timeframe for implementation of this Programme Every shift ◯ Daily ◯
3. Develop a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____ _____ _____	Please indicate your choice of timeframe for completion of the development of this Programme Every shift ◯ Daily ◯

6.8.1 Findings Round Two

A period of two weeks was provided for the 18 chosen panellists to provide their inputs and comments on the second draft (Round Two Action Plan). All panellists provided their responses, thus not one panellist was lost despite the normal challenges in e-Delphi (Avella, 2016:315) participation. The results were analysed and interpreted based on feedback and the motivations were open-coded (Appendix O).

6.8.1.1 Theme 1- Culture

Strategic Action Goal: Develop and implement a Structured, Behaviour-Based Education Programme that supports nurses to practice cultural competence, proficiency in English and conversational Arabic.

Action statement 1: A Standardised and Structured Behaviour-Based Cultural Orientation Programme, supported by a theory, must be developed by the **nursing team** (consensus = 100%) within **60 days** (consensus = 94.44%).

Action statement 2: A Standardised and Structured Behaviour-Based Cultural Orientation Programme, supported by a theory, must be implemented by the **nursing team** (consensus = 100%) during **every shift** (consensus = 100%).

Action statement 3: A person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting, must be developed by the **nursing team** (consensus = 100%) during **every shift** (consensus = 94.44%).

Action statement 4: A person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting, must be implemented by the **nursing team** (consensus = 100%) during **every shift** (consensus = 100%).

Action statement 5: An audit tool to ensure that a person-centred, theory-based interview assessment is used 100% of the time must be developed by the **nursing team** (consensus = 100%) **within 60 days** (consensus = 100%).

Action statement 6: A clear policy which describes the behavioural expectations for the application of culturally congruent care for patient safety and satisfaction must be developed by the **nursing team** (consensus = 100%) **monthly** (consensus = 100%).

Action statement 7: A **monthly** audit (consensus = 100%) to determine if culturally congruent care policies are applied into clinical practice must be applied by the **nursing team** (consensus = 100%).

Action statement 8: During **each shift** (consensus = 100%) the **nurse** (consensus = 100%) should identify and act on culture-specific needs in each individual patient care plan.

Action statement 9: The **Human Resource Department** (consensus = 100%) should identify English proficiency **during application interviews** (consensus = 100%) through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English.

Action statement 10: The **Human Resource Department** (consensus = 100%) should provide basic Arabic language training to improve conversational Arabic **within 60 days of employment** (consensus = 83.33%).

6.8.1.2 Theme 2 – Patient Safety

Strategic Action Goal: Develop and implement Structured, Standardised Behaviour-Based Training Programmes for NAA, falls prevention, HAPU and HH. Develop a clear policy to ensure compliance with NAA, falls and HAPU prevention, and HH practices. Annual competency re-validation linked to compliance audit results for NAA, falls, HAPU, and HH. Conduct and share performance audit data in a structured process with teams on NAA, falls, HAPU, HH compliance and system defects being addressed.

Action statement 11: A Standardised snd Structured Behaviour-Based Training Programme that is supported by the nursing process theory must be developed **within 60 days** (consensus = 100%) by the **nursing team** (consensus = 100%).

Action statement 12: A Standardised and Structured Behaviour-Based Training Programme that is supported by the nursing process theory must be implemented **every shift** (consensus = 100%) by the **nursing team** (consensus = 100%).

Action statement 13: Nurses' competency regarding: 1) patient Health Assessment on Admission, 2) development of an appropriate individualised nursing care plan, and 3) the parameters required within the Admission Assessment Policy must be validated by the **nursing team** (consensus = 100%) **every shift and when issues are identified in documentation**(consensus = 100%).

Action statement 14: An evidence-based, acuity-driven nurse:patient ratio that will positively influence compliance with regards to patient care activities must be provided by the **nursing team** (consensus = 100%) **every shift** (consensus = 94.44%).

Action statement 15: Nurses must be educated by the **nursing team** (consensus = 100%) **immediately and when an issue is identified** (consensus = 88.89%) to perform a Risk Assessment on the electronic medical record to identify and report connectivity system issues affecting compliance with the NAA completion.

Action statement 16: An evidence-based behavioural fall risk programme that incorporates the Morse and Humpty Dumpty algorithm to support standard practice must be developed by the **nursing team** (consensus = 100%) **within 60 days** (consensus = 94.44%).

Action statement 17: An evidence-based behavioural fall risk programme that incorporates the Morse and Humpty Dumpty algorithm to support standard practice must be implemented **every shift** (consensus = 88.89%) by the **nursing team** (consensus = 100%).

Action statement 18: Nurses' competency regarding: 1) Morse and Humpty Dumpty Scoring, 2) fall risk assessment, 3) use of preventative safety measures based on risks identified, 4) verbalisation on frequency for conducting fall risk assessments, 5) application of visual cues to alert others to fall risk, and 6) the application of the Fall Prevention Policy in practice must be validated by the **nursing team** (consensus = 100%) **daily** (consensus = 88.89%).

Action statement 19: The **nursing team** (consensus = 83.33%) must ensure a nurse:patient ratio of 1:1, 1:2 or 1:3 based on patient acuity **daily** (consensus = 88.89%).

Action statement 20: An evidence-based behavioural Skin Integrity training programme, that is supported by a theory, must be developed by the **nursing team** (consensus = 100%) **within 60 days** (consensus = 94.44%).

Action statement 21: An evidence-based behavioural Skin Integrity training programme, that is supported by a theory, must be implemented by the **nursing team** (consensus = 100%) **within 60 days** (consensus = 94.44%).

Action statement 22: Nurses' competency on: 1) the use of the Braden Skin Risk Assessment tool, 2) the interpretation of the Braden scoring to identify skin risk, 3) the implementation of the appropriate pressure reduction measures based on risk, 4) frequency for conducting Braden Risk Assessments, 5) appropriate referral to physicians and dieticians when skin risk is high, 6) staging Pressure Ulcers and 7) the application of the Skin Integrity Policy in practice must be validated **every shift** (consensus = 94.44%) by the **nursing team** (consensus = 100%).

Action statement 23: A standardised and structured behavioural HH training programme, that is supported by a theory, must be developed by the **nursing team** (consensus = 100%) **within 60 days** (consensus = 94.44%).

Action statement 24: A standardised and structured behavioural HH training programme, that is supported by a theory, must be implemented **every patient encounter** (consensus =100%) by the **nursing team** (consensus = 94.44%).

Action statement 25: Nurses' competency on: 1) the application of the '5 moments of HH' 2) demonstrating aseptic hand washing technique, 3) educating others on HH, 4) appropriately using gloves before and after a procedure, 5) HH in Bundle Compliance to prevent infections, and 6) the application of the HH policy in practice must be validated **every shift** (consensus = 83.33%) by the **nursing team** (consensus = 100%).

Action statement 26: The **nursing team** (consensus = 100%) must **immediate when issue is identified** with hand washing stations (consensus = 100%) educate nurses to perform a risk assessment to ensure the hand wash stations are appropriately placed in the unit for nurses to wash their hands.

Action statement 27: The **nursing team** (consensus = 100%) must **immediately** (consensus = 100%) report skin irritations incurred from hand washing solutions in order to find an alternative.

Action statement 28: The **nurse manager** (consensus = 100%) must communicate to the nursing team the behavioural expectations required to comply with NAA, Falls, HAPU, HH processes in order to avoid consequences **during daily safety meetings (Huddles)** (consensus = 94.44%).

6.8.1.3 Theme 3 – Positive Work Environment (Hospital Climate)

Strategic Action Goal: Establish a standardised and structured positive work environment process to improve the work environment to be supportive of patient and staff safety to illustrate leadership, support and guidance, teamwork, staff scheduling and patient allocation clearly listed for teams to refer to when required.

Action statement 29: The **nursing team** (consensus = 100%) must, **within 60 days** (consensus = 100%), develop a structured and standardised Positive Work Environment Process (based on elements listed in Strategic Action Goal) to ensure nurses safe care practices.

Action statement 30: The **nursing team** (consensus = 100%) must implement the structured and standardised Positive Work Environment Process **daily and when change is introduced** (consensus = 100%) (based on elements listed in Strategic Action Goal) to ensure nurses' safe care practices.

Action statement 31: The **nursing team** (consensus = 100%) must **daily and when change is introduced** (consensus = 100%) use the patient outcomes data to ensure individual nurse performance evaluations for NAA within the 24-hour timeframe at 100%, Falls and HAPU rates at zero and 100% HH compliance directed towards improvement for patient safety.

Action statement 32: The **nursing team** (consensus = 100%) must implement the minimum safe, evidence-based staffing and skills mix guidelines for units to support safe patient staffing levels; **daily and when there are changes in patients' conditions** (consensus = 100%).

Action statement 33: The **nursing team** (consensus = 100%) must **daily and during unit meetings** (consensus = 100%) monitor incident reports whether nurse:patient allocations resulted in safety concerns for: 1) NAA within timeframe, 2) falls, 3) HAPU, and 4) and HH compliance.

Action statement 34: The **nursing team** (consensus = 100%) must provide a structured guideline for communication channels in units to: 1) report if they experience patient-related issues that might affect patient safety, 2) request assistance from team members when required, 3) speak up if another healthcare provider compromises patient safety; **every shift or when safety concern is identified** (consensus = 100%).

Action statement 35: The **nursing team** (consensus = 100%) must establish a process for nurse managers' visibility and participation to include: 1) intentional rounding on all new patients to determine if there were any issues with care provided, 2) rounding with a purpose on all staff – every shift to identify resource deficits and needs, and 3) environmental monitoring to identify patient safety risks **every shift and during change of shifts** (consensus = 100%).

Action statement 36: A structured process to: 1) acknowledge nurses' patient safety achievements, 2) enforce professional development activities, 3) identify individual nurses' professional development needs, 4) share the performance management data, and 5) provide feedback on performance must be established by the **nursing team** (consensus = 100%) **during monthly unit meeting and annually in individual nurse performance review** (consensus = 100%).

6.8.1.4 Theme 4 – Safety Culture has five distinct sections which will be discussed individually (1. INFORMED CULTURE/ 2. FLEXIBLE CULTURE/ 3. REPORTING CULTURE/ 4. JUST CULTURE / 5. LEARNING CULTURE)

1) Informed Culture

Strategic Action Goal: Engage nurses in process improvement activities through structured processes to address factors that affect patient safety and sustainment of patient safety practices, based on regular data analysis from audits, errors, near-misses and incident report data.

Action statement 37: The performance management data (HAPU/HH/ Falls/ NAA) must be shared through: 1) unit meetings to engage nurses in process improvement activities required for change, 2) on quality boards as visual reminders of pending process improvement actions, 3) during daily safety huddles to alert nurses to safety concerns, and 4) through individual nurse coaching if practice gaps are identified by the **nursing team** (consensus = 94.44%); daily, during monthly unit meetings and when concern identified (consensus = 100%).

Action statement 38: The **nursing team** (consensus = 100%) must utilise a structured process to facilitate: 1) that identified corrective actions are completed to ensure process improvement is implemented for a culture of safety, and 2) ensure that the Comprehensive Unit Safety Programme (CUSP) is implemented in the unit to sustain practices **monthly and quarterly** (consensus = 100%).

Action statement 39: The **nursing team** (consensus = 100%) must identify trends in reported incidents and provide feedback to nurses to facilitate process improvements and education activities **daily and in unit meetings** (consensus = 100%).

2) Flexible Culture

Strategic Action Plan: Develop and implement a structured and standardised communication process to allow nurse managers and nurses to adapt and change in emergent situations to ensure that an immediate decision can be taken to prevent harm to a patient.

Action statement 40: The **nursing team** (consensus = 100%) must – **every shift, during break times and transfer of patients** (consensus = 100%) – implement a structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate the safe handoff of patient care.

Action statement 41: The **nursing team** (consensus = 100%) must promote active nurses' participation in audits to monitor compliance with: 1) handoff of patient practices to ensure patient continuity of care, 2) team briefing (Huddles) as tool to align team on patient care concerns, 3) the use of SBAR (tool) during shifts, break times and transfer of patients to communicate patient information in a structured way; **daily and monthly** (consensus = 100%).

Action statement 42: The **nursing team** (consensus = 100%) must develop a structured process to involve the nursing team in: 1) unit risk assessment to involve nurses in improving system gaps and in 2) root cause analysis when incidents are reported that affect patient safety; **annually and when safety concern identified** (consensus = 100%).

3) Reporting Culture

Strategic Action Goal: Apply a structured and standardised positive work environment process in which the nursing team feels safe and are prepared to report their errors and near-misses to ensure patient safety.

Action statement 43: The **nurse manager** (consensus = 100%) must communicate the Culture of Safety Process to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ and patient harm from falls **in daily shift debriefs (huddles) and during monthly unit meetings** (consensus = 100%).

Action statement 44: The **nursing team** (consensus = 100%) must apply the positive work environment process listed as a guide for nurses to: 1) report behavioural practices of others affecting patient safety, and 2) report system defects affecting patient safety **during daily shift debriefs (huddles) and every time a safety concern is identified** (consensus = 100%).

4) Just Culture

Strategic Action Goals:(a) Ensure a standardised safety-supportive system of shared accountability where nurse managers are accountable for the systems they have designed and also for responding to the behaviours of their nursing staff in a fair and just manner, and apply processes to facilitate behavioural management of safety. (b) Ensure nurses' accountability for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.

Action statement 45: The **nursing team** (consensus = 100%) must develop a structured Risk Assessment Programme to proactively avoid patient harm **annually and when new risk is identified** (consensus = 100%).

Action statement 46: The **nursing team** (consensus = 100%) must implement the structured Risk Assessment Programme proactively to avoid patient harm **annually and when new risk is identified** (consensus = 100%).

Action statement 47: Nurse competence regarding patient Hourly Rounding Principles must be validated by the **nursing team** (consensus = 100%) **every shift and for all new patients** (consensus = 100%), in terms of: 1) explanation of the principles of Hourly Rounding to patient/family, 2) use of drafted wording (script) in every patient encounter to ensure patient hears the same message from all the nurses,

3) ensure that nurse physically checks to determine if the five “P’s” are addressed (Position, Potty, Pain, Possessions and IV Pump) to avoid HAPU, Falls and ensure patient satisfaction, 4) use of the whiteboard as tool to communicate the five “P’s” with patients and 5) informing patients based on drafted wording (script) what is next in term of returning to room and care activities.

Action statement 48: The **nursing team** (consensus = 100%) must audit nurse compliance in applying Hourly Rounding Principles **daily and monthly** (consensus = 100%).

Action statement 49: The **nursing team** (consensus = 100%) must implement the action plans for gaps identified in Safety Culture Results to prevent patient safety concerns for NAA/ HH/ HAPU/ and patient harm from falls **every shift and monthly** (consensus = 100%).

Action statement 50: The structured process to communicate patient safety expectations to nurses: 1) ensures that the nurse understands responsibility and accountability for safe practice behaviour, affecting sustainment of outcomes for NAA/ HH/ HAPU/ and patient harm from falls, and 2) ensures that the nurse reports system issues affecting patient safety to the **nursing team** (consensus = 100%) **every shift and during annual competency** (consensus = 100%).

5) Learning Culture

Strategic Action Goals: Develop and implement a structured and standardised process to identify learning and training needs supported on reviews and analyse safety-related data, reports and incidence reports. Ensure training is behaviour-based to allow expectations and consequences to be clearly understood and supported by a theory to apply the hospital safety management plan.

Action statement 51: A Standardised and Structured Behaviour-Based Culture of Safety Training Programme to align nurses’ safety efforts to sustained patient safety practices must be developed by the **nursing team** (consensus = 100%) **within 60 days** (consensus = 100%).

Action statement 52: A Standardised and Structured Behaviour-Based Culture of Safety Training Programme to align nurses' safety efforts to sustained patient safety practices must be implemented by the **nursing team** (consensus = 100%) **every shift, every patient encounter and when change is introduced** (consensus = 100%).

Action statement 53: The **nursing team** (consensus = 100%) must implement standardised training programmes on basic quality methodologies to: 1) conduct Plan Do Check Act (PDCA) to improve process gaps, 2) perform a root cause analysis (RCA) if identified incidents affect patient safety, 3) respond and conduct process improvement (PI) to allow the nursing team to identify gaps in performance for NAA, Falls Incidence, HAPU Rates and HH compliance based on targets set **during annual competency assessment, when safety risk identified and in monthly unit meetings** (consensus = 100%).

Action statement 54: The **nursing team** (consensus = 100%) must implement training programmes to conduct standardised performance audits for: 1) NAA within timeframe, 2) falls, 3) HAPU and 4) HH **every shift and during annual competency assessment** (consensus = 100%).

6.9 THE ACTION PLAN

The panellist in Phase 4 of the study reached 100% consensus that the 54 action items are essential and important for patient safety, with a 94% consensus on the responsible person/s and 93% consensus on the timeframe within which to complete each action statement. In Table 6.17 the Action Plan to Enhance a Sustainable Culture of Safety for Positive Patient Outcomes is displayed (Appendix P).

Table 6.17: Action Plan to Enhance a Sustainable Culture of Safety to Improve Patient Outcomes

THEME 1 - CULTURE: **Strategic Action Goal**: Develop and implement a Structured, Behaviour-Based Education Programme that supports nurses to achieve cultural competence, proficiency in English and conversational Arabic.		
Action statement	**Responsible person**	**Timeframe**
1. Develop a Standardised and Structured Behaviour-Based Cultural Orientation Programme that is supported by a theory	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	60 Days
2.Implement the Standardised and Structured Behaviour-Based Cultural Orientation Programme to ensure patient satisfaction is at 95% for culturally congruent care	The Nursing Team	Every shift
3. Develop a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting	The Nursing Team	Every shift
4. Develop an audit tool to monitor that the person-centred, theory-based interview assessment is used 100% of the time	The Nursing Team	Every shift
5. Audit compliance with applying person-centred, theory-based interview assessment 100% of the time	The Nursing Team	Monthly
6. Develop a clear policy which describes the behavioural expectations for the application of culturally congruent care for patient safety and satisfaction	The Nursing Team	Monthly
7. Conduct audits to determine if culturally congruent care policies are applied in clinical practice, and act to address gaps	The Nursing Team	Monthly
8. Identify and act on culture-specific needs in each individual patient care plan		Every shift

	The Registered Nurse (Staff and Charge)	
9.Identify English proficiency through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English.	Human Resource Department	During application interview
10. Provide basic Arabic language training to improve conversational Arabic for patient safety	Human Resource Department	Within 60 Days
THEME 2 – PATIENT SAFETY: **Strategic Action Goal:** Develop and implement Structured, Standardised Behaviour-Based Training Programmes for NAA, falls prevention, HAPU and HH. Develop a clear policy to ensure compliance with NAA, falls and HAPU prevention, and HH practices. Annual competency re-validation linked to compliance audit results for NAA, falls, HAPU, and HH. Conduct and share performance audit data in a structured process with teams on NAA, falls, HAPU, HH compliance and system defects being addressed.		
Action statement	Responsible person	**Time frame**
11. Develop a Standardised and Structured Behaviour-Based Training Programme that is supported by the Nursing Process Theory.	The Nursing Team	60 Days
12. Implement the Standardised and Structured Behaviour-Based Training Programme that is supported with the Nursing Process Theory in order for NAA to be sustained at 100%	The Nursing Team	Every shift
13. Assess the nurses' competencies regarding: 1. Patient Health Assessment on Admission 2. Development of an appropriate individualised nursing care plan. 3. The parameters required within the Admission Assessment Policy	The Nursing Team	All (every shift, and when issue identified in documentation review)
14. Ensure an evidence-based, acuity-driven nurse: patient ratio that will positively influence compliance with regards to patient care activities	The Nursing Team	Every shift
15. Educate nurses to perform a risk assessment on the electronic medical record to identify and report connectivity system issues affecting compliance with the completion of the NAA within the specified timeframe	The Nursing Team	Immediate when issue identified

16. Develop an evidence-based behavioural fall risk programme that incorporates the Morse and Humpty Dumpty algorithm to support standard practice	The Nursing Team	60 Days
17. Implement the standardised and Structured Behaviour-Based Falls Training Programme to ensure that all nurses comply with the falls prevention algorithm to prevent falls.	The Nursing Team	Every shift
18. Assess the nurses' competencies regarding: 1. Morse & Humpty Dumpty Scoring 2. Fall risk assessment 3. Use of preventative safety measures based on risks identified. 4. Verbalisation on frequency for conducting fall risk assessments. 5. Application of visual cues to alert others to fall risk. 6. The application of the Fall Prevention Policy in practice.	The Nursing Team	Daily
19. Ensure a nurse: patient ratio of 1:1, 1:2 or 1:3 based on patient acuity.	The Nursing Team	Every shift
20. Develop a Standardised and Structured Behaviour-Based Skin Risk Integrity Training Programme that is supported by a theory.	The Nursing Team	Within 60 Days
21. Implement the Standardised and Structured Behavioul-Based Skin Risk Integrity Training Programme to reduce HAPUs	The Nursing Team	Every shift
22. Assess nurses' competency on: 1. The use of the Braden Skin Risk Assessment tool. 2. The interpretation of the Braden scoring to identify skin risk. 3. The implementation of the appropriate pressure reduction measures based on risk. 4. Frequency for conducting Braden Risk Assessment. 5. Appropriate referral to physician and dietician when skin risk is high. 6. Staging Pressure Ulcers	The Nursing Team	Every shift

7. The application of the Skin Integrity Policy in practice.		
23. Develop a Standardised and Structured Behaviour-Based HH Training Programme that is supported by a theory.	The Nursing Team	Within 60 Days
24. Implement the Standardised and Structured Behaviour-Based HH Training Programme in clinical settings to reduce hospital-acquired infections.	The Nursing Team	Every patient encounter
25. Assess nurses' competency on: 1. The application of the '5 moments of HH' 2. Demonstrate aseptic hand washing technique 3. Educating others on HH 5. Appropriate use of gloves before and after a procedure 6. HH in Bundle Compliance to prevent infections 6. The application of the HH Policy in practice.	The Nursing Team	Every shift
26. Educate nurses to conduct a risk assessment to determine if the hand washing stations are appropriately placed in the unit to ensure that nurses are able to wash their hands.	The Nursing Team	Immediate when issue identified with hand wash station
27. Report skin irritations incurred from hand washing solutions so an alternative can be found.	The Nursing Team	Immediate when skin irritation experienced
28. Communicate the behavioural expectations required to comply with NAA, Falls, HAPU, HH processes in order to avoid consequences.	The Nursing Team	Daily Safety Meetings (Huddles)
THEME 3 – POSITIVE WORK ENVIRONMENT (HOSPITAL CLIMATE): **Strategic Action Goal**: Establish a standardised and structured Positive Work Environment process to improve the work environment and to be supportive of patient and staff safety in order to illustrate leadership, support and guidance, teamwork, staff scheduling, and patient allocation as clearly listed for the team to refer to when required.		

Action statement	Responsible person	Time frame
29. Develop a structured and standardised Positive Work Environment Process (based on elements listed in Strategic Action Goal) to ensure nurses' safe care practices	The Nursing Team	Within 60 Days
30. Implement the structured and standardised Positive Work Environment Process to ensure a work environment conducive for nurses to perform safe care	The Nursing Team	All (Daily and When change is introduced)
31. Use the patient outcomes data to ensure that individual nurse performance evaluations for NAA within the 24-hour timeframe are at 100%, Falls and HAPU rates are at zero, and 100% HH compliance is directed towards improvement for patient safety	The Nursing Team	All (Every shift, daily and monthly)
32. Implement the minimum safe, evidence-based staffing and skills mix guidelines for the unit to support safe patient staffing levels	The Nursing Leadership Team (Senior Nurse Leadership, Nurse Manager, Nurse Educator and Charge Nurse)	All (Every shift and changes patient condition)
33. Monitor, through incident reports, whether nurse: patient allocations resulted in: 1.NAA within the specified timeframe 2.Falls rates to zero 3. HAPU rates to zero 4. and HH compliance	The Nursing Leadership Team	All (Daily and during monthly unit meetings)
34. Provide a structured guideline for communication channels in units to: 1. Report if patient-related issues are experienced that might affect patient safety. 2. Request assistance from team members when required. 3. Speak up if another healthcare provider compromises patient safety	The Nursing Team	All (Every shift and when safety concern identified)
35. Establish a process for nurse managers' visibility and participation to include: 1. Intentional rounding on all new patients to determine if there are any issues with the care provided.	The Nursing Leadership Team	All (Every shift and during shift change)

2. Rounding with a purpose on all staff - every shift to identify resource deficits and needs. 3. Environmental monitoring to identify patient safety risks		
36. Establish a structured process to: 1. Acknowledge nurses' patient safety achievements 2. Enforce professional development activities 3. Identify individual nurses' professional development needs 4. Share the performance management data 5. Provide feedback on performance	The Nursing Leadership Team	All (Monthly and Annually)
THEME 4 – SAFETY CULTURE HAS FIVE DISTINCT SECTIONS WHICH WILL BE DISCUSSED individually (1. Informed culture/ 2. Flexible culture/ 3. Reporting culture/ 4. Just culture / 5. Learning culture) **4.1 Informed Culture:** **Strategic Action Goal**: Engage nurses in process improvement activities through structured processes to address factors that affect patient safety and sustainment of patient safety practices, based on regular data analysis from audits, errors, near-misses and incident report data		
Action statement	**Responsible person**	**Time frame**
37. Share the performance management data (HAPU/HH/ Falls/ NAA) through: 1. Unit meetings to engage nurses in process improvement activities required for change. 2. Quality boards as visual reminder on pending process improvement actions. 3. Daily safety huddles to alert nurses to safety concerns. 4. Individual nurse coaching if practice gaps are identified.	The Nursing Team	All (Daily when issue identified, Weekly and Monthly Unit Meetings)
38. Utilise a structured process to facilitate: 1. That corrective actions identified are completed to ensure process improvement is implemented for a culture of safety. 2. Ensure that the Comprehensive Unit Safety Programme (CUSP) is implemented in the unit to sustain practices.	The Nursing Leadership Team	All (Monthly and Annually)
39. Identify trends in reported incidents and provide feedback to nurses to facilitate process improvement and education activities.	The Nursing Team	

		All (Daily & in Monthly Unit Meetings)
5.2 Flexible culture: **Strategic Action Plan:** Develop and implement a structured and standardised process to allow nurse managers and nurses to adapt to changes in emergent situations to ensure that an immediate decision can be taken to prevent harm to a patient.		
Action statement	**Responsible**	**Time frame**
40. Implement the structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe handoff of patient care	The Nursing Team	All (Every shift, during break times & transfer of patients)
41. Promote active participation of nurses in audits to monitor compliance with: 1. Handoff of patient practices to ensure patient continuity of care 2. Team briefing (Huddles) as a tool to align the team on patient care concerns 3. Use of the SBAR handoff tool during shifts and break times to communicate patient information in a structured way	The Nursing Team	All (Daily and monthly)
42. Develop a structured process to involve the nursing team in: 1. Unit risk assessment to involve nurses in improving system gaps. 2. Root cause analysis when incidents are reported that affect patient safety	The Nursing Team	All (Annually & when safety concern identified)
4.3 Reporting Culture: **Strategic Action Goal**: Apply a structured and standardised Positive Work Environment process in which the nursing team feels safe and are prepared to report their errors and near-misses to ensure patient safety.		
Action statement	**Responsible person**	**Time frame**
43. Communicate the culture of safety process in unit meetings to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ and patient harm from falls	The Nurse Manager	All (Daily shift Debrief (Huddles) and

		monthly unit meetings)
44. Apply the positive work environment process as guide for nurses to: 1. Report behavioural practices of others affecting patient safety. 2. Report system defects affecting patient safety.	The Nursing Team	All (Daily shift Debrief (Huddles) and every time safety concern identified)
4.4 Just Culture: **Strategic Action Goals:** (a) Ensure a standardised, safe, supportive system of shared accountability where nurse managers are accountable for the systems they have designed and for responding to the behaviours of their nursing staff in a fair and just manner. Also apply processes to facilitate behavioural management of safety. (b) Ensure nurses' accountability for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.		
Action statement	**Responsible person**	**Time frame**
45. Develop a structured Risk Assessment Programme to proactively avoid patient harm	The Nursing Team	All (When new risk identified, and annually)
46. Implement the structured Risk Assessment Programme to: 1. Identify system defects 2. Involve nurses in the unit's Environment Risk Assessment 3. Mitigate identified risks	The Nursing Team	All (When new environment change identified, and every shift)
47. Assess nurses' competency with patient Hourly Rounding Principles for: 1.Explanation of the principles of Hourly Rounding to patient/family 2. Use of drafted wording (script) in every patient encounter to ensure the patient hears the same message from all the nurses. 3. Ensure that nurses physically check to determine if the five "P's" are addressed (Position,	The Nursing Team	All (Every shift & all new patients)

Potty, Pain, Possessions and IV Pump) to avoid HAPU, Falls and to ensure patient satisfaction. 4. Use of the whiteboard as a tool to communicate the five “P’s” to patients 5. Informing patients based on drafted wording (script) what is next in terms of returning to their room and care activities		
48. Audit nurses’ compliance in applying Hourly Rounding Principles.	The Nursing Team	All (Every shift and monthly)
49. Implement action plans for gaps identified in safety culture results to prevent patient safety concerns for NAA/ HH/ HAPU/ and patient harm from falls.	The Nursing Team	All (Every shift and monthly)
50. Apply structured processes to communicate patient safety expectation to nurses: 1. Ensure the nurse understansd responsibility and accountability for safe practice behaviours affecting sustainment of outcomes for NAA/ HH/ HAPU/ and patient harm from falls patient safety 2. Ensure that the nurse reports system issues affecting patient safety.	The Nursing Team	All (Every shift and during annual competency assessment)
4.5 Learning Culture: **Strategic Action Goals**: Develop and implement a structured and standardised process to identify learning and training needs supported on reviews, and analyse safety-related data, reports and incidence reports. Ensure training is behaviour-based to ensure expectations and consequences are clearly understood and supported by a theory to apply the hospital safety management plan		
Action statement	**Responsible person**	**Time frame**
51. Develop a Standardised and Structured Behaviour-Based Culture of Safety Training Programme to align nurses’ safety efforts to sustained patient safety practices	The Nursing Team	Within 60 Days
52. Implement the Standardised and Structured Behaviour-Based Culture of Safety Training Program to align team safety efforts to sustained patient safety practices	The Nursing Team	All (Every shift, every patient encounter and when safety concern identified)

53. Implement standardised training programmes on basic quality methodologies to: 1. Conduct Plan Do Check Act (PDCA) to improve process gaps 2. Perform a Root Cause analysis (RCA) if incidents identified affecting patient safety 3. Respond and act conducting Process Improvement (PI) to allow nursing team to identify gaps in performance for NAA, Falls Incidence, HAPU Rate and HH based on targets set.	The Nursing Team	All (During annual competency assessment, when safety risk identified, monthly unit meetings)
54. Implement training programmes to conduct standardised performance audits on: 1. NAA within the specified timeframe, 2. Falls, 3. HAPU, 4. HH.	The Nursing Team	All (Every shift and during annual competency assessment)

6.10 CONCLUSION

In this chapter, the draft action plan was validated by the panel of experts to ensure that all panellist reached consensus on the Action Plan to Enhance a Sustainable Culture of Safety to Improve Patient Outcomes.

Only two e-Delphi rounds were needed to achieve 100% consensus that the action statements are essential and important for patient safety, 94% on the person/s responsible for the actions, and 93% consensus for the timeframe within which to act.

The conclusion and recommendations, as well as the limitations of the study, will be discussed in Chapter 7.

CHAPTER 7
CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

Chapter 7, as illustrated in Table 7.1, consists of the conclusions, applicable recommendations, as well as the limitations of the study.

Table 7.1: Progress of the study

Chapter	Content
1	Orientation to the study
2	Literature review (1) safety culture, (2) hospital climate, (3) patient safety outcomes and (4) managing 'just culture' based on Reason's and Ekenedo's Safety Culture Framework.
3	Phase 1: Research methodology, data gathering and interpretation of outcomes data
4	Phase 2: Research methodology, data gathering and interpretation of questionnaires
5	Phase 3: Literature review on action plan development as well as the development of the draft action plan and the validation assessment instrument
6	Phase 4: Research methodology, data gathering and validation of the action plan
7	Conclusions, limitations and recommendations

7.2 CONCLUSIONS

The aim of this multiple methods study was to develop an action plan to enhance a sustainable culture of safety to improve patient outcomes.

The objectives of the study were achieved as follows:

7.2.1 Objective 1: Describe the patient safety outcomes from the various hospitals concerning HAPUs, falls, NAAs, and HH practices

The analysis of the data revealed that hospitals have challenges in sustaining safety outcomes for NAAs within a 24-hour timeframe, falls, HAPUs, as well as challenges regarding HH compliance.

The data for both hospitals reflected that practices for NAA, however, are not being equally sustained in each quarter and that on average Hospital B's compliance was higher (f=98.3%) than that of Hospital A (f=96%).

Although the nurses conducted fall risk assessments for the total number of patients admitted in both hospitals (N=28836), fall incidents still occurred and 162 (n=162) falls were reported by nurses within the units of the selected hospitals.

The data for both hospitals reflected that HH practices were also not being sustained in every quarter, and that on average Hospital B's HH compliance ranged between 91.8% to 95.6% to that of Hospital A's at 85.4% to 94%.

Although the nurses have done the Braden Skin Integrity Risk Assessment for all patients admitted in both hospitals, HAPU incidents still occurred.

From the data obtained, 96 (n=96) HAPU incidents were reported by nurses within the units of the selected hospitals.

7.2.2 Objective 2: Describe nursing teams' safety culture practices affecting patient safety

With the complexities that exist within healthcare, the nurse manager needs to ensure that the patient care environment, processes and the safety behaviours required from nurses to provide safe healthcare, is in place and sustained to contribute to the enhancement of patient safety, while in the care of the diverse nursing workforce (Stevens, 2011:9).

Creating a safety culture in an institution is not based on a new set of rules but is a philosophy that should be embraced by the entire healthcare team for the prevention of harm in the workplace (Golda, 2013:30). Many factors can have an impact on patient safety in an organisation, of which a culture of safety, cultural diversity, time limitations, nurses' competencies and qualifications, hospital climate (positive work environment) and managers' 'just culture' practices are but a few (Blegen, et al. 2013:92).

Four different themes were used to develop the action plan: Culture, Patient Safety, Hospital Climate (positive work environment), and Culture of Safety.

Culturally congruent care can be described as "culturally based care, knowledge, acts, and decisions used in sensitive and knowledgeable ways to appropriately fit the cultural values, beliefs, and life ways of clients for health and well-being, or to prevent illness, disabilities, or death" (Dike, 2013:3; Mousa, 2017:448). Since culturally congruent care is essential for holistic patient-centred care, it was addressed in the action plan.

Theme 1 - Culture:

Participants in Phase 2 identified a lack of knowledge pertaining to how culture affects patient safety; how to deliver culturally congruent care; as well as a challenge regarding English proficiency as emphasised with the incorrect interpretation of questions (see Chapter 4, Sections 4.6.1 & 4.7.2). Nurses also commented that their language proficiency prevented them from communicating with patients in Arabic (see Chapter 4, Sections 4.6.1 & 4.7.3).

Patient safety is often misunderstood since so many factors have an impact on it. Reviews on the impact of safety cultures on patient safety and outcomes found that it remains an issue worldwide (Mullin, et al. 2011; Desai, et al. 2011). Therefore, the need to review NAAs, falls, HAPUs and HH was essential to address patient safety.

Theme 2 – Patient Safety:

Patient outcomes data in Phase 1 confirmed that NAA, falls, HAPU and HH compliance was inconsistent in the various hospitals. A lack of knowledge about the

rationale for conducting the NAA, and inconsistency among the nursing team in conducting NAA within the 24-hour timeframe, the prevention of falls, HAPU, as well as HH to prevent hospital-acquired infections, were identified. The following system safety concerns were listed as contributory to non-compliance: (1) staffing shortages, (2) patient allocations, (3) hand wash stations' placements, and (4) HH solutions causing skin irritation.

The hospital climate can be described as the "perceived and recurring patterns of behaviour, attitudes and feelings that characterise life in the organization" (Sevilla-Zeigen, 2016:8). Since nurses spend the majority of their time in the work environment, facilitating a safe hospital climate is essential to ensure safety for the patient and the staff.

Theme 3 – Hospital Climate (Positive Work Environment)

7.2.3 Objective no 3: Describe nursing teams' climate factors affecting patient safety

Participants in Phase 2 identified the absence of a standardised, structured process to proactively assess the system safety risks. The need for the nurse managers' visibility and support, teamwork, duty scheduling, patient allocations, acknowledgement of contributions, professional development and communication were identified as gaps in ensuring patient safety.

In a diverse environmental context such as the UAE, a culture of safety requires not only the observable behaviours and organisational processes, but also the inclusion of perceptions of daily practices, attitudes, and beliefs of the nurse (Health Research and Education Update 2017; Chenhall, 2010:17-18).

Theme 4 – Culture of Safety

7.2.4 Objectives 4, 5, and 6: Describe nurses' challenges and opportunities regarding safety culture practices that influence patient safety, and explore managers' perceptions of how they are managing the behavioural choices of the nurses to ensure positive patient outcomes

Participants identified the general absence of an awareness of a safety culture and the nursing team's roles and responsibilities towards patient safety.

Informed Culture: Study participants identified that there is no standardised and structured process used by nurse managers to share and communicate safety information with the nurses to make sure that safety culture practices are sustained and to align nurses' safety efforts.

Flexible Culture: It was also identified that a standardised and structured process to assist nurses in adapting to changes brought about in ever-changing healthcare environments does not exist.

Reporting Culture: According to the participants, there was a punitive environment within units that prevents nurses from reporting incidents that affect patient safety.

Just Culture: It was noted by participants that there was a punitive environment, the system issues were not proactively addressed, and nurses' behavioural practices were not managed in a safe and just manner.

Learning Culture: Participants indicated that there is a (1) lack of equal training opportunities for all nurses, and (2) there is no standardised and structured process for professional and career development to ensure that nurses are competent and skilled to perform patient risk assessments and to initiate preventative measure to avoid patient harm. It was also mentioned that there is a lack of knowledge and consistency in performing key nursing activities listed for NAA, falls, HAPU and HH (see Chapter 4, Section 4.6.3).

7.2.5 Objective 7: Develop and validate an action plan to enhance a sustainable culture of safety, to improve patient outcomes.

The main focus of the study was to develop and validate an action plan to enhance a sustainable culture of safety to improve patient outcomes. The results of Phases 1 and 2, as well as a literature review on a culture of safety, hospital climate, patient safety, culture, and action plan development, were utilised to develop the action plan that was validated through an e-Delphi as described in Chapters 5 and 6. Only two e-Delphi rounds were needed to achieve a 100% consensus to validate that the action statements were essential and important for patient safety; 94% consensus was reached on the person/s responsible for actions, and 93% consensus was established for the timeframes to act upon actions (see Chapter 6, Section 6.8). The validated and approved action plan is illustrated in Table 6.17.

7.3 RECOMMENDATIONS

Safety culture practices are frequently not sustained in hospitals (Hospital Data, 2013; Balamurugan & Flower, 2014:4) as indicated in the study's findings. Many factors could contribute to patient safety in a positive or negative way. It is recommended that the action plan must be utilised and implemented to sustain a culture of safety to improve patient outcomes. The implementation thereof will assist nurse leaders to:

(1) Understand the importance of the nursing team in utilising the patient outcome data to drive patient safety practices and facilitate positive patient outcomes through NAA within a 24-hour timeframe, fall risk assessments, HAPU prevention and HH compliance.
(2) Considering the importance of the nursing team and the patient culture, a structured and standardised cultural orientation programme must be developed and implemented by the nursing team. Due to the nurses' diversity, the Human Resource Team in hospitals must ensure English proficiency and provide basic Arabic training to all nurses.
(3) The importance of patient safety pertaining to NAA within a 24-hour timeframe, prevention of falls, reducing HAPUs and HH compliance requires a structured behaviour-based training programme to be developed and implemented. It

requires the nursing team to understand the rationale, expectations and consequences if they do not apply safety measures in preventing patient safety concerns. The need for structured risk assessment training, for sharing performance data and competency assessments of the nursing team is also essential to sustain practices.

(4) The nurse leader needs to set a positive work environment (hospital climate) that enables leadership support and visibility, communication, teamwork, safe staffing and patient allocation. Reward and recognition are also important factors for sustaining a culture of patient safety.

(5) Understand the five themes for a culture of safety as allowing the nurse manager and team to share information related to patient safety; apply flexibility in managing patient safety; report incidents or concerns that could impact patient safety; apply 'just culture' to manage behavioural choices and system safety affecting patient safety; and have a continuous learning culture whereby the nursing team learns and is empowered to be engaged and improve systems.

The researcher will take responsibility to electronically share the final research report for the 'Action Plan to Sustain a Culture of Safety to Iimprove Patient Outcomes', with the chairpersons of the Institutional Review Boards in both Hospitals A and B.

The action plan will also be electronically shared with the CNOs. The researcher will request an opportunity to discuss the study findings and the possibility to implement the action plan within the hospitals.

A written request will be sent to the CEO who is responsible for policy-making and implementation to schedule a date and time to discuss the action plan and possibilities to apply the action plan in these hospitals.

A possible intervention to be suggested and discussed with the CNOs is for professional development sessions to be scheduled to share the action plan with the nurse managers.

The action plan is a working document which nurse leaders will use to implement, evaluate and change according to clinical needs.

7.4 LIMITATIONS

Due to the cultural diversity of the participants, some groups might have refrained from providing honest opinions and their own perception of safety culture and positive work environment factors that affect their provision of safe care. It is acknowledged that this could have been a limitation but the researcher attempted to minimise false answers as far as possible. The questionnaire and e-Delphi participation were anonymous and confidential as only the researcher and principal supervisor had access to the information.

Some of the population's cultures are not accustomed to giving feedback about their nurse managers, which was evident in the neutral responses in Phase 2 (Appendix G).

The challenges identified with the misunderstanding of questions in the questionnaires and e-Delphi assessment instrument due to language proficiency challenges, could have an effect on the study's findings. However, most questions were correctly interpreted. The validation process, where all panellists were English proficient, also ensured reliable data.

7.5 SUMMARY

Nurses migrate to the UAE across borders for financial incentives, enhancing work experience and career opportunities. This allows the UAE to be enriched with an abundance of different cultural heritages (Haskins, 2009:27).

The effect of this culturally rich environment requires the nurse leaders to proactively facilitate culturally congruent care practices (Truong, et al. 2014:4).

This study's findings support that implementing the developed action plan would ensure a structured and standardised approach to patient safety and hospital climate factors, will result in the sustainment of a culture of safety.

Providing nurse recognition, support and behaviour-based education on patient safety, culturally congruent care, and a culture of safety will allow the sustainment of a culture of safety and positive patient outcomes.

As evident in the data, improving and assessing patient risk requires the nurse manager to track incident report data, share outcomes data and involve the nursing team in improvement activities.

'Just culture' is one of the subcultures of a culture of safety, and as evident in the findings, it is essential that the nursing team applies a 'just culture' to eliminate perceptions of punitive environments that exist among nurses.

Nurse leaders are pivotal to sustain practices and should continuously be assessing the potential factors that affect patient safety and proactively address them to avoid negative patient outcomes, as we, as a nursing team, "are as strong as our weakest link" (quote by Mark Gray).

An **Action Plan to Enhance a Sustainable Culture of Safety to Improve Patient Outcomes** is thus vital in today's evolving, ever-changing and diverse healthcare environment.

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APPENDICES

APPENDIX A

To: Chief Nursing Officer/s
Sheikh Khalifa Medical City/ Al Ain Hospital
Abu Dhabi

Date: 30 August 2014.

Subject: Request TO CONDUCT THE RESEARCH STUDY**: AN ACTION PLAN TO ENHANCE A SUSTAINABLE SAFETY CULTURE TO IMPROVE PATIENT OUTCOMES**

Dear Ms. Ray/ Ms. and Hooper,

My name is Helena Elizabeth Maria (Linda) Haskins and is current in process with my PhD studies through the University of South Africa (UNISA). I would like to request permission to conduct this study in your respective hospitals. It requires providing hospital data on key nursing performance indicators and involving the nurses and nurse managers in the data collection process. I will commence with the study once I have received approval from the Ethics Committee from the University of South Africa (UNISA) and your Hospital Institutional Research Boards.

The aim of my study is to develop an action plan to enhance a sustainable safety culture to contribute to improved patient outcomes. The population for this study will be the nurses (SN, CN) and the nurse leaders (ADON, Nurse Managers and Senior Charge Nurses).

The researcher has included in Appendix B the "Information for Participation in Questionnaire" outlining the research project '*AN ACTION PLAN TO ENHANCE A SUSTAINABLE SAFETY CULTURE TO IMPROVE PATIENT OUTCOMES'* and Appendix C the "Hospital Patient Safety Survey" and the "Organisational Climate Survey", and the "Just Culture Survey" in Appendix D and the Patient Outcomes Checklist in Appendix E. The nurse leaders and nurses will be informed; they will participate voluntary, withdrawing or declining to give information at any time without fear of recrimination.

I will ensure that the information gathered, remains confidential and that hospital and participants identities remain anonymous by providing identification numbers to the questionnaire.

Awaiting your response.

Signed

Linda Haskins - 32800843

APPENDIX B

AN ACTION PLAN TO ENHANCE A SUSTAINABLE SAFETY CULTUR TO IMPROVE PATIENT OUTCOMES

INFORMATION FOR PARTICIPANTS

The purpose of this study is to determine what the current safety culture is and what factors in the nurses' environment contribute to a culture of safety not to be sustained over time, to make appropriate recommendations for an appropriate action plan to enhance patient outcomes. Additionally, we will be reviewing how nurse leaders are managing the behavioural choices of the nurses in order to develop an action plan to sustain safety culture for positive patient outcome.

I would like to request your participation in the data collection process by asking you to complete various questionnaires:

- If nurse - questionnaire in regard to patient safety, culture of safety, positive work environment (hospital climate) and cultural diversity (Appendix C).
- If nurse manager - questionnaires in regard to patient safety, culture of safety, positive work environment (hospital climate), cultural diversity and your just culture practices in managing the behavioural choices of their nursing team (Appendix D).

The completion of the questionnaire will be done anonymously as your names will not appear on the documents. You will be provided with the questionnaire and an envelope in order for you to place completed questionnaires and drop them in the designated sealed boxes on your units.

Participation in this study is voluntary, and you may choose to withdraw or choose not to disclose information at any time without fear of recrimination. Participants are assured that all information will be kept confidential. Materials will be stored safely for the required time and only made available to the research supervisor: Professor L. Roets of UNISA.

Completing the questionnaire will be an indication of consent to participate in the study as well as to acknowledge that you have received information about the research project and have volunteered to participate.

Thank you for your participation.

Linda Haskins -32800843

APPENDIX C

Nurses Safety Culture, Patient Safety, Climate and Cultural Questionnaire

Dear Participant

The information leaflet has been provided to you explaining the reason for this study and voluntary participation, and completing this questionnaire implies consent to participate**.** Please answer as honest as possible. The researcher posed questions in different headings and you are required to answer all the questions and sections as appropriate.

SECTION A DEMOGRAPHICAL DATA

1. **Gender:** Male ☐ Female☐
2. **Indicate your age:**

   18-24 years ☐

   25-34 years ☐

   35-44 years ☐

   45-54 years ☐

   55-64 years ☐

3. **Please specify your Nationality:** _____
4. **What is your official spoken home language**? Specify _____
5. **If your home language is not English, did you receive any formal training, other than in English as a school subject in the English language**_____ **No** ☐ **Yes**☐ _____
6. **If Yes, where did you receive this training?**

_____

_____

7 If no, do you think you would have benefited in your current working environment if you did have formal training? Please explain:

_____

8 Where do you currently work:

8.1 ED ☐

8.2 Med ☐

8.2 Surg ☐

8.3 Peads ☐

8.4 Step Down ☐

8.5 CCU☐

8.6 ICU ☐

8.7 Maternity ☐

8.8 Psychiatry ☐

9. Please indicate your specific position in the institution:

9.1 Charge Nurse ☐

9.2 Staff Nurse ☐

10. How long have you been in this current position?

10.1. 1-5 years ☐

10.2. 6-10 years ☐

10.3. 11-15 years ☐

10.4. 16 years and above ☐

11. Please indicate your highest level of education

11.1. Diploma in Nursing ☐

11.2. Bachelor's degree ☐

11.3. Master's degree ☐

11.4. Any Others: Please specify _____

12. **Do you think that your own culture (traditions, values and beliefs) has an effect (positive or negative) on how to ensure patient safety where you are working?**

Yes ☐ No ☐

12.1. If yes, please explain why.

_____

_____

_____

_____

12.2. If no, please explain why.

_____

_____

_____

13. **Do you think that the culture (traditions, values and beliefs) of your patients have any effect on you, in providing safe care to them?** Yes ☐ No ☐

13.1. If yes, please explain why.

_____

_____

_____

13.2. If no, please explain why.

_____

_____

_____

14. **What training did you receive on different traditions, values and beliefs that you need to introduce into practice to ensure patient care needs is addressed safely when you joined the hospital?**

_____

_____

_____

15. Explain how this training helped you care for patients from different cultures.

_____

_____

_____

SECTION B PATIENT SAFETY

A. Nursing Admission Assessment (NAA)

1. Do you think it is important to always complete the nursing admission assessment within 24 hours? Yes □ No □

1.1. If no, please provide reasons for not being able to do NAA in the timeframe required by the standards:

_____

_____

_____

1.2. If you do always complete the NAA, please explain what motivates you to do so-

_____

_____

_____

2. What do you think can be implemented that will assist you to complete the Nursing Admission Assessment within the 24 hour timeframe?

_____

_____

_____

3. Please describe how did this help you completing the NAA in timeframe required

_____

_____

_____

4. Do you know how well your team perform with regards to completing the NAA every month?

Yes ☐ No ☐

4.1 If yes, why do you think that it is important to know about it?

_____

_____

_____

4.2 If you not aware of how team performing on NAA completion, do you want to know about it? Yes ☐ No ☐

4.2.1 Motivate your answer

_____

_____

_____

5. Do you think that nurse manager should communicate compliance issues with the team

Yes ☐ No ☐

5.1 If yes, please explain why you think it is necessary

_____

_____

_____

6. Please describe how your nurse manager communicates compliance issues with regards to NAA completion with the team?

_____

_____

_____

7. Please provide possible suggestions to improve communicating the compliance with the team

_____

_____

_____

8. Do you think it is important to complete the NAA within the 24 hour? Yes ☐ No ☐

8.1 Please motivate your answer.

_____

_____

_____

B. FALLS ASSESSMENT

1. Do you always identify the patients at risk for fall? Yes □ No □

1.1. If no , please provide reason/s for not being able to do so

_____

_____

_____

2. Explain when do you identify patients for falls risk

_____

_____

_____

3. Please indicate the frequency of doing falls risk assessments on patients

_____

_____

_____

4. Describe the safety devices and processes available in your facility in preventing patient falls?

_____

_____

_____

5. Do you have patient falls in your unit?

Yes ☐ No ☐

5.1 If yes, please provide information on why you think it does happen in your unit.

_____

_____

_____

5.2. If yes, please suggest measures that can be implemented to prevent falls

_____

_____

_____

C HOSPITAL ACQUIRED PRESSURE ULCERS (HAPU)

1. Please explain how a risk assessment for skin integrity will prevent developing HAPU?

_____

_____

_____

2. Does your unit have patient with HAPU? Yes □ No □

2.1 If yes, please indicate the incidence rate in your unit

_____

2.2 If yes, what do you think could have been done to prevent HAPU in your unit?

_____

_____

2.3. If no, describe what your team is doing to ensure no pressure ulcer development?

_____

_____

_____

3. Describe the frequency for conducting a skin integrity risk assessment?

_____

_____

4. Do you know how to stage pressure ulcers? Yes □ No □

4.1 If yes, please describe when was this training received:

_____

4.2 If no, whould you have likes to have training? Yes ☐ No ☐

Please motivate your answer:

_____

_____

5. What prevention strategies and measures do you implement in preventing HAPU from occurring?

_____

_____

_____

D. HAND HYGIENE PRACTICES

1. Do you always use the '5'moments of Hand Hygiene in daily practices? Yes □ No □

1.1 If Yes, please explain the procedure

_____

_____

1.2. If no, please provide the reason/s for not being able to do so:

_____

_____

2. Please explain how your unit is performing with regards to Hand Hygiene Compliance?

_____

3. Explain how do you ensure that other members of healthcare team wash their hands

_____

_____

_____

___

4. Wearing gloves is just as good as washing hands for protection? Yes □ No □

Please motivate your answer

_____

_____

_____

5. Please describe how you ensure that the patient and relatives practice hand hygiene?

_____

_____

_____

E. Please explain how does your team contribute positively to patient safety

_____

_____

_____

_____

F. Explain how your unit structure and processes allows for you to work safely in providing patient care (i.e. duty rota, resources, patients' allocation, teamwork, communication etc).

_____

_____

_____

_____

SECTION C SAFETY CLIMATE AND CULTURE

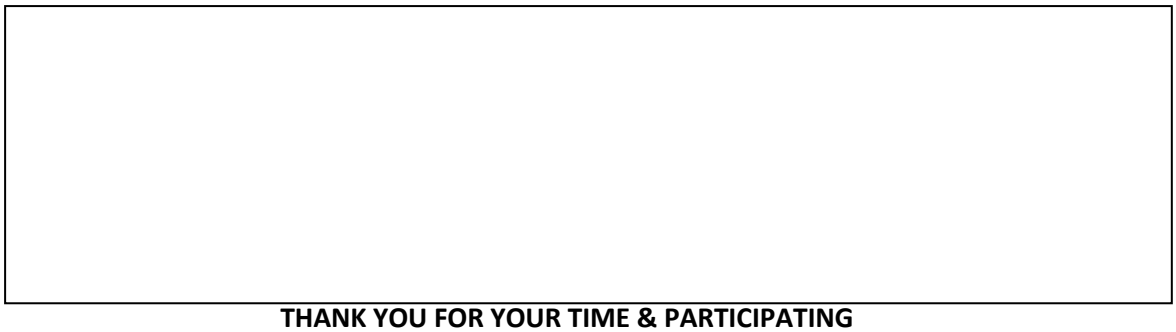
Please indicate your agreement or disagreement with the following statements

No	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	We are actively doing things to improve patient safety					
2	We feel like our mistakes are held against us					
3	Mistakes have led to positive changes here					
4	When one area in this unit gets really busy, other team members assist					

5	When an adverse event is reported, it feels like the person is being written up, not the problem					
6	We worry that mistakes that we make are kept in our personnel files					
7	My nurse manager involves us to improve procedures and system defects					
8	Our procedures and systems are good at preventing errors from happening					
9	My nurse manager says a good word when he/she sees a job done according to established patient safety procedures					
10	My nurse manager seriously considers staff suggestions for improving patient safety					
11	My nurse manager ignores patient safety problems that happen over and over					
12	We have enough staff to handle the workload					
13	When a lot of work needs to be done quickly, we work together as a team to get the work done					
14	In this unit, people treat each other with respect					
15	My nurse manager supports nurses to participate in process improvement on the unit that affects patient safety					
16	My nurse manager is visible in unit to assess patient care concerns on the unit to ensure staff assignments appropriate for patient acuity					
17	We are given feedback about the changes that are needed to be made, based on adverse event reports					
18	Staff will freely speak up if they see something that may negatively affect patient care					

19	We are informed about errors that happen in this unit					
20	Staff feel free to question the decisions of those with more authority					
21	Staff are afraid to ask questions when something does not seem right					
22	Hospital management provides a work climate that promotes patient safety					
23	**Errors occur when transferring patients from one unit to another**					
24	Important patient care information is often lost during shift changes					
25	Problems often occur in the exchange of information across hospital units					
26	Shift changes are problematic for patients in this hospital					
27	I feel confident that the team has the competencies to care for the patients on this unit					
28	My nurse manager ensures I have time to attend education session to uphold my skills					
29	I am able to request training when I feel that I have a need for more training					
30	My nurse manager manages our patient safety practices through patient outcomes data					
31	My nurse managers is constantly auditing our patient safety practices					
32	My nurse manager involves me in root cause analysis when an event has occurred to identify issues in systems					
33	My nurse manager is proactively addressing system issues affecting patient safety					

34. Based on your answers pertaining to the above questions, please provide suggestions on how the safety climate (structures and processes) in your institution can be improved



THANK YOU FOR YOUR TIME & PARTICIPATING

APPENDIX D

Nurse Managers Culture of Safety, Climate, Cultural & Just Culture Practices Questionnaire

Dear Participant

The information leaflet has been provided to you explaining the reason for this study and voluntary participation, and completing this questionnaire implies consent to participate. Please answer as honest as possible. The researcher posed questions in different headings and you are required to answer all the questions and sections as appropriate.

SECTION A DEMOGRAPHICAL DATA

1. **Gender:** Male ☐ Female☐
2. **Indicate your age:**

   18-24 years ☐

   25-34 years ☐

   35-44 years ☐

   45-54 years ☐

   55-64 years ☐

3. **Please specify your Nationality:** _____
4. **What is your official spoken home language**? Specify _____

4.1. If your home language is not English, did you receive any formal training other than in English as a school subject in the English language_____ **No** ☐ **Yes**☐ _____

4.2. If **yes**, where did you receive this training?

_____

_____

4.2. If no, do you think you would have benefited in your current working environment if you did have formal training? Please explain:

_____

_____

5. Where do you current work:

5.1. ED □

5.2 Med □

5.3 Surg □

5.4 Peads □

5.5 Step Down□

5.6 CCU □

5.7 ICU □

5.7 Maternity □

5.8 Nursing Admin□

5.9 Psychiatry□

6. Please indicate your specific position in the institution:

76.1 Nurse Manager □

76.2 Senior Charge Nurse □

7. How long have you been in this current position?

7.1. 1-5 years □

7.2. 6-10 years □

7.3. 11-15 years □

7.4. 16 years and above □

8. Please indicate your highest level of education

8.1. Diploma in Nursing □

8.2. Bachelor's degree □

98.3. Master's degree □

8.4. Any Others: Please specify _____

9. **Do you think that your own culture (traditions, values and beliefs) has an effect (positive or negative) on how to ensure patient safety where you are working?** Yes □ No □

9.1. If yes, please explain why.

_____

_____

_____

9.2. If no, please explain why.

_____

_____

10. **Do you think that the culture (traditions, values and beliefs) of your patients have any effect on you, in providing safe care to them?** Yes □ No □

10.1. If yes, please explain why.

_____

_____

_____

10.2. If no, please explain why.

_____

_____

_____

11. **What training did you receive on different traditions, values and beliefs that you need to introduce into practice to ensure patient care needs is addressed safely when you joined the hospital?**

_____

_____

_____

12. **Explain how this training helped you care for patients from different cultures.**

_____

_____

_____

B. Patient Safety

1. **Please explain how does your team contribute positively to patient safety**

_____

_____

_____

2. **Explain how your unit structure and processes allows for your team to work safely in providing patient care (i.e. duty rota, resources, patients' allocation, teamwork, communication etc).**

_____

_____

_____

3. **Explain how do you communicate patient safety data to the nurses on your unit**

_____

_____

_____

4. **Explain how you address patient safety outcomes (HAPU/ FALLS/ Hand Hygiene/ Nursing Admission Assessment) that are not sustained over time with your nurses?**

   Please motivate your answer for each of the processes - HAPU/ FALLS/ Hand Hygiene/ Nursing Admission Assessment.

_____

_____

_____

_____

C. Safety Culture

1. **Explain what you understand from the concept safety culture as a nurse manager?**

_____

_____

_____

2. **Explain what training did you receive on safety culture concept at your hospital?**

_____

_____

_____

3. **What support does hospital management provide with regards to safety culture?**

Please motivate your answer

_____

_____

_____

_____

D. Just Culture Practices

Please choose one that is the most appropriate choice.

No	Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The disciplinary process of my hospital is clear to guide me managing my nurses behaviors					
2	System issues is frequently reviewed through the incidents occurring in my unit					
3	Process reviews is part of how we manage system defects affecting patient safety					
4	Process reviews is part of how we manage nurse behaviors affecting patient safety					

5	The current incident reporting system provides me the data to manage patient safety issues					
6	Hospital Management support me in addressing system issues affecting patient safety					
7	Incidents are managed on this unit through appropriate quality methodologies.					
8	Nurses safety performance is managed immediately to avoid safety concerns.					
9	All incidents are reviewed for patient safety					

10 Explain what more you can contribute to improve just culture **(safe supportive systems and managing behavior's and accountability for all)** on your unit

THANK YOU FOR YOUR TIME & PARTICIPATION

APPENDIX E

Checklist for the <u>Patient Outcomes Data</u>: Nursing Admission Assessment within 24 hrs; Falls Rate, HAPU incidence & HH compliance

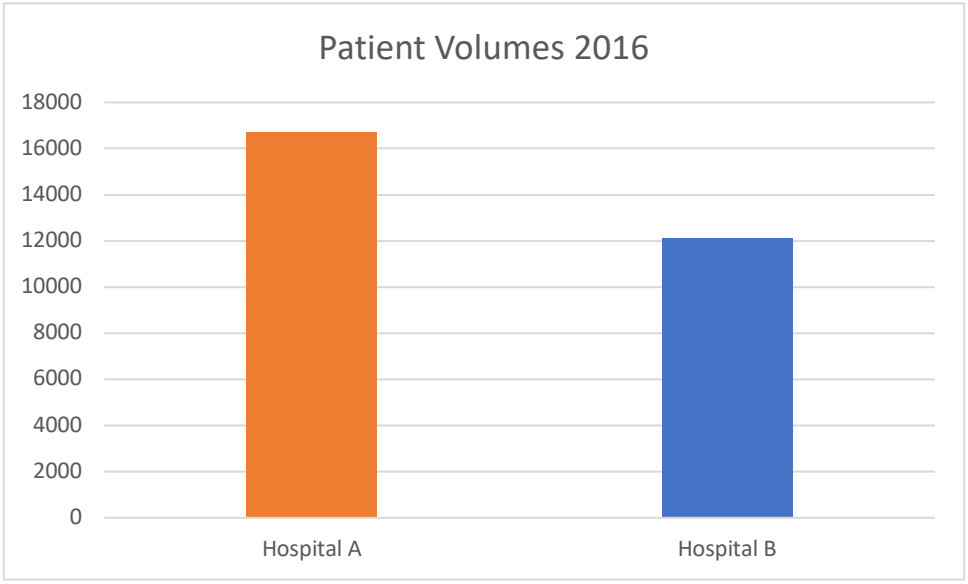
Please add your current Patient outcomes data for each of your clinical areas similar to that what you capture for SEHA/NDNQI												
Nursing Admission Assessment within 24hr Compliance Rate	**Q1 2016**			**Q2 2016**			**Q3 2016**			**Q4 2016**		
Unit	**Jan-16**	**Feb-16**	**Mar-16**	**Apr-16**	**May-16**	**Jun-16**	**Jul-16**	**Aug-16**	**Sep-16**	**Oct-16**	**Nov-16**	**Dec-16**
Falls Incidents	**Q1 2016**			**Q2 2016**			**Q3 2016**			**Q4 2016**		
Unit	**Jan-16**	**Feb-16**	**Mar-16**	**Apr-16**	**May-16**	**Jun-16**	**Jul-16**	**Aug-16**	**Sep-16**	**Oct-16**	**Nov-16**	**Dec-16**
HAPU Rates	**Q1 2016**			**Q2 2016**			**Q3 2016**			**Q4 2016**		
Unit	**Jan-16**	**Feb-16**	**Mar-16**	**Apr-16**	**May-16**	**Jun-16**	**Jul-16**	**Aug-16**	**Sep-16**	**Oct-16**	**Nov-16**	**Dec-16**

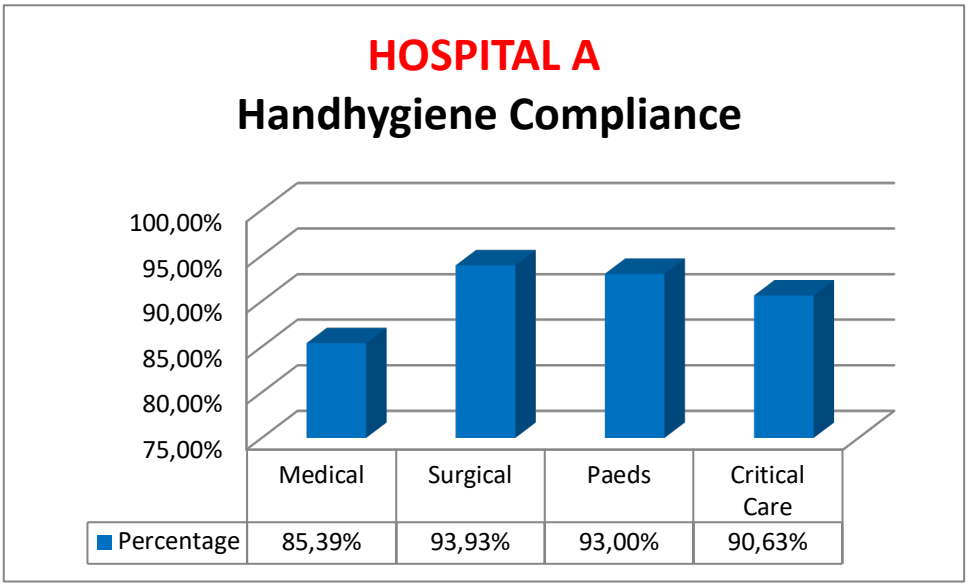
Hand Hygiene Compliance	**Q1 2016**			**Q2 2016**			**Q3 2016**			**Q4 2016**		
Unit	**Jan-16**	**Feb-16**	**Mar-16**	**Apr-16**	**May-16**	**Jun-16**	**Jul-16**	**Aug-16**	**Sep-16**	**Oct-16**	**Nov-16**	**Dec - 16**

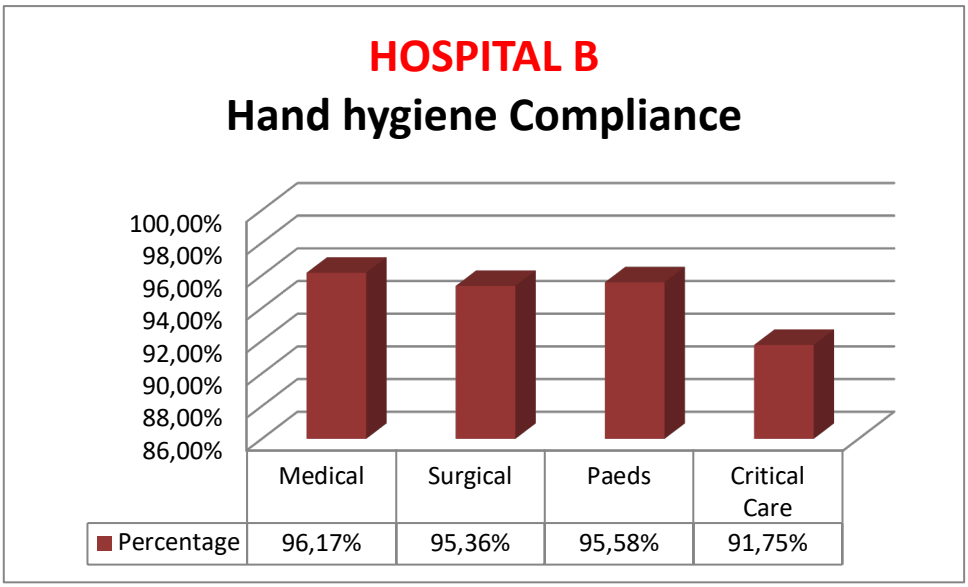
APPENDIX F

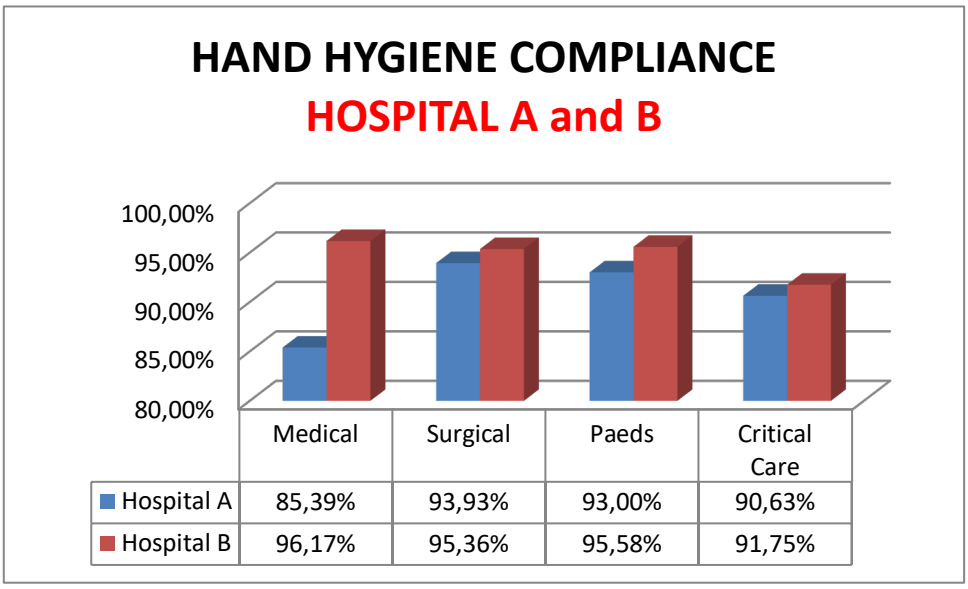
Data Analysis Patient Outcomes Data

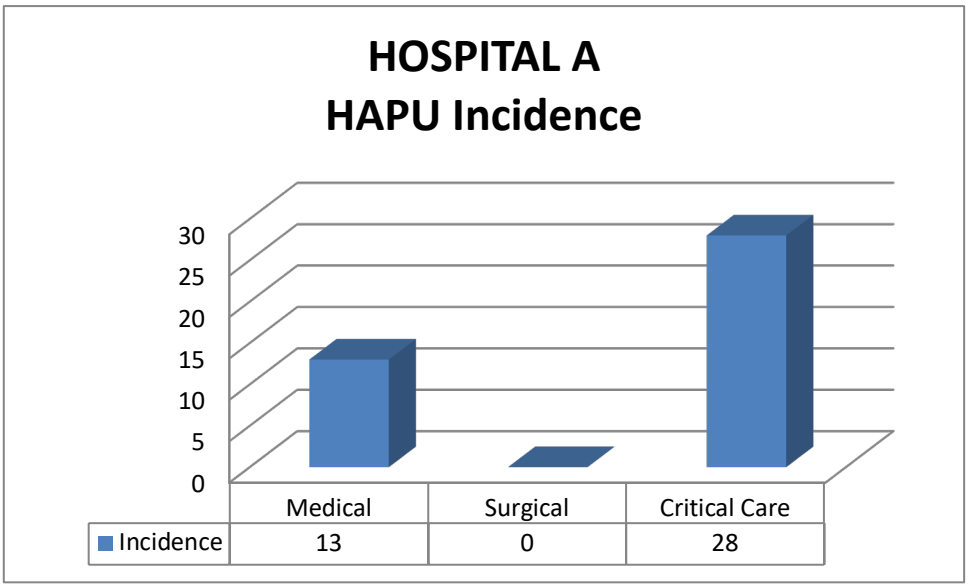
Phase 1

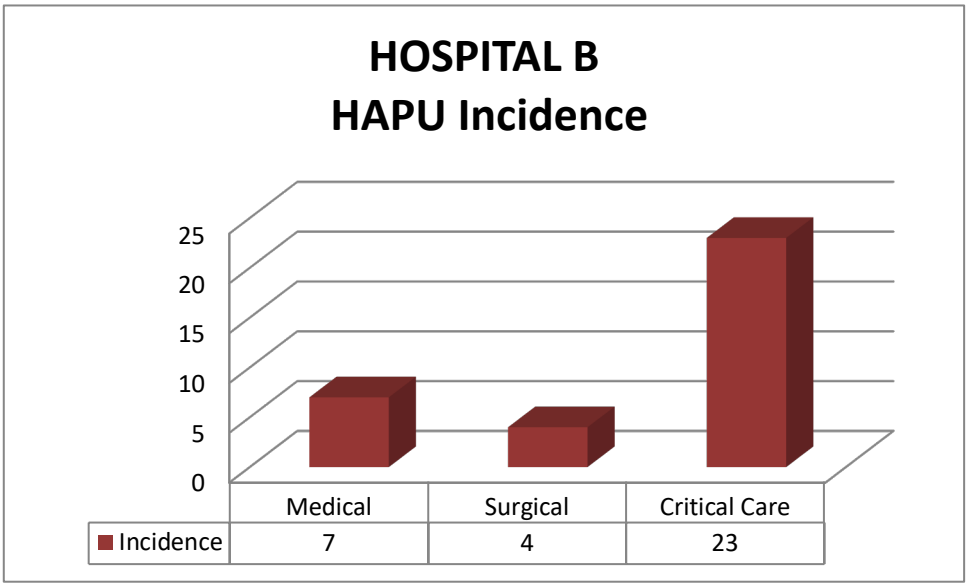





HOSPITAL B
Hand hygiene Compliance
100,00%
98,00%
96,00%
94,00%
92,00%
90,00%
88,00%
86,00%
Medical
Surgical
Paeds
Critical Care
Percentage
96,17%
95,36%
95,58%
91,75%

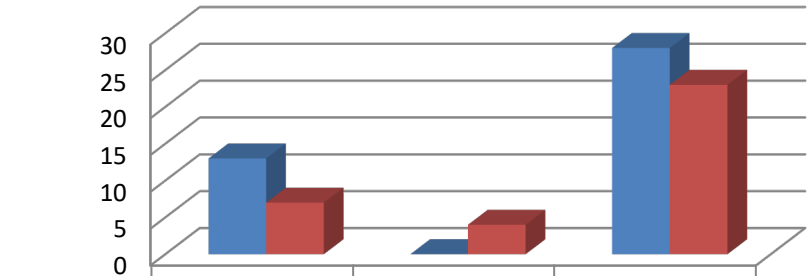

HAND HYGIENE COMPLIANCE
HOSPITAL A and B
100,00%
95,00%
90,00%
85,00%
80,00%
Medical
Surgical
Paeds
Critical Care
Hospital A
85,39%
93,93%
93,00%
90,63%
Hospital B
96,17%
95,36%
95,58%
91,75%


HOSPITAL A
HAPU Incidence
30
25
20
15
10
5
0
Medical
Surgical
Critical Care
Incidence
13
0
28


HOSPITAL B
HAPU Incidence
25
20
15
10
5
0
Medical
Surgical
Critical Care
Incidence
7
4
23

HAPU Incidence

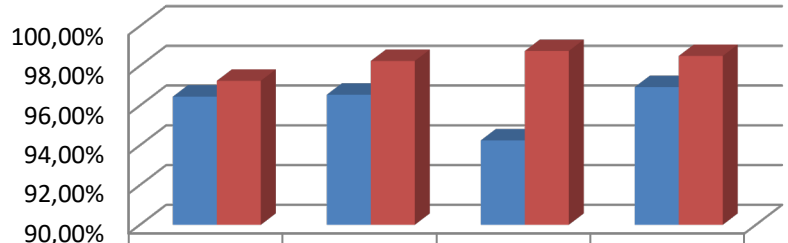
HOSPITAL A and B



	Medical	Surgical	Critical Care
Hospital A	13	0	28
Hospital B	7	4	23

HOSPITAL A and B

Nursing Admission Assessment



	Medical	Surgical	Paeds	Critical Care
Hospital A	96,45%	96,55%	94,25%	96,93%
Hospital B	97,25%	98,25%	98,75%	98,50%

APPENDIX G

Data Analysis Nurse Questionnaire

Phase 2

Correlations Biographical & Culture Data

		Gender	Age	Nationality	Home Language	English Training	English Training Yes	Current Work Area	Position	Years in Position	Education	Own Culture Affect	Patient Culture Affect
Gender	Pearson Correlation	1	0.02	0.039	-0.066	0.045	0.068	0.067	0.003	0.046	-0.074	-0.004	-0.054
	Sig. (2-tailed)		0.685	0.428	0.183	0.36	0.17	0.175	0.957	0.352	0.131	0.928	0.277
	N	413	411	412	410	411	410	412	411	411	413	409	410
Age	Pearson Correlation	0.02	1	-.131**	.193**	-0.056	-.116*	-0.05	-.278**	.590**	-.185**	-0.054	-0.021
	Sig. (2-tailed)	0.685		0.008	0	0.253	0.019	0.313	0	0	0	0.276	0.665
	N	411	414	413	411	412	412	413	412	412	414	410	411
Nationality	Pearson Correlation	0.039	-.131**	1	-.315**	0.011	-0.004	-0.039	0.037	-0.011	-.098*	-0.027	0.011
	Sig. (2-tailed)	0.428	0.008		0	0.821	0.937	0.423	0.456	0.818	0.046	0.58	0.827
	N	412	413	415	412	413	412	414	413	413	415	411	412
Home Language	Pearson Correlation	-0.066	.193**	-.315**	1	-.105*	-.172**	0.041	0.059	0.013	.148**	-.143**	-0.037
	Sig. (2-tailed)	0.183	0	0		0.033	0	0.401	0.233	0.794	0.003	0.004	0.45
	N	410	411	412	413	411	410	412	411	411	413	409	411
English Training	Pearson Correlation	0.045	-0.056	0.011	-.105*	1	.622**	0.03	-.162**	-0.017	0.002	.111*	-0.02
	Sig. (2-tailed)	0.36	0.253	0.821	0.033		0	0.545	0.001	0.735	0.965	0.025	0.687
	N	411	412	413	411	414	411	413	412	412	414	410	411
English Training Yes	Pearson Correlation	0.068	-.116*	-0.004	-.172**	.622**	1	0.029	-.106*	-0.058	-0.025	.101*	-0.018
	Sig. (2-tailed)	0.17	0.019	0.937	0	0		0.554	0.032	0.238	0.613	0.04	0.715
	N	410	412	412	410	411	413	412	411	411	413	409	410
Current Work Area	Pearson Correlation	0.067	-0.05	-0.039	0.041	0.03	0.029	1	-0.087	-0.059	0.019	.137**	0
	Sig. (2-tailed)	0.175	0.313	0.423	0.401	0.545	0.554		0.077	0.228	0.697	0.005	0.998
	N	412	413	414	412	413	412	415	413	413	415	411	412
Postion	Pearson Correlation	0.003	-.278**	0.037	0.059	-.162**	-.106*	-0.087	1	-.152**	-0.081	-.104*	-0.041
	Sig. (2-tailed)	0.957	0	0.456	0.233	0.001	0.032	0.077		0.002	0.102	0.036	0.406
	N	411	412	413	411	412	411	413	414	413	414	410	411

Years in Position	Pearson Correlation	0.046	.590**	-0.011	0.013	-0.017	-0.058	-0.059	-.152**	1	-.235**	-0.034	0.017
	Sig. (2-tailed)	0.352	0	0.818	0.794	0.735	0.238	0.228	0.002		0	0.491	0.726
	N	411	412	413	411	412	411	413	413	414	414	410	411
Education	Pearson Correlation	-0.074	-.185**	-.098*	.148**	0.002	-0.025	0.019	-0.081	-.235**	1	-0.042	-0.018
	Sig. (2-tailed)	0.131	0	0.046	0.003	0.965	0.613	0.697	0.102	0		0.4	0.711
	N	413	414	415	413	414	413	415	414	414	416	412	413
Own Cultur Affect	Pearson Correlation	-0.004	-0.054	-0.027	-.143**	.111*	.101*	.137**	-.104*	-0.034	-0.042	1	.284**
	Sig. (2-tailed)	0.928	0.276	0.58	0.004	0.025	0.04	0.005	0.036	0.491	0.4		0
	N	409	410	411	409	410	409	411	410	410	412	412	410
Patient Culture Affect	Pearson Correlation	-0.054	-0.021	0.011	-0.037	-0.02	-0.018	0	-0.041	0.017	-0.018	.284**	1
	Sig. (2-tailed)	0.277	0.665	0.827	0.45	0.687	0.715	0.998	0.406	0.726	0.711	0	
	N	410	411	412	411	411	410	412	411	411	413	410	413

1. BIOGRAPHICAL DATA

Statistics

		Gender	Age	Nationality	Home Language	English Training	English Training place	Current Work Area	Position	Years in Position	Education	Own Culture Affect	Patient Culture Affect
N	Valid	414	414	415	413	414	413	415	414	414	416	412	413
	Missing	2	2	1	3	2	3	1	2	2	0	4	3

One-Sample Statistics

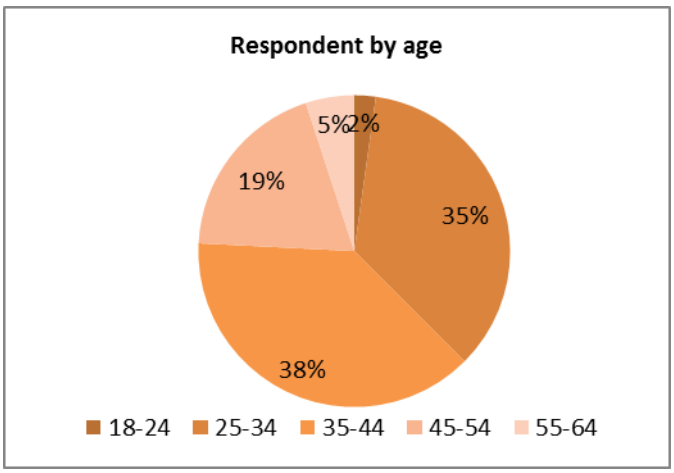
	N	Mean	Std. Deviation	Std. Error Mean
Age	414	2.8937	.90909	.04468
Gender	413	1.8547	.51029	.02511
Nationality	415	4.4337	5.24334	.25739
CWA	415	3.8627	2.39018	.11733
Postion	414	1.8478	.43850	.02155
ETY	413	3.8983	1.37570	.06769
YearsP	414	2.1473	1.03920	.05107
Education	416	1.8438	.53061	.02602
CulturA	412	1.2112	.40863	.02013
CulturePA	413	1.1792	.38397	.01889

Gender (N=416)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	67	16.1	16.2	16.2
	Female	345	82.9	83.5	99.8
	Total	413	99.3	100.0	
Missing	System	3	.7		
Total		416	100.0		

Age (N=416)

		n	F=%	Valid Percent	Cumulative Percent
Valid	18-24	9	2.2	2.2	2.2
	25-34	147	35.3	35.5	37.7
	35-44	158	38.0	38.2	75.8
	45-54	79	19.0	19.1	94.9
	55-64	21	5.0	5.1	100.0
	Total	414	99.5	100.0	
Missing	System	2	.5		
Total		416	100.0		



Gender and Age* of Nurses (N=416)

	Age	F
Female	18-24	8
n=345	25-34	113
	35-44	139
	45-54	64
	55-64	20
Male	18-24	1
n=67	25-34	32
	35-44	17
	45-54	15
	55-64	1

Home Language (N=416)

		n	Percent = f	Valid Percent	Cumulative Percent
Valid	ARABIC	73	17.5	17.7	17.7
	ENGLISH	24	5.8	5.8	23.5
	AFRIKAANS	5	1.2	1.2	24.7
	GERMAN	1	.2	.2	24.9
	POLISH	1	.2	.2	25.2
	URDU	12	2.9	2.9	28.1
	MALAYLAM	109	26.2	26.4	54.5
	SWAHAILI	3	.7	.7	55.2
	TAGALOG	165	39.7	40.0	95.2
	TAMIL	4	1.0	1.0	96.1
	HINDI	10	2.4	2.4	98.5
	BULGARIAN	1	.2	.2	98.8
	BENGALI	2	.5	.5	99.3
	BAHASSA INDONESIAN	1	.2	.2	99.5
	Total	413	99.3	100.0	
Missing	System	3	.7		
Total		416	100.0		

Nationality of Nurses (N=416)

Nationality	n	f=%
JORDANIAN	21	5.05
PHILIPINE	164	39.42
INDIAN	155	37.25
SOUTH AFRICAN	9	2.16
EMIRATI	6	1.44
MALAYSIAN	1	.2
BRITISH	4	.96
GERMAN	1	.2
PAKISTANI	2	.24
SYRIAN	1	.2
EGYPTIAN	3	.72
PALESTINIAN	14	3.36
LEBANON	2	.48
SOMALIA	12	3.36
SUDANI	6	1.44
BANGLADESHI	3	.72
OMANI	5	1.2
SEYCHELLES	1	.2
AUSTRALIAN	1	.2
INDONESIAN	3	.72
BULGARIAN	1	.2

Language Spoken by the Nurses (N=416)

LANGUAGE	n	f=%
ARABIC	73	17.54
ENGLISH	24	5.76
AFRIKAANS	5	1.2
GERMAN	1	.24
POLISH	1	.24
URDU	12	2.88
MALAYLAM	109	26.2
SWAHAILI	3	.72
TAGALOG	165	39.66
TAMIL	4	.96
HINDI	10	2.40
BULGARIAN	1	.24
BENGALI	2	.48
BAHASA INDONESIAN	1	.24

English Training (N=416)

		n	Percent=f	Valid Percent	Cumulative Percent
Valid	Yes	221	53.1	53.4	53.4
	No	193	46.4	46.6	100.0
	Total	414	99.5	100.0	
Missing	System	2	.5		
Total		416	100.0		

Place English Training Received (N=416)

		N	f=%
Valid	Home language	2	.5
	School	118	28.4
	Nursing School	29	7.0
	Country	53	12.7
	Training Centre English	18	4.3
	Total	413	99.3
	Missing System	3	.7
Total		416	100.0

Nurses Position in Unit (N=416)

		n	f=%
Valid	Charge Nurse	76	18.3
	Staff Nurse	338	81.2
	Total	414	99.5
	Missing System	2	.5
	Total	416	100.0

Nurses Years of Experience (N=416)

	n	f=%
1-5 YRS	142	34.1
6-10 YRS	123	29.6
11-15 YRS	96	23.1
16 YRS & ABOVE	52	12.5
Total	414	99.5
Missing System	2	.5
Total	416	100.0

Nursing Education (N=416)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DIPLOMA	94	22.6	22.6	22.6
	BSN	295	70.9	70.9	93.5
	MSN	25	6.0	6.0	99.5
	OTHER	2	.5	.5	100.0
	Total	416	100.0	100.0	

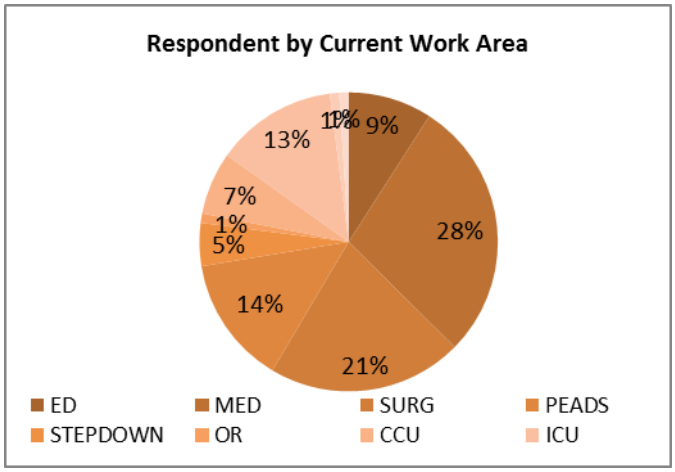
Nurse Respondent Highest Nursing Qualifications (N=416)

	n	f=%
BSN	295	70.9
DIPLOMA	94	22.6
MSN	25	6.0
Missing System	2	.5
Total	416	100.0

Current Work area (N=416)

Current Work Area		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ED	39	9.4	9.4	9.4
	MED	117	28.1	28.2	37.6
	SURG	87	20.9	21.0	58.6
	PEADS	57	13.7	13.7	72.3
	STEPDOWN	19	4.6	4.6	76.9
	OR	5	1.2	1.2	78.1
	CCU	28	6.7	6.7	84.8
	ICU	55	13.2	13.3	98.1
	MATERNITY	4	1.0	1.0	99.0
	Psychiatry	4	1.0	1.0	100.0
	Total	415	99.8	100.0	
Missing	System	1	.2		
Total		416	100.0		

Unit/Specialty		Yes	No
ED	39	15	24
Medical	115	70	45
Surgical	87	46	41
Pediatric	57	43	14
Step down	19	13	6
OR	6	0	6
CCU	28	11	17
ICU	55	23	32
Telemetry	4	2	2
Psychiatry	4	1	3



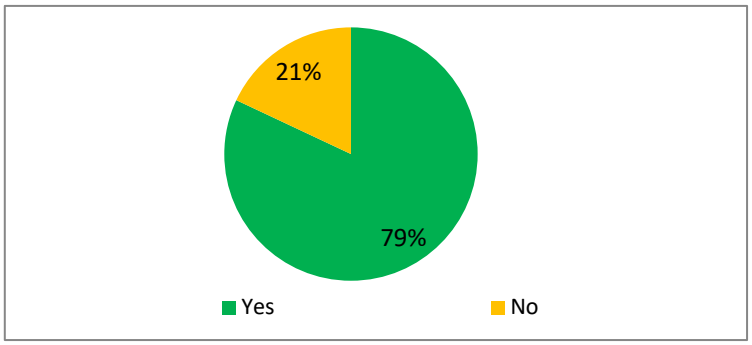
2. CULTURE

2.1 Culture of Nurses and Patient Safety

Nurse Culture Affect Patient Safety (N=416)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	325	78.1	78.9	78.9
	No	87	20.9	21.1	100.0
	Total	412	99.0	100.0	
Missing	System	4	1.0		
Total		416	100.0		

Culture Effect Patient Safety (N= 412)



Gender * Culture Affect Cross Tabulation (N= 408)

		Culture Affect patient safety				
		Yes	Yes	No	No	
		n	f=%	n	f =%	Total
Gender	Male	54	80.5%	13	19.5%	67
	Female	268	79%	73	21%	341
Total		322		86		408

Reason Nurse Culture to Affect Patient Safety

Theme	**Direct quotes underpinning theme**
(1) Respect for diverse culture	"*my own culture enabled me to understand and respect the values and traditions of the country*"
(2) Care and compassion	'*my culture enabled me to support, and care for patients as it is the core principles of nursing'*
3) Safety and Quality	'*my culture will lead to improved safety and quality because my specific culture should not affect patient safety negatively'*
(4) Improved Patient Interactions.	'*my culture enabled me to communicate better with my patients'*

Nurse Culture does not affect patient safety

Theme	**Direct quotes underpinning the theme**
Gender preferences for patient care	'*gender is not a problem as females can care for both males and females'* *'we are assigned to male patients only'*
Culture sensitivity	*'I need to respect cultures as part of being a nurse'* *'caring and respects allows you to care for other nationalities also'* *'I am from the same culture as the patients'*

	'If oriented on different cultures then it helps you to care for them'
Prescribed Safety Standards	'*By complying with hospitals quality and safety standards patient safety cannot be affected'* *''in nursing we follow standards of care'*

2.2 Culture of Patient and Patient Safety

Patient's Culture Affect Patient Safety (N=416)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	339	81.5	82.1	82.1
	No	74	17.8	17.9	100.0
	Total	413	99.3	100.0	
Missing	System	3	.7		
Total		416	100.0		

Patient's Culture Affect Patient Safety (N=416)

	n	f=%
Yes	339	81.5
No	74	17.8
Total	413	99.3
Missing System	3	.7
Total	416	100.0

Gender * Patient Culture Affect Cross tabulation (N=410)

		Patient Culture Affect Patient Safety				
		Yes	Yes	No	No	
		N	f=%	n	f=%	Total
Gender	Male	52	77.6%	15	22.4%	67
	Female	284	83%	58	17%	342
Total		337		73		410

Gender * Position Cross tabulation (N=411)

Count					
		Position			
		CN	SN	Other	Total

		Patient Culture Affect Patient Safety				
		Yes	Yes	No	No	
		N	f=%	n	f=%	Total
Gender	Male	52	77.6%	15	22.4%	67
	Female	284	83%	58	17%	342

Gender	Male	11	53	2	66
	Female	63	270	11	344
Total		74	324	13	411

Reasons why Patient Culture Affects Patient Safety

Theme	**Direct quotes underpinning the theme**
Gender sensitivity	*'gender is a problem as male patients do not want a female nurse to nurse them and similar approach for male nurses looking after female patients'* *'the segregation of male from female as practiced in this country according to their religion needs to be followed thus creating a safe environment for female population'*
Disrespect for nurses	*'we respect patients, but they treat us not nice when we ask them to comply with treatment'* *'patients still view nurses as maids'* *'we often get screamed at by patients calling us bad names'*
Cultural values and believes affecting care and treatment	*'patient's attitude about medical care and sometimes their ability to understand and cope with the illness affects the level of providing care'* *'we spend a lot of time to explain the care required and as a result of cultural beliefs they still don't comply'* *'patients want to use their traditional medicine and therapies with regular medicine even when a doctor informed them it is not safe to do so'*
Communication challenges	'*patients don't understand us very clearly"* *'we can only inform some members of the family about a patient diagnosis and prognosis because in Arabic culture healthcare professionals and nurses are not allowed to communicate directly with female patient but with husband or a male family member'*

Training received on Culture

Theme	Direct quotes underpinning the theme
Program content	"*I was given basic Arabic Phrases to communicate with Arabic patients, but not other languages'* *'I had an orientation program in which they explained well about the tradition, values, and beliefs of people here and how to follow that'* *'I was informed what gestures not to use in this culture'* *'cultural beliefs like wearing full covered dress when we come to hospital. Ramadan timing - we need to co-operate with the Arab culture and what to do and not to do'* *'dress code in the Muslim country'* *'how to manage patients from different cultures'* *'in general orientation that we need to ensure that patient understand their rights and responsibilities'* *'patient has right to refuse treatment'*

Culture Training and the effect on Culturally Congruent Care

Theme	Direct quotes underpinning the theme
Interaction and communication	*"it provided us the information to interact with our patients in proper way'* *'the basic Arabic phrases helped greeting patients in their language'*
Knowledge of diverse cultural needs	*'it helped us to respect the patient and their culture even if different than ours'* *'we could deal with patients the way they need us to'* *'we understood that during Ramadan, patient routines change as patients fast during the day even if they are ill'* *'it released tension among patients and nurses as for us to provide safe care'* *'working with different nationalities in the hospital helped me a lot in improving my care to my patients. I have learned to create an effective safety culture and a positive attitude and safety, thus reducing incident'*

3. PATIENT SAFETY

Correlations Patient Safety Data

		NAY	NAK	NAKW	NMC	NA24	FI	PF	HAPU	HAPUS	HH5	HHG
NAY	Pearson Correlation	1	0.078	0.017	.141**	0.071	-0.014	-0.007	0.003	0.019	-0.012	-0.05
	Sig. (2-tailed)		0.116	0.74	0.004	0.154	0.775	0.889	0.953	0.7	0.807	0.313
	N	413	410	389	411	406	405	413	412	410	403	410
NAK	Pearson Correlation	0.078	1	-.466**	0.022	-0.047	-0.003	.154**	0	.126*	0.021	-0.004
	Sig. (2-tailed)	0.116		0	0.652	0.347	0.95	0.002	0.987	0.011	0.668	0.938
	N	410	413	389	411	407	405	413	411	410	403	410

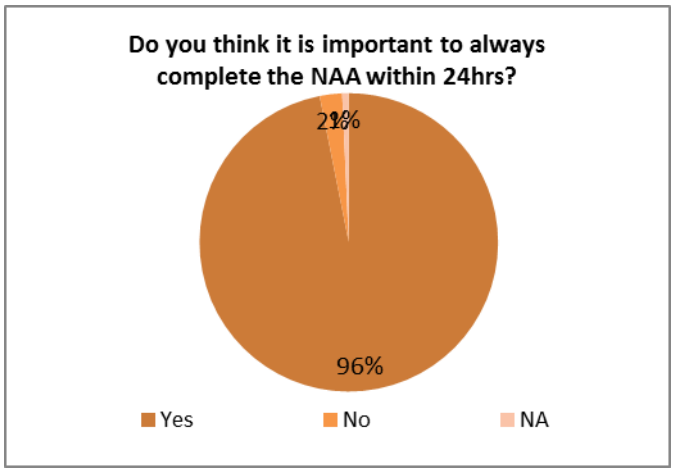
NAKW	Pearson Correlation	0.017	-.466**	1	-0.073	0.049	0.033	0.07	0.064	-0.037	0.002	-0.038
	Sig. (2-tailed)	0.74	0		0.15	0.333	0.514	0.165	0.211	0.465	0.972	0.459
	N	389	389	391	390	389	384	391	389	388	383	390
NMC	Pearson Correlation	.141**	0.022	-0.073	1	-0.009	-0.006	-0.064	-0.027	-0.036	-0.005	0.04
	Sig. (2-tailed)	0.004	0.652	0.15		0.863	0.903	0.193	0.586	0.47	0.921	0.417
	N	411	411	390	414	408	406	414	412	411	404	411
NA24	Pearson Correlation	0.071	-0.047	0.049	-0.009	1	-0.011	0.01	0.084	-0.063	-0.009	-0.069
	Sig. (2-tailed)	0.154	0.347	0.333	0.863		0.831	0.842	0.092	0.206	0.861	0.162
	N	406	407	389	408	409	403	409	408	407	399	407
FI	Pearson Correlation	-0.014	-0.003	0.033	-0.006	-0.011	1	0.092	-0.002	-0.045	-0.006	0.05
	Sig. (2-tailed)	0.775	0.95	0.514	0.903	0.831		0.063	0.968	0.371	0.902	0.312
	N	405	405	384	406	403	408	408	406	405	401	406
PF	Pearson Correlation	-0.007	.154**	0.07	-0.064	0.01	0.092	1	0.007	0.058	0.006	-0.077
	Sig. (2-tailed)	0.889	0.002	0.165	0.193	0.842	0.063		0.88	0.239	0.911	0.118
	N	413	413	391	414	409	408	416	414	413	406	413
HAPU	Pearson Correlation	0.003	0	0.064	-0.027	0.084	-0.002	0.007	1	.106*	-0.027	0.056
	Sig. (2-tailed)	0.953	0.987	0.211	0.586	0.092	0.968	0.88		0.032	0.59	0.257
	N	412	411	389	412	408	406	414	414	412	404	411
HAPUS	Pearson Correlation	0.019	.126*	-0.037	-0.036	-0.063	-0.045	0.058	.106*	1	-0.037	-0.037
	Sig. (2-tailed)	0.7	0.011	0.465	0.47	0.206	0.371	0.239	0.032		0.462	0.449
	N	410	410	388	411	407	405	413	412	413	404	411
HH5	Pearson Correlation	-0.012	0.021	0.002	-0.005	-0.009	-0.006	0.006	-0.027	-0.037	1	0.04
	Sig. (2-tailed)	0.807	0.668	0.972	0.921	0.861	0.902	0.911	0.59	0.462		0.417
	N	403	403	383	404	399	401	406	404	404	406	404
HHG	Pearson Correlation	-0.05	-0.004	-0.038	0.04	-0.069	0.05	-0.077	0.056	-0.037	0.04	1
	Sig. (2-tailed)	0.313	0.938	0.459	0.417	0.162	0.312	0.118	0.257	0.449	0.417	
	N	410	410	390	411	407	406	413	411	411	404	413
**. Correlation is significant at the 0.01 level (2-tailed).												
*. Correlation is significant at the 0.05 level (2-tailed).												

FREQUENCIES:

3.1. Nursing Admission Assessment (NAA)

Importance of completing NAA within 24-hour period (N=417)

	n	f=%
Yes	400	95.9
No	10	2.4
NA	3	.7
Total	413	99.0
System	4	1.0
Total	417	100.0



Reasons for not been able to complete NAA

Theme	Direct quotes underpinning the theme
Patient related aspects	*'example patient coming in middle of the night when in the room they prefer to go to sleep how can we do the nursing admission assessment unless there is somebody with them that knows the patient (on admission some patients settled in bed and then they prefer to sleep rather than give information for the nursing assessment)'* *'most of the children or patient coming for admission with maid or driver and most of the time patient will be lethargic and cannot give the details. And, maid and driver also did not know patient's or child's details. And family will come after long time and days (the nannies escort kids into hospital and often don't have the relevant health history required for nursing assessment)'*
Staffing related aspects	*'was busy and the patient's acuity was high, so I was unable to complete the nursing assessment'* *'I had six patients assigned to me and 2 new admissions so difficult to do all the work'* *'to much workload on the bedside and high demands from patient. Too much*

	acuity or high acuity patient came late, and nurse has no more time to document'
Knowledge deficit	*'this (nursing) assessment is to lengthy and does not apply to us'* *'we don't need all the information in the nursing admission assessment'*
Language barriers	'*the patients are unable to understand, and no translator is available to get the information (difficult for patients to communicate due to language difficulty)'* *'there are some things/issues that you will find out along with your care that you may need to amend your previous entry. Sometimes the person you are interviewing may not give you the exact or correct information, when you find out the correct information after 24 hours then if you amend it, the audits will say it is not done right (often patients do not provide accurate information about health history)'*

Motivation to complete NAA within 24-hr timeframe

Theme	Direct quotes underpinning the theme
Development of the nursing care plan	*'it aids in the development of an appropriate care plan for the patient'* *'the assessment included the patient history which includes: allergies, medical, surgical and psychosocial history to develop care plan'*
Ensure patient safety	*'to ensure understand safety concerns that might affect treatment (identify from the patient their health history to determine the appropriate care and support required for patient care)'* *'it is easy for nurse's workflow and proper communication among nurses (allow continuity of care among caregivers)'*
Compliance with hospital policy	*'to ensure we are following hospital policy'* *'it's required elements in the policy' (the nursing assessment fields are built into the electronic medical system)*

Motivation to do Nursing Assessment in Timeframe (n=385)

Responses	**Number of comments**
Provide care plan	266
For patient safety	115
Identify needs	101
Hospital policy	100
Proper patient history	63
Changes in condition	42
Presenting Problem	33

Suggestions required completing NAA within 24-hour timeframe

Theme	Category	Direct quotes underpinning the theme
	Adequate Staffing	*'need to reduce the workload as we have heavy (high acuity) patients assigned to us and unable to cope (manage)'* *'proper nurse: patient ratio'*

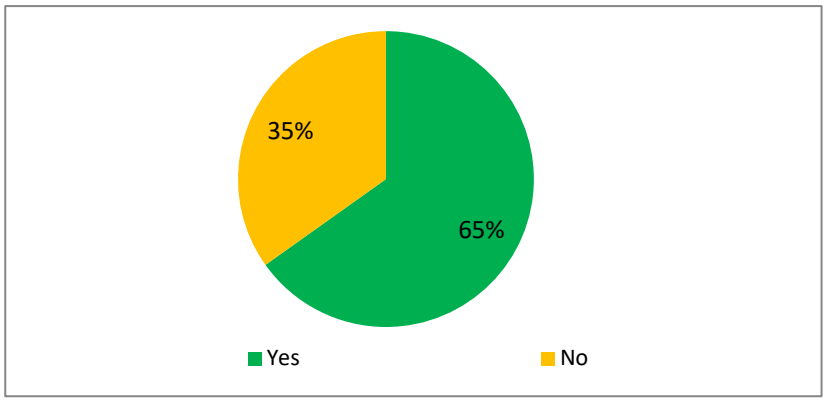
Process	Communication Barriers	*'ensure sufficient (translator resource adequacy) translators on duty even during night shift'* *'sometimes the patient is from country and we have no one able to translate (provide translator services to support translating care concerns from patient's whose language is not supported within hospital translation resources)'*
System Issues	Electronic Medical Record connectivity	'*the system is slow, and signal often lost if go into patient rooms (improve internet connectivity to allow real time documentation without interruptions)'* *'we don't have enough computers on wheels as the batteries not working'*

Recommendations by nurses to improve NAA completion

Theme	Category	Direct quotes underpinning the theme
Process	Realistic workload	*'with a proper nurse-patient ratio, nurses will have ample time to complete NAA in the timeframe required'* *'there is not enough nurse and that mean not enough time to complete my assessment and PRO (patient relation officer) to solve problems'*
System	Improve functioning of Electronic Medical Record (EMR)	*'if EMR faster it will allow us to complete in timely fashion (if internet connectivity works well then real time documentation of assessment would not be affected)'* *'a good working EMR will help assessing all the assessment elements to get care plan (the workflow for the documentation of assessment in electronic medical record will aide in conducting assessment within timeframe)'*

Do you know how well your team is performing with regards to completing Nursing Admission Assessment?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	269	64.5	65.1	65.1
	No	144	34.5	34.9	100.0
	Total	413	99.0	100.0	
Missing	System	4	1.0		
Total		417	100.0		



Team Performance on NAA Completion (N=412)

If you are not aware how team is performing Nursing Admission Assessment completion, do you want to know about it?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	182	43.6	46.5	46.5
	No	40	9.6	10.2	56.8
	NA	169	40.5	43.2	100.0
	Total	391	93.8	100.0	
Missing	System	26	6.2		
Total		417	100.0		

If not Aware, reasons why nurses should be aware of NAA performance (n=150)		
comments	**Number of comments**	**Percentage**
Identify areas of improvement	193	49.3%
Complete my part on the process	12	3.06%
Identify mistakes to correct	51	3.04%
Find solutions for gaps	31	8%
Important for continuity of care	20	5.1%

Importance of completing NAA within timeframe

Theme	Direct quotes underpinning the theme
Identification of areas for improvement	'*it shows us what we have missed in our initial assessment on admission'* *'Policy indicates that in case not completed by the admitting nurse, the nurse on next shift should complete the assessment.*

	It is important for the continuity of care' *'as I am part of the audit team, I understand the value of completing the assessment within timeframe as so if gap identified we use the quality tool PDCA (Plan, Do, Check, Act) for corrective actions to improve'*

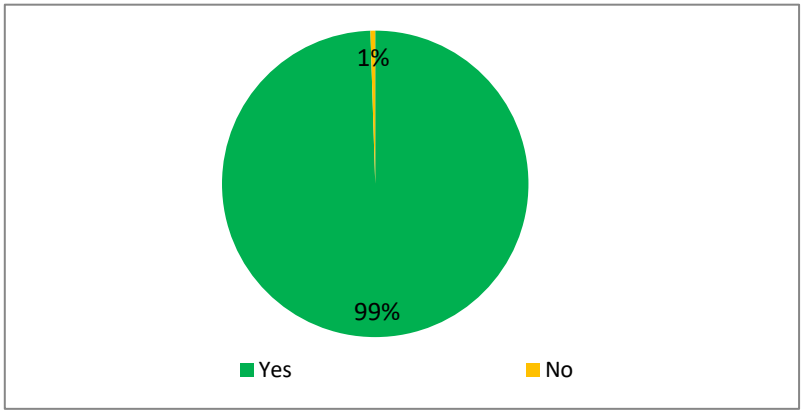
Do nurses want to know about NAA Compliance of their team (N=417)

	n	f=%
Yes	182	43.6
No	40	9.6
Not Applicable	169	40.5
Total	391	93.8
Missing System	26	6.2

Do you think the nurse manager should communicate compliance issues with the team?(N=417)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	412	98.8	99.5	99.5
	No	2	.5	.5	100.0
	Total	414	99.3	100.0	
Missing	System	3	.7		
Total		417	100.0		

Nurse Manager to Share Compliance Data (N=414)



Reasons for Nurse Manager to share compliance data NAA (N=228)

Responses	Number of comments = F
Identify areas of improvement	162
Maintain good standard	120
Improve quality of care	89
Identify the needs of patients	81
Identify gaps in practice	68
Check elements of patient care	56
Develop a care plan	54
Compliance with policy	43
Important for the continuity of care	38
Identify Team needs	23
Total	**734**

Description how Nurse Manager share compliance data NAA

Theme	Category	Direct quotes underpinning the theme
Timing	During Ward Meetings	*'in our charge nurse meetings'* *'in monthly unit meetings'*
	During Shift Handover	*'during our safety debrief meetings (huddles)'* *'during shift change'*
	During Performance Evaluations	*'during our annual (performance) appraisal'*
	During manager Rounding	*'during rounding on staff'* *'face to face when they identify issues'*
Medium	Written	*'through our emails'* *'just place it on the notice boards no discussions'*
	Verbally	*'tell (inform) us when the audits completed'*

Recommendation in How Nurse Manager should share compliance data NAA (N=243)

Theme	Direct quotations underpinning the theme	Number of comments =F
Timing (where and when)	*'to conduct audit and routine tracers'*	95
	'place information on quality boards'	94
	'to update us during handover'	68
	'to provide advanced workshops'	67
	'during daily rounds in the unit'	48
Manner (How)	*'nurse manager to follow a polite and supportive culture'*	155
	'provide awareness training (on) Hospital policies and procedures'	120
	'by involving the nurses'	94
	'follow a Just culture of openness when managing us'	78

Do you think it is important to complete the Nursing Admission Assessment within 24 hour period? (N=417)

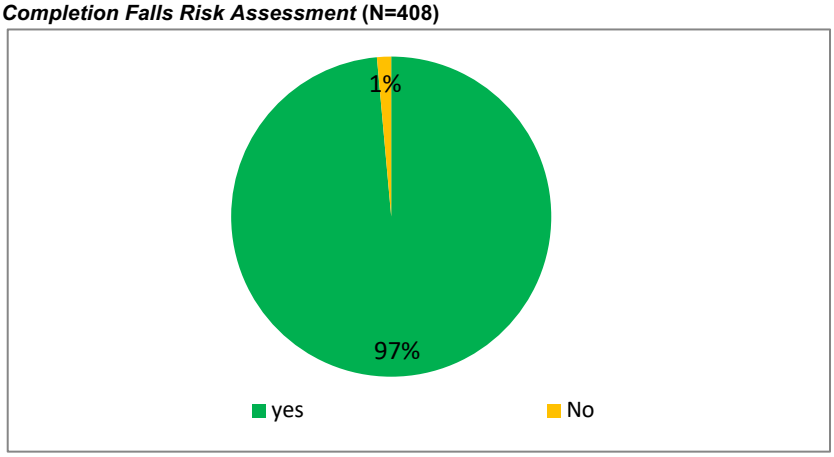
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	403	96.6	98.5	98.5
	No	6	1.4	1.5	100.0
	Total	409	98.1	100.0	
Missing	System	8	1.9		
Total		417	100.0		

Importance of completing NAA

Theme	Direct quotes underpinning the theme
Availability of Baseline Data	*'to have baseline data to compare patient progress (on treatment and care provided)'* *'for care plan coordination (with interdisciplinary team)'*
Improve Patient Care	*'to improve the (nursing) care that we provide'* *'continuity of patient care'* *'compliance with hospital policies and standards'* *'improve patient safety'*

3.2. Falls Risk Assessment

Completion Falls Risk Assessment **(N=408)**



Completion Falls Risk Assessment (N=417)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	405	97.1	99.3	99.3
	No	3	.7	.7	100.0
	Total	408	97.8	100.0	
Missing	System	9	2.2		
Total		417	100.0		

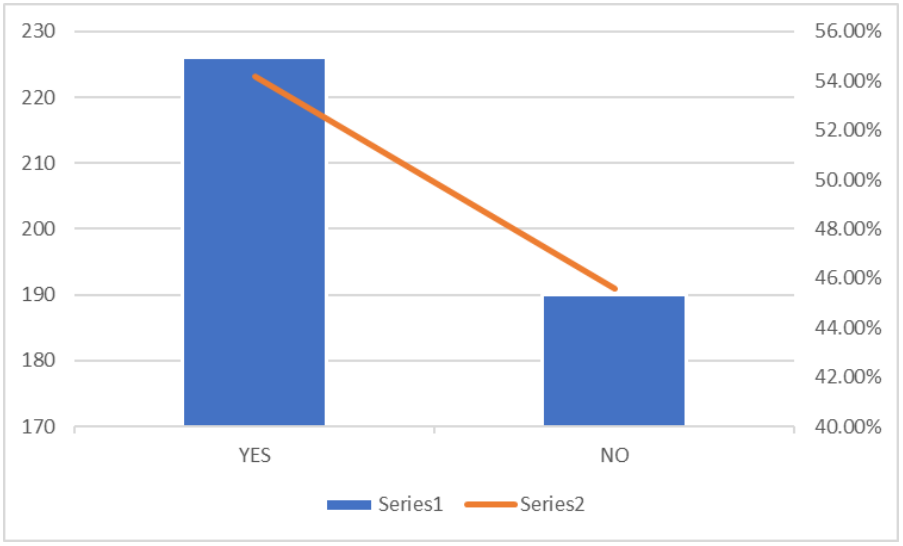
When is Falls Risk Assessment conducted (N=414)

Theme	Direct Quotes underpinning theme	Number of comments = F
Incorrect falls assessment	*'On Admission'*	391
	'Every shift'	384
	'Change in medication'	312
	'Change in patient condition'	226
	'Patient transfer'	124
	'After sedation or surgery'	97
Correct Falls Risk Assessment Process	*'On admission, every shift, when patient falls, patient transfer, after surgery and sedatives, after a fall and change in patient condition'*	110
	Total	**1644**

Safety Devices for Falls Prevention (N=396)

Type of safety devices	Number of comments =F
Side rails up	221
Visual Cues (High risk signs and armband)	140
Call bell and possessions within reach	122
Non-slippery floors (no wet floors) and environment free of clutter	86
Falls Risk Assessment and policy	78
Bed brakes secured	74
Bed at lowest	67
Hourly Rounding	65
Lighting in room adequate	58
Patient and sitter education	50
Mobility Aides	35
Total	**935**

Is there Patient Falls on Unit (N=416)



Is there patient falls on your unit?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	226	54.2	54.3	54.3
	No	190	45.6	45.7	100.0
	Total	416	99.8	100.0	
Missing	System	1	.2		
Total		417	100.0		

Reasons for Patient Falls

Theme	Direct quotes underpinning the theme
Patient Condition	*'patient's mental status (behavioural condition) resulted him to fall'* *'patient non-compliance to our education (about not standing up alone)'* *'mother left child alone on bed (unattended with the side rails down)'*
Lack of Falls Training	*'falls cannot be predicted for all (even if proper falls risk assessment done patient do fall)'* *'lack of training'*

Measures to prevent Patient Falls

Theme	Direct quotes underpinning the theme
Adequate Staffing	*'we are short of staff and acuity often not allowing to prevent falls (short staffing and high patient acuity prevent us to not be more proactive to prevent patient falls)'* *'to many patients assigned to one nurse every shift and unable to care for patient safely'*
Falls Prevention Education	*'sitter (family member or aide in room) involvement in falls prevention training'*

	'educating the cleaners to clean more frequently bathrooms to ensure floors not wet (increase the cleaning of bathrooms to ensure no wet floors)'

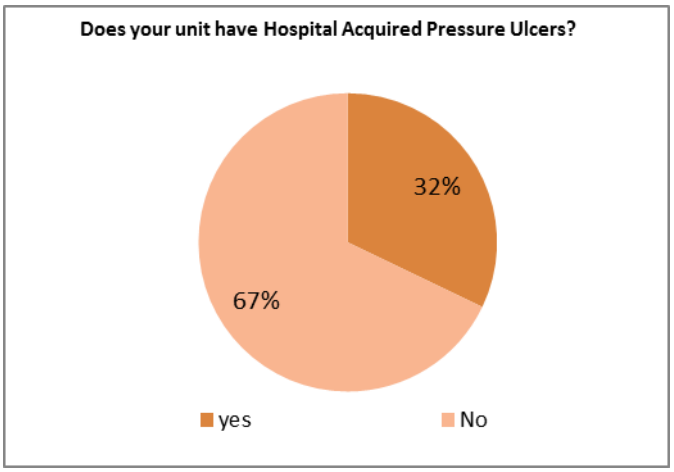
3.3. Hospital Acquired Pressure Ulcers (HAPU)

Use of Skin Integrity Assessment to prevent HAPU (N=366)

Theme	Direct Quotes underpinning the theme	Number of relevant responses = F
Assessing the Braden Risk Elements	'*we assess the sensory, moisture, mobility, activity, nutrition, friction and shear'*	233
	'we check this on admission assessment (when patient admitted to the ward)'	301
Multiple Factors (not part of Braden Risk Elements)	*'we provide patient education'*	127
	'using proper prevention equipment'	73
	'to do the hourly rounding'	61
	'attending pressure ulcer staging education'	40
	Total	**835**

Does your unit have Hospital Acquired Pressure Ulcers (N= 417)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	133	31.9	32.1	32.1
	No	281	67.4	67.9	100.0
	Total	414	99.3	100.0	
Missing	System	3	.7		
Total		417	100.0		



Does Patient's in units have HAPU? (N=414)

	n	f=%
Yes	133	31.9
No	281	67.4
Total	414	99.3
Missing System	2	.7
Total	416	100.0

How to prevent patients developing HAPU?

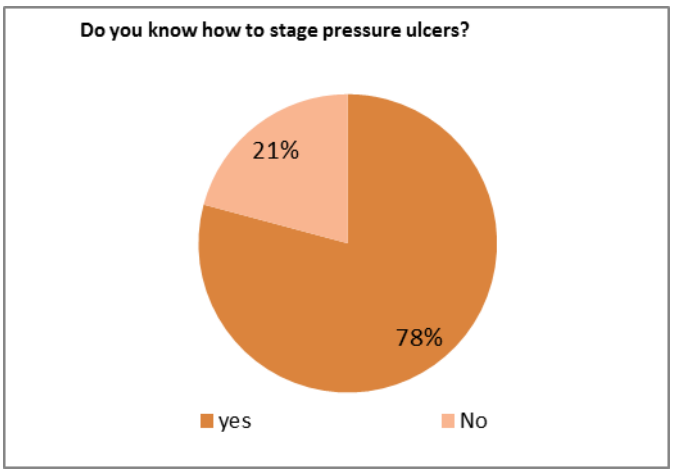
Themes Preventative measures	Number of responses =F
Skin Risk Assessment	87
Nutrition assessment & Support	21
Position changes	101
Support surface through pressure reduction resources	31
Total	**240**

Frequency for Skin Risk Assessment (N=358)

Frequency – Direct Quotes	Number of responses = F
On Admission	104
Every shift	265
Change in patient condition	98
Before transfer to another unit	42
Total	**509**

Ability to stage pressure ulcers (N=417)

		n	f=%
Valid	Yes	327	78.4
	No	86	20.6
	Total	413	99.0
Missing	System	4	1.0
Total		417	100.0

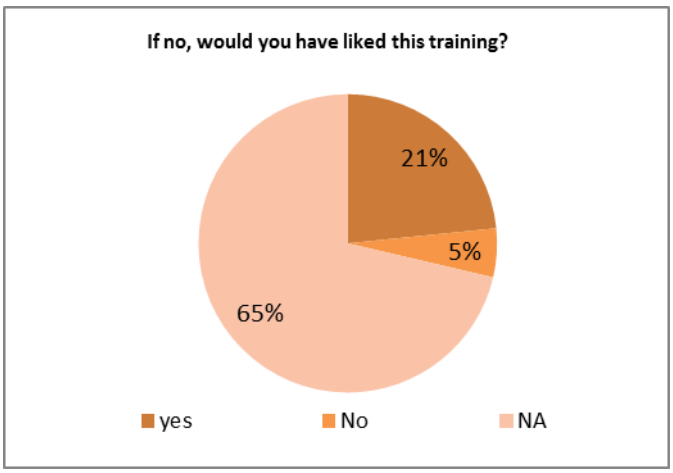


When was Pressure Ulcers Staging Training received? (N=242)

Time frames: Direct Quotes	Number of relevant responses = F
'Part of the Curriculum during their general nurse training'	142
'During Orientation'	162
'During Annual Performance Evaluation'	91
'During Awareness Workshops'	23
Total	**418**

Training needed if not received on Staging Pressure Ulcers (N= 417).

		n	f=%
Valid		1	.2
	Yes	89	21.3
	No	20	4.8
	Not Applicable	271	65.0
	Total	417	100.0



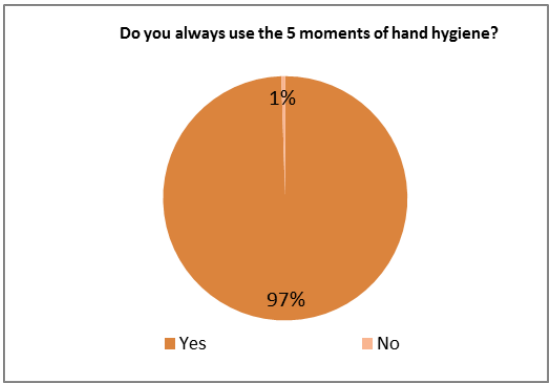
Measures to Prevent Pressure Ulcers

Prevention Strategy	Total Number of responses =F
Skin Risk Assessment (a well as assessing temperature, pain & edema)	211
Nutritional assessment and dietary supplements	150
Position Changes	235
Managing Moisture & Friction	80
Continence Management	40
Using protective barriers	35
Support surfaces (pressure reduction resources)	185
Total	936

3.4. Hand Hygiene (HH)

Nurses always use the '5' moments of hand hygiene (N=406)

	n	f=%
Yes	404	96.9
No	2	.5
Total	406	97.4
Missing System	11	2.6
Total	417	100.0



Nurses` explanation of the '5' Moment of Hand Hygiene (n=374).

Direct Quotes as categories	Responses = F
The moment before touching a patient	220
Before performing aseptic and clean procedures	190
After being at risk of exposure to blood and body fluids	190
After touching a patient	220
Touching a patient's surroundings	190
Total	1010

Reasons Unable to do proper Hand Hygiene

Theme	Direct quotes underpinning the theme
Lack of hand hygiene resources	*'not enough hand basins in between patient rooms'* *Not enough paper towels to dry hands'*
Staff shortages	*'we have to many patients allocated and unable to complete task'* *'multiple care activities (patient allocations not equally distributed and unable to complete workload)'*
Reactions to cleaning agents	*'the hand hygiene agents cause skin lesions and irritations'* *'allergic to the hand hygiene agents'*

Nurses explanation of the HH Compliance Rate (n=323)

Theme	Direct Quotes underpinning the theme	Responses =F
Numerical Description	*'we are between 80%/85%with HH compliance'*	21
	'our unit HH are between 90%-99%'	14
	'our HH compliance rate is 100%'	9
Word Description	*'we are compliant in our HH practices'*	50
	'our HH practices are average'	30
	'our HH compliance rate is excellent'	21
	'our HH compliance rate is good'	91
	'HH compliance rate is satisfactory'	61
	'our HH compliance rate is very good'	37
	'I am not sure what our HH compliance rate is'	18
Total		**413**

Enforce Hand Hygiene Among Healthcare Professionals (n=366)

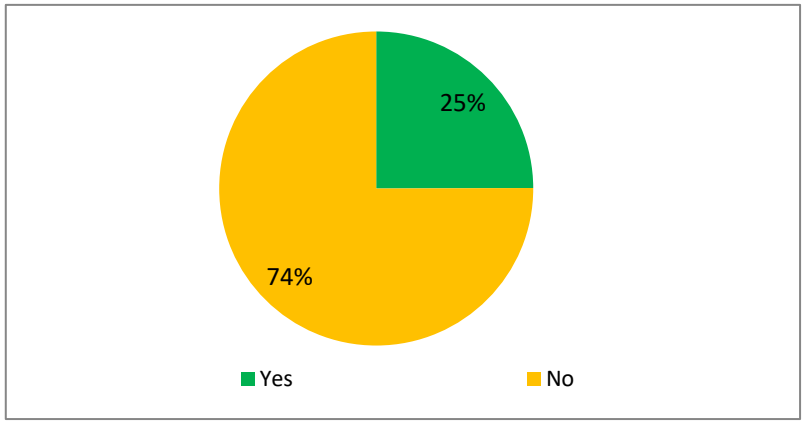
Theme	Direct quotes underpinning the theme
Education	*'tell (inform) them'*
	'observes them'
	'remind them'
	'infection control link (nurses)'
	'educate patients and families'

	'provide proper equipment and material'
Monitoring	*'Audit to ensure they perform HH'*

Wearing gloves is just as good as washing hands?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	103	24.7	24.9	24.9
	No	310	74.3	75.1	100.0
	Total	413	99.0	100.0	
Missing	System	4	1.0		
Total		417	100.0		

Wearing Gloves Just as Important as HH (N=413)



Reasons that Wearing Gloves Just as Important as Hand Hygiene (N=331)

Direct quotes as categories	Responses = F
For protection of the patient & staff	291
To prevent infection between patients	301
Supportive of hand hygiene	50

Engaging Patient and Family Hand Hygiene Program (N=371)

Theme	Direct quotes underpinning the theme	Responses = F
HH Education provided to patient or relatives	*'we provide education materials to the patients on HH'*	387
	'we observe patient and family compliance with HH practices'	116
	'we demonstrate to patient and family HH practices when we are educating'	48
Display of HH Visual Posters	*'placing HH signs and posters at every wash basin for all to see'*	91

	'ensure rules and consequences of non-compliance to HH practices are communicated'	51
HH Awareness Campaigns	*'we introduced system where the security staff ensures that families wash hands before entering the unit'*	97
	'we conduct awareness campaigns on HH practices'	87
	'we communicate HH practices in media to inform the community of best practices'	30

3.5 Nursing Teams Safety Culture Practices

Team Safety Culture (N=331)

Culture of Safety elements as themes	Direct quotes underpinning the theme	Responses = F
Informational Culture	*'we follow hospital policy for safety'*	97
Flexible Culture	*'enforce use of the international patient safety goals'*	243
	'we have team work together'	197
	'we do risk assessment to ensure safe care environment'	67
	'we use effective communication in handing patients over between shifts'	64
	'we follow hourly rounding principles to allow us to flex care'	53
Learning Culture	*'we use the Comprehensive Unit Safety Program (CUSP) to guide us'*	181
	'we use patient education to ensure alignment with care regime'	67

3.6. Hospital Climate (Positive Work Environment) Factors affecting Patient Safety

Positive Work Environment (Hospital Climate) and Patient Safety (n=324)

Themes	Direct quotes underpinning the theme	Responses = F
Communication	*'we use effective communication to share patient safety information and patient safety data'*	251
Teamwork	*'to help each other when unit busy'*	301
Support from Leadership	*'leadership needs to support staff with issues on unit'*	213
	'daily meeting with staff to follow up issues'	42
Patient Allocations	*'ensure balance of nurse patient allocations based on acuity and needs'*	267
Nurse Manager Visibility	*'we have nurse manager visibility as they do*	94

	round daily to follow up on issues'	
Flexible Duty Schedule	*'need to improve duty schedule and leave planner for nurses'*	94

4. Safety Culture and Climate

Reliability Statistics

Cronbach's Alpha	N of Items
.877	33

Questions included in this survey were coded as below table:

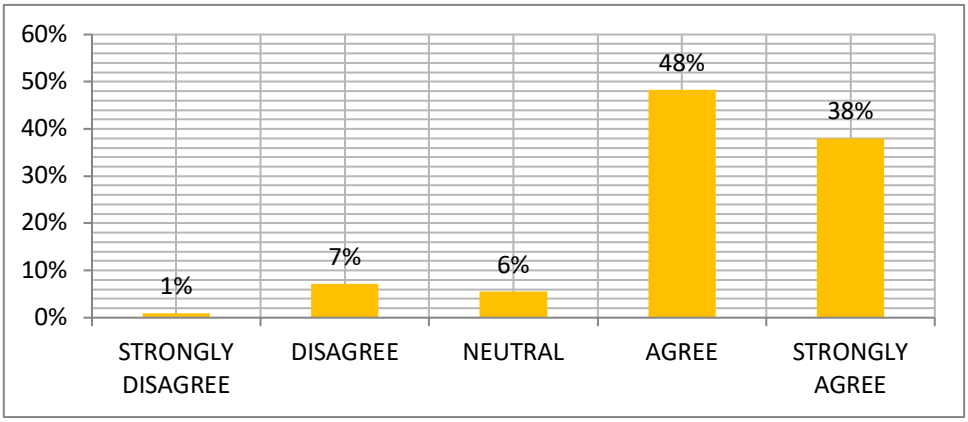
C.1	We are actively doing things to improve patient safety
C.2	We feel like our mistakes are held against us
C.3	Mistakes have led to positive changes here
C.4	When one area in this unit get really busy, other team members help
C.5	When an adverse event I reported, it feels like the person is being written up not the problem
C.6	We worry that the mistakes we make is in our personal files
C.7	My nurse manager involve us to improve procedures and systems defects
C.8	Our procedures and systems are good at preventing errors from happening
C.9	My nurse manager say a good word when he/she sees a job done according to established patient safety procedures
C.10	My nurse manager seriously considers staff suggestions in improving patient safety
C.11	My nurse manager ignores patient safety problems that happen over and over
C.12	We have enough staff to handle the workload
C.13	When a lot of work needs to be done quickly, we work together as a team to get the work done
C.14	In this unit, people treat each other with respect
C.15	My nurse manager supports nurses to participate in process improvement on the unit that affects patient safety
C.16	My nurse manager is visible in unit to assess patient care concerns on the unit to ensure staff assignments appropriate for patient acuity
C.17	We are given feedback about the changes that are needed to be made, based on adverse event reports
C.18	Staff will freely speak up if they see something that may negatively affect patient care
C.19	We are informed about errors that happen in this unit
C.20	Staff feel free to question the decisions of those with more authority
C.21	Staff are afraid to ask questions when something does not seem right
C.22	Hospital management provides a work climate that promotes patient safety
C.23	Errors occur when transferring patients from one unit to another
C.24	Important patient care information is often lost during shift changes
C.25	Problems often occur in the exchange of information across hospital units
C.26	Shift changes are problematic for patients in this hospital
C.27	I feel confident that the team has the competencies to care for the patients on this unit
C.28	My nurse manager ensures I have time to attend education session to uphold my skills

C.29	I am able to request training when I feel that I have a need for more training
C.30	My nurse manager manages our patient safety practices through patient outcomes data
C.31	My nurse managers is constantly auditing our patient safety practices
C.32	My nurse manager involves me in root cause analysis when an event has occurred to identify issues in systems
C.33	My nurse manager is proactively addressing system issues affecting patient safety

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
C1	416	1.00	5.00	4.1514	.88829
C2	416	1.00	5.00	3.2260	.95281
C3	416	1.00	5.00	3.6635	.82853
C4	416	1.00	5.00	3.6731	.98609
C5	416	1.00	5.00	3.1322	.95404
C6	416	1.00	5.00	3.4087	.90318
C7	416	1.00	5.00	3.7692	.84146
C8	416	1.00	5.00	3.6587	.82364
C9	416	1.00	5.00	3.8245	.87287
C10	416	1.00	5.00	3.6659	.89517
C11	416	1.00	5.00	2.1274	.94963
C12	416	1.00	5.00	2.6130	1.06724
C13	416	1.00	5.00	3.6490	.88734
C14	416	1.00	5.00	3.7837	.82802
C15	416	1.00	5.00	3.7548	.82285
C16	413	1.00	5.00	3.6271	.91186
C17	416	1.00	5.00	3.7332	.76266
C18	416	1.00	5.00	3.5385	.88275
C19	416	1.00	5.00	3.7957	.75989
C20	416	1.00	5.00	3.1010	.95912
C21	416	1.00	5.00	2.8293	.93767
C22	416	1.00	5.00	3.3942	1.02422
C23	414	1.00	5.00	2.7077	.91217
C24	416	1.00	23.00	2.5457	1.37371
C25	416	1.00	5.00	2.7188	.89724
C26	416	1.00	5.00	2.5721	.90758
C27	416	1.00	5.00	3.9327	.80677
C28	416	1.00	5.00	3.5745	.89938
C29	415	1.00	5.00	3.4988	.87608
C30	416	1.00	5.00	3.6971	.76966
C31	416	1.00	5.00	3.7644	.75556
C32	415	1.00	5.00	3.5542	.87990
C33	415	1.00	5.00	3.6843	.91108

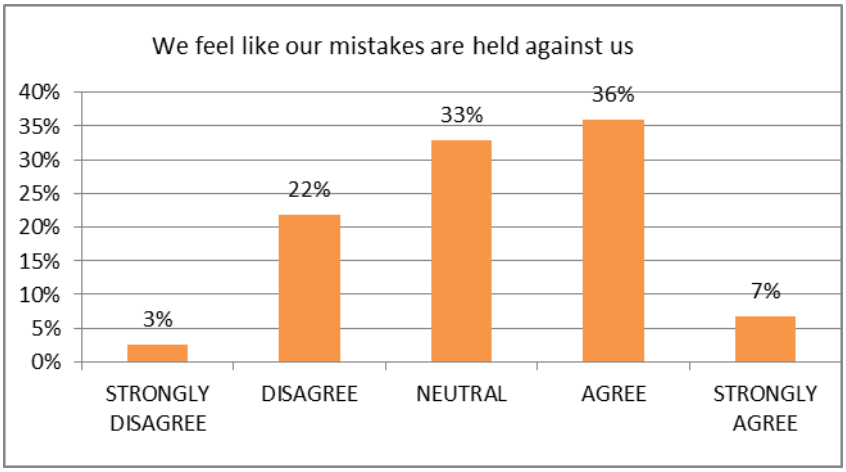
C1. Nursing Team and active engagement in patient safety (N=416)



We are actively doing things to improve patient safety

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	4	1.0	1.0	1.0
	DISAGREE	30	7.2	7.2	8.2
	NEUTRAL	23	5.5	5.5	13.7
	AGREE	201	48.3	48.3	62.0
	STRONGLY AGREE	158	38.0	38.0	100.0
	Total	416	100.0	100.0	

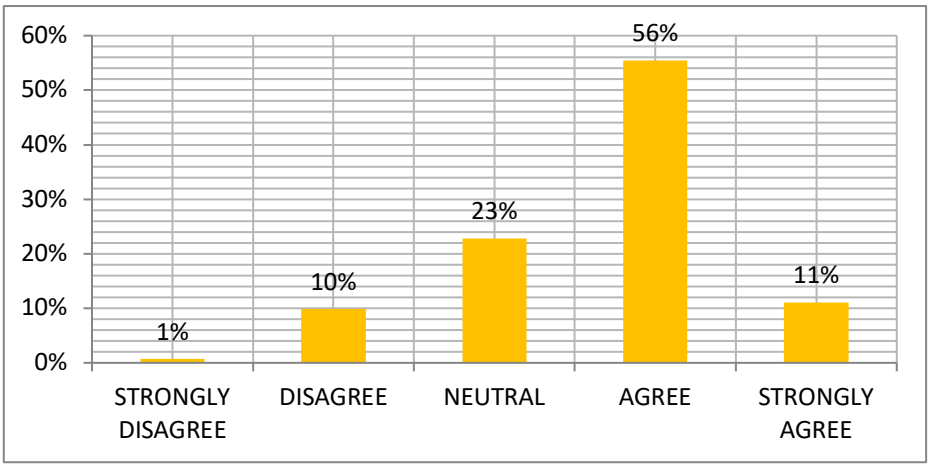
C2. Nurses perceptions that mistakes are held against them (N=416)



Nurses perceptions that mistakes are held against them (N=416)

	n	f=%
STRONGLY DISAGREE	11	2.6
DISAGREE	91	21.9
NEUTRAL	135	32.5
AGREE	151	36.3
STRONGLY AGREE	28	6.7
Total	416	100.0

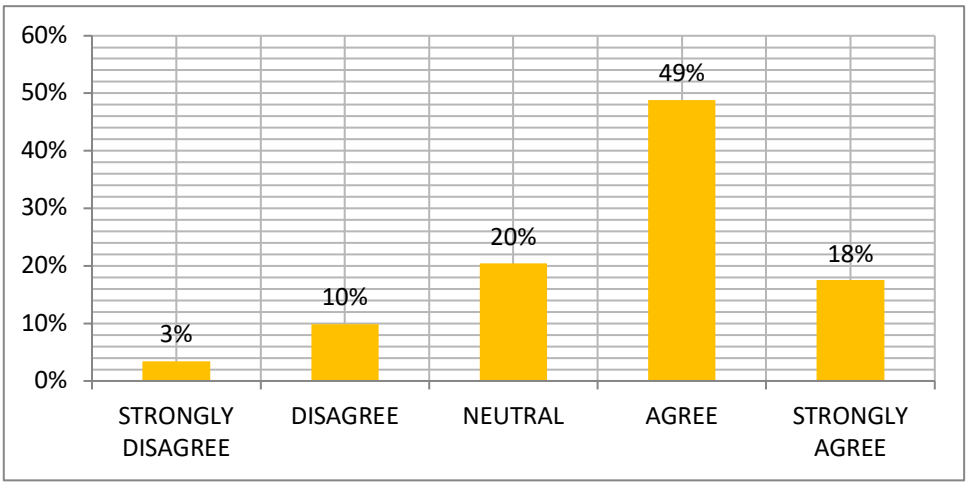
C3. Mistakes have led to positive changes on unit (N=416)



Mistakes have led to positive changes here

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	3	.7	.7	.7
	DISAGREE	41	9.9	9.9	10.6
	NEUTRAL	95	22.8	22.8	33.4
	AGREE	231	55.5	55.5	88.9
	STRONGLY AGREE	46	11.1	11.1	100.0
	Total	416	100.0	100.0	

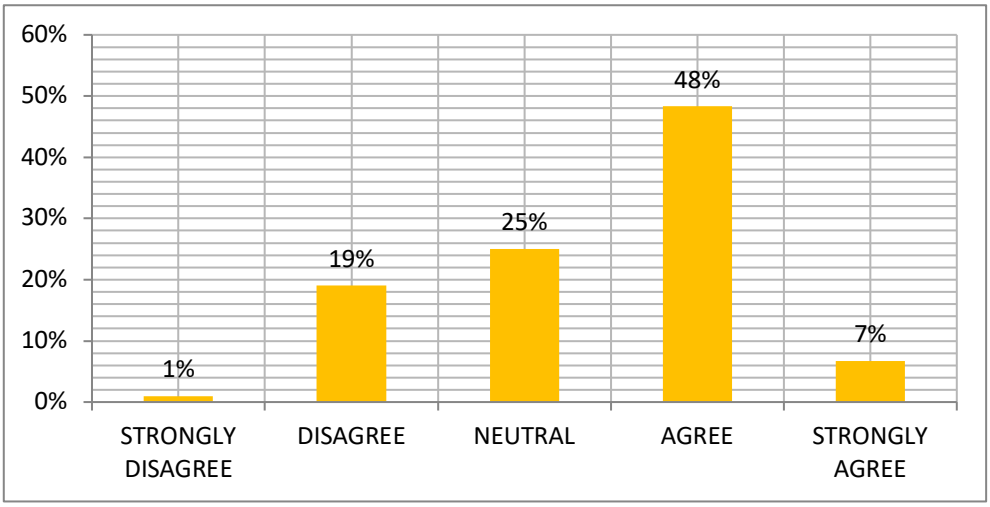
C.4. Teamwork among Nurses (N=416)



When one area in this unit get really busy, other team members help

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	14	3.4	3.4	3.4
	DISAGREE	41	9.9	9.9	13.2
	NEUTRAL	85	20.4	20.4	33.7
	AGREE	203	48.8	48.8	82.5
	STRONGLY AGREE	73	17.5	17.5	100.0
	Total	416	100.0	100.0	

C.5. Mistakes made is kept in nurses' personal files (N=416)

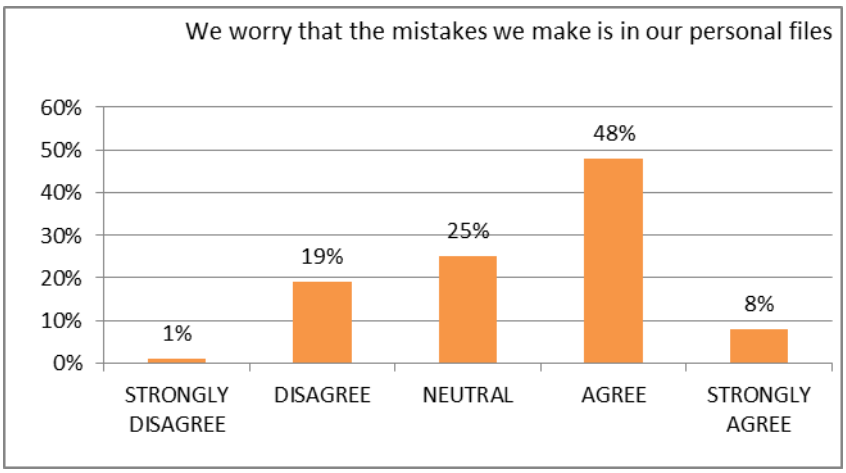


When an adverse event I reported, it feels like the person is being written up not the problem

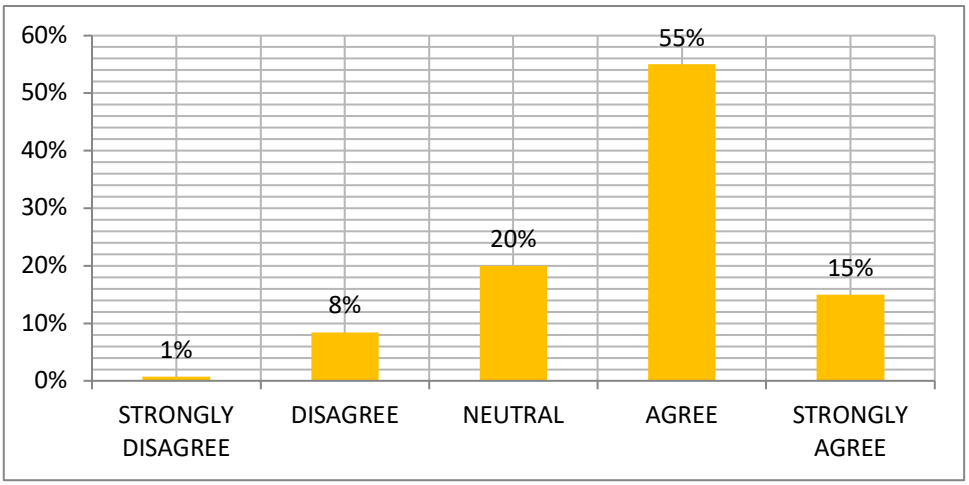
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	13	3.1	3.1	3.1
	DISAGREE	110	26.4	26.4	29.6
	NEUTRAL	118	28.4	28.4	57.9
	AGREE	159	38.2	38.2	96.2
	STRONGLY AGREE	16	3.8	3.8	100.0
	Total	416	100.0	100.0	

C.6. We worry that the mistakes we make is in our personal files

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	4	1.0	1.0	1.0
	DISAGREE	79	19.0	19.0	20.0
	NEUTRAL	104	25.0	25.0	45.0
	AGREE	201	48.3	48.3	93.3
	STRONGLY AGREE	28	6.7	6.7	100.0
	Total	416	100.0	100.0	



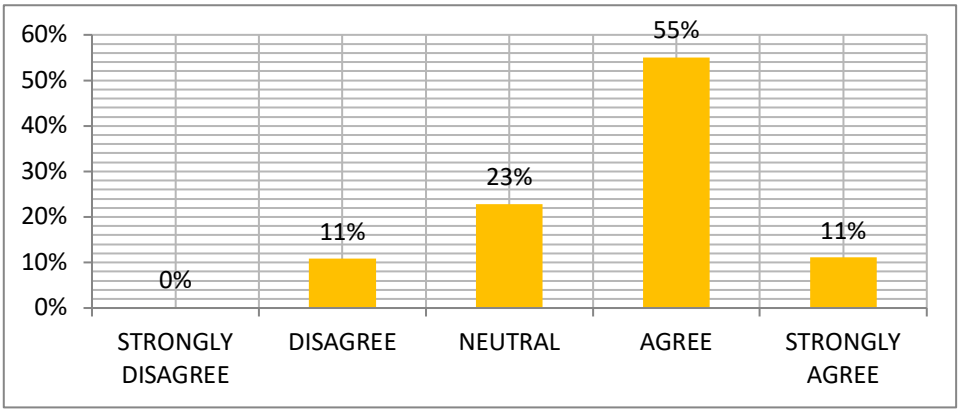
C.7. Nurses involved to improve procedures and systems defects (N=416)



My nurse manager involve us to improve procedures and systems defects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	3	.7	.7	.7
	DISAGREE	35	8.4	8.4	9.1
	NEUTRAL	83	20.0	20.0	29.1
	AGREE	229	55.0	55.0	84.1
	STRONGLY AGREE	66	15.9	15.9	100.0
	Total	416	100.0	100.0	

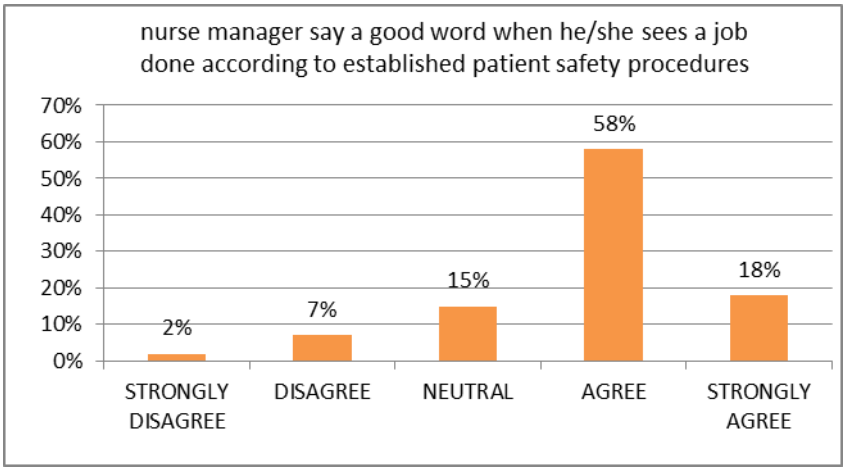
C.8. Proactive unit procedures and systems to prevent errors (N=416)



Our procedures and systems are good at preventing errors from happening

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	1	.2	.2	.2
	DISAGREE	45	10.8	10.8	11.1
	NEUTRAL	95	22.8	22.8	33.9
	AGREE	229	55.0	55.0	88.9
	STRONGLY AGREE	46	11.1	11.1	100.0
	Total	416	100.0	100.0	

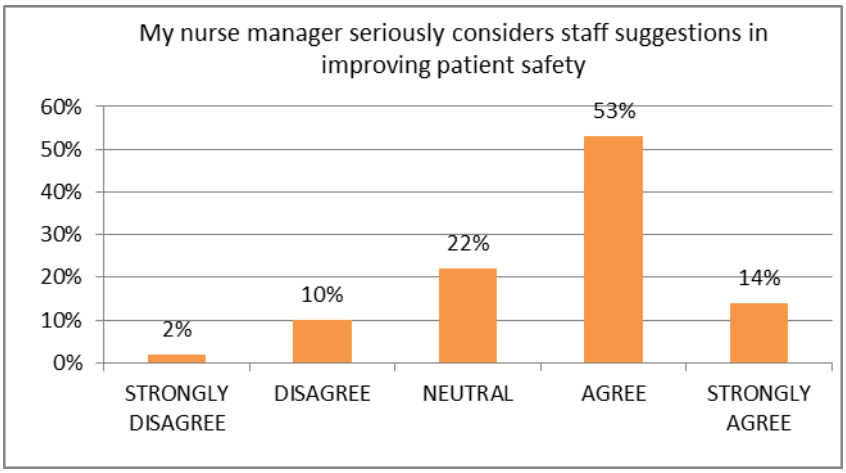
C.9. Recognition of nurse patient safety procedures (N=416)



My nurse manager say a good word when he/she sees a job done according to established patient safety procedures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	8	1.9	1.9	1.9
	DISAGREE	30	7.2	7.2	9.1
	NEUTRAL	63	15.1	15.1	24.3
	AGREE	241	57.9	57.9	82.2
	STRONGLY AGREE	74	17.8	17.8	100.0
	Total	416	100.0	100.0	

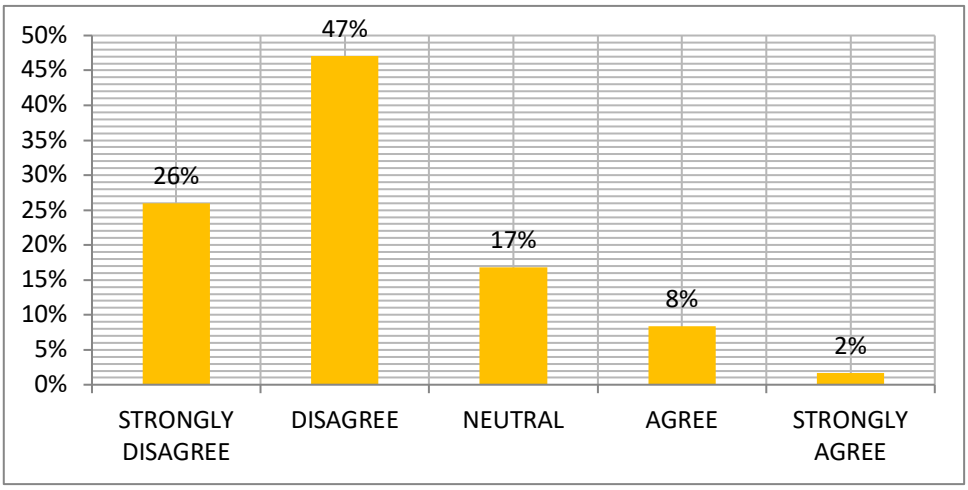
C.10. Including Nurse Recommendations to improve patient safety (N=416)



My nurse manager seriously considers staff suggestions in improving patient safety (N=416)

	n	f=%
STRONGLY DISAGREE	7	1.7
DISAGREE	42	10.1
NEUTRAL	91	21.9
AGREE	219	52.6
STRONGLY AGREE	57	13.7
Total	416	100.0

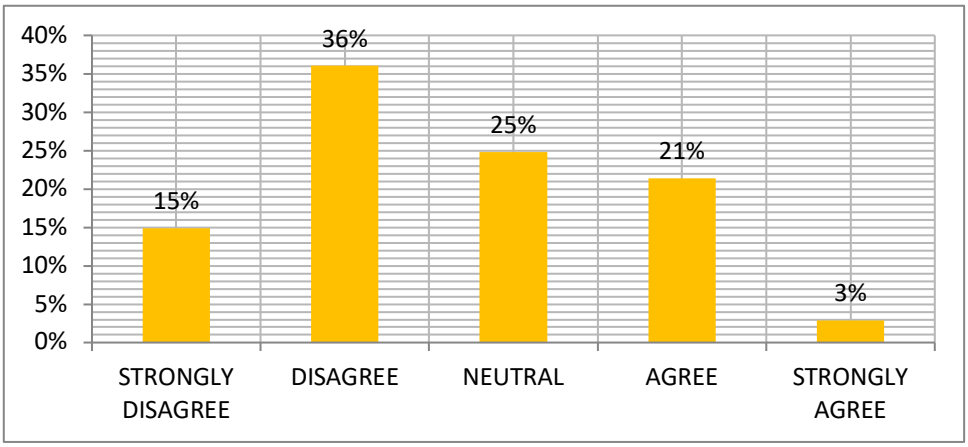
C.11. Patient safety concerns recurring not addressed proactively *(N=416)*



My nurse manager ignores patient safety problems that happen over and over

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	108	26.0	26.0	26.0
	DISAGREE	196	47.1	47.1	73.1
	NEUTRAL	70	16.8	16.8	89.9
	AGREE	35	8.4	8.4	98.3
	STRONGLY AGREE	7	1.7	1.7	100.0
	Total	416	100.0	100.0	

C.12. Nurse Perception on Staffing adequacy to handle the workload (N=416)



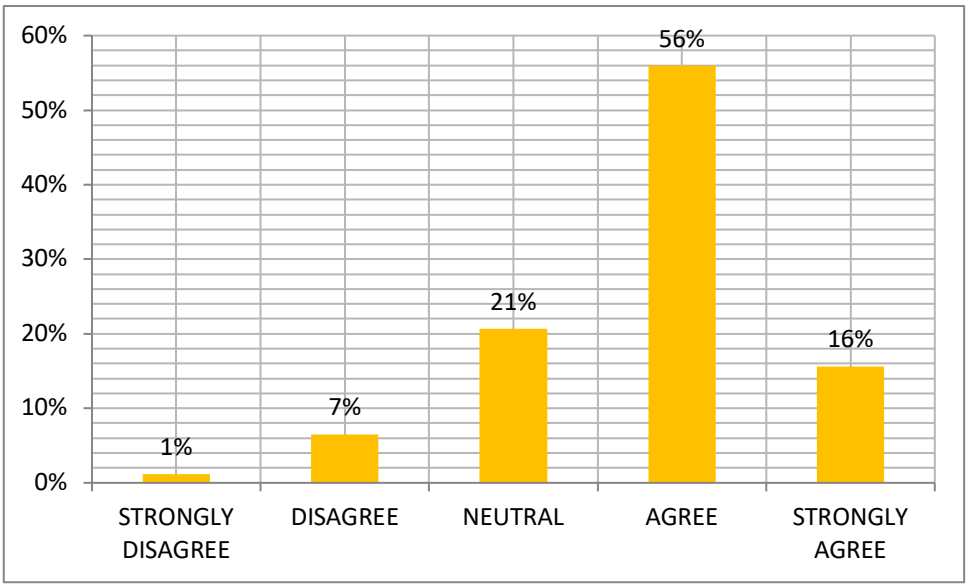
We have enough staff to handle the workload

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	62	14.9	14.9	14.9
	DISAGREE	150	36.1	36.1	51.0
	NEUTRAL	103	24.8	24.8	75.7
	AGREE	89	21.4	21.4	97.1
	STRONGLY AGREE	12	2.9	2.9	100.0
	Total	416	100.0	100.0	

C.13. When a lot of work needs to be done quickly, we work together as a team to get the work done (N=416).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	6	1.4	1.4	1.4
	DISAGREE	45	10.8	10.8	12.3
	NEUTRAL	91	21.9	21.9	34.1
	AGREE	221	53.1	53.1	87.3
	STRONGLY AGREE	53	12.7	12.7	100.0
	Total	416	100.0	100.0	

C.14. Respect among nursing team (N=416)



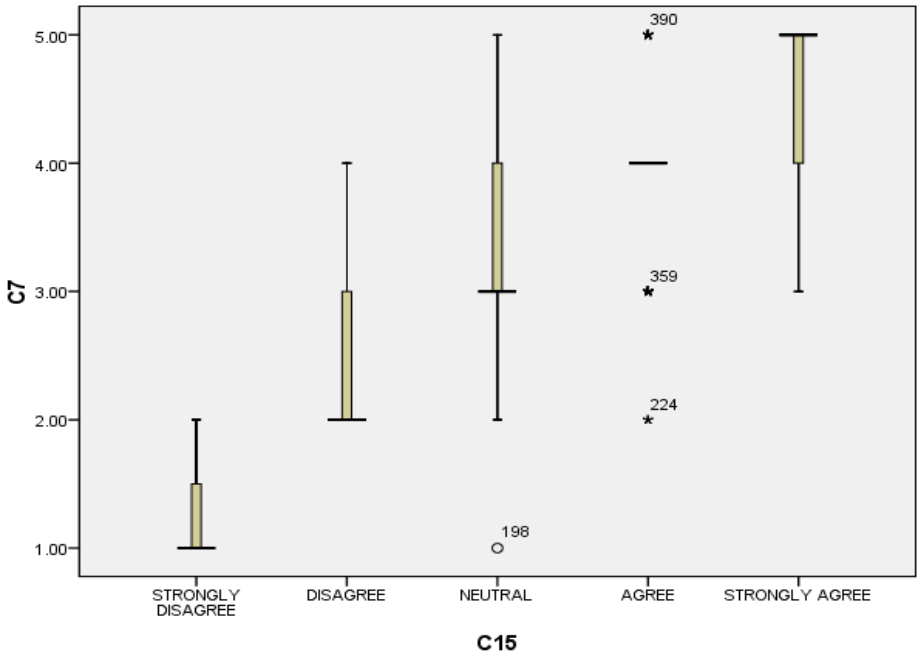
In this unit, people treat each other with respect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	5	1.2	1.2	1.2
	DISAGREE	27	6.5	6.5	7.7
	NEUTRAL	86	20.7	20.7	28.4
	AGREE	233	56.0	56.0	84.4
	STRONGLY AGREE	65	15.6	15.6	100.0
	Total	416	100.0	100.0	

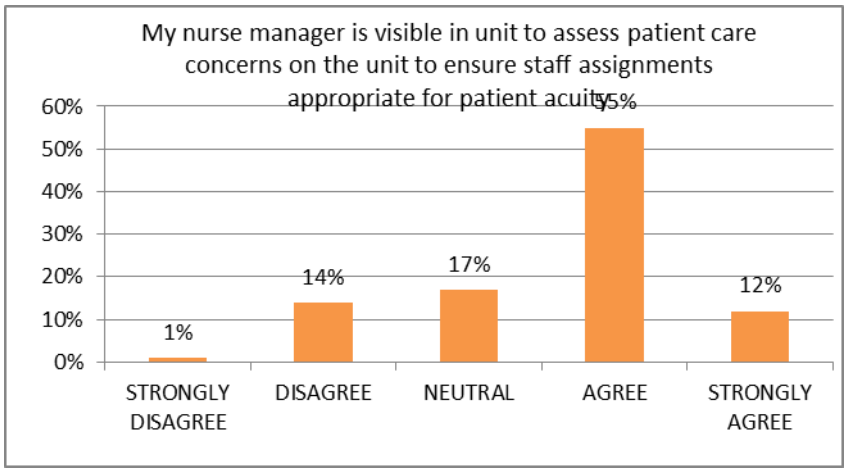
C.15. My nurse manager supports nurses to participate in process improvement on the unit that affects patient safety (N=416)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	3	.7	.7	.7
	DISAGREE	38	9.1	9.1	9.9
	NEUTRAL	72	17.3	17.3	27.2
	AGREE	248	59.6	59.6	86.8
	STRONGLY AGREE	55	13.2	13.2	100.0
	Total	416	100.0	100.0	

Triangulating C.7 with C.15 on nurse participation in process improvement (N=416)



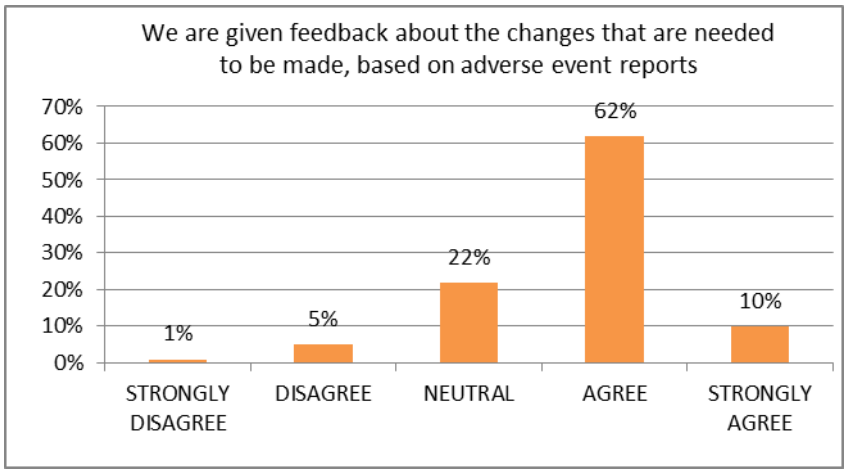
C.16. My nurse manager is visible in unit to assess patient care concerns on the unit to ensure staff assignments appropriate for patient acuity (N= 416).



My nurse manager is visible in unit to assess patient care concerns on the unit to ensure staff assignments appropriate for patient acuity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	5	1.2	1.2	1.2
	DISAGREE	59	14.2	14.3	15.5
	NEUTRAL	70	16.8	16.9	32.4
	AGREE	230	55.3	55.7	88.1
	STRONGLY AGREE	49	11.8	11.9	100.0
	Total	413	99.3	100.0	
Missing	System	3	.7		
Total		416	100.0		

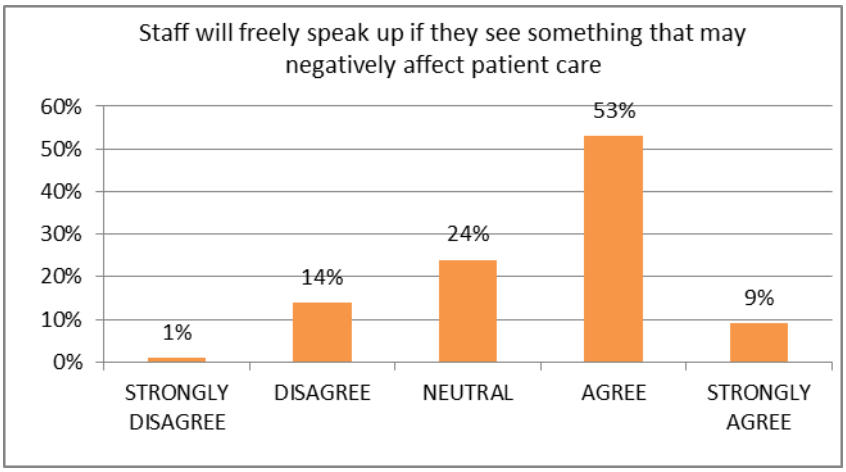
C.17. Feedback on improving processes for patient safety (N=416)



We are given feedback about the changes that are needed to be made, based on adverse event reports

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	6	1.4	1.4	1.4
	DISAGREE	21	5.0	5.0	6.5
	NEUTRAL	92	22.1	22.1	28.6
	AGREE	256	61.5	61.5	90.1
	STRONGLY AGREE	41	9.9	9.9	100.0
	Total	416	100.0	100.0	

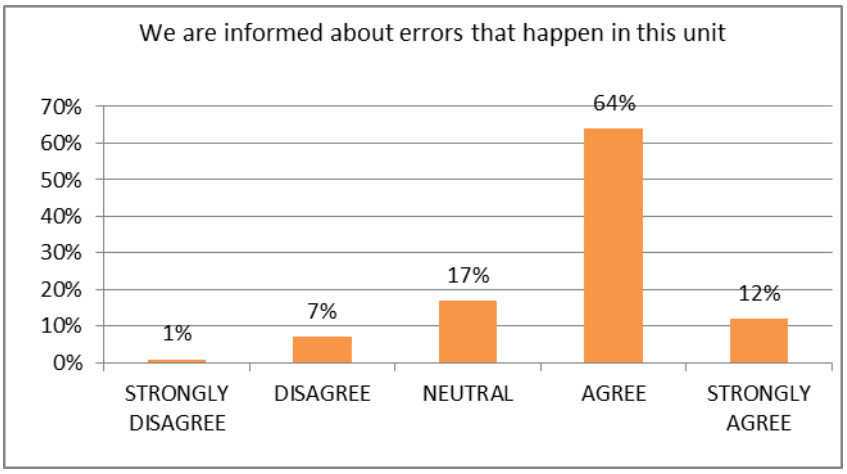
C.18. Nurses ability to 'Speak Up' on unsafe issues for patient safety (N=416)



Staff will freely speak up if they see something that may negatively affect patient care

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	6	1.4	1.4	1.4
	DISAGREE	56	13.5	13.5	14.9
	NEUTRAL	98	23.6	23.6	38.5
	AGREE	220	52.9	52.9	91.3
	STRONGLY AGREE	36	8.7	8.7	100.0
	Total	416	100.0	100.0	

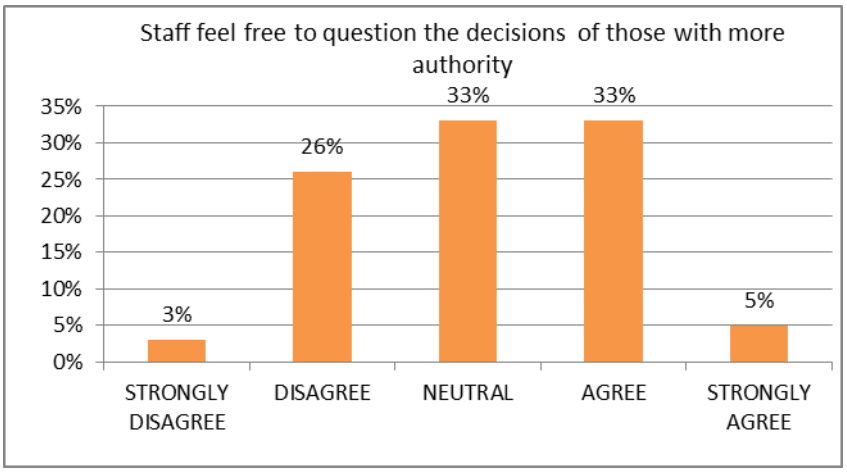
C19. Nurses are informed about errors that happen in this unit (N=416)



We are informed about errors that happen in this unit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	3	.7	.7	.7
	DISAGREE	27	6.5	6.5	7.2
	NEUTRAL	72	17.3	17.3	24.5
	AGREE	264	63.5	63.5	88.0
	STRONGLY AGREE	50	12.0	12.0	100.0
	Total	416	100.0	100.0	

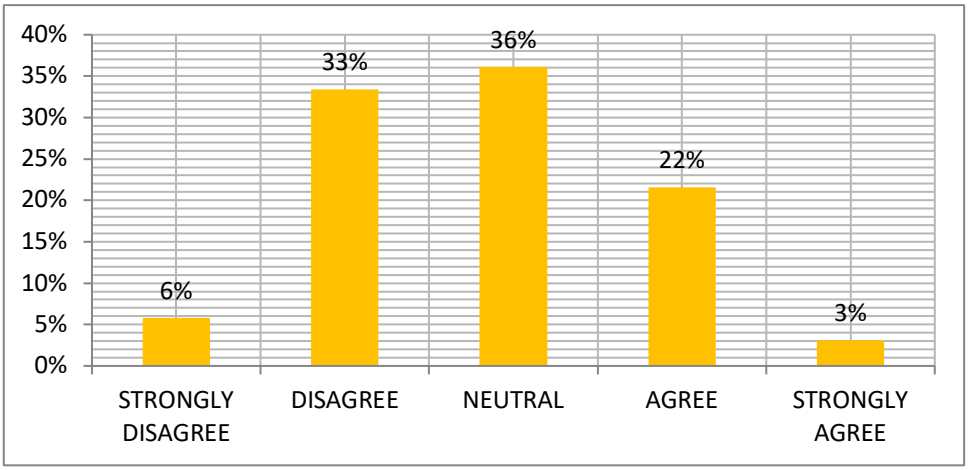
C.20. Nurses ability to question safety decision for those with more authority (N=416)



Staff feel free to question the decisions of those with more authority

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	14	3.4	3.4	3.4
	DISAGREE	109	26.2	26.2	29.6
	NEUTRAL	135	32.5	32.5	62.0
	AGREE	137	32.9	32.9	95.0
	STRONGLY AGREE	21	5.0	5.0	100.0
	Total	416	100.0	100.0	

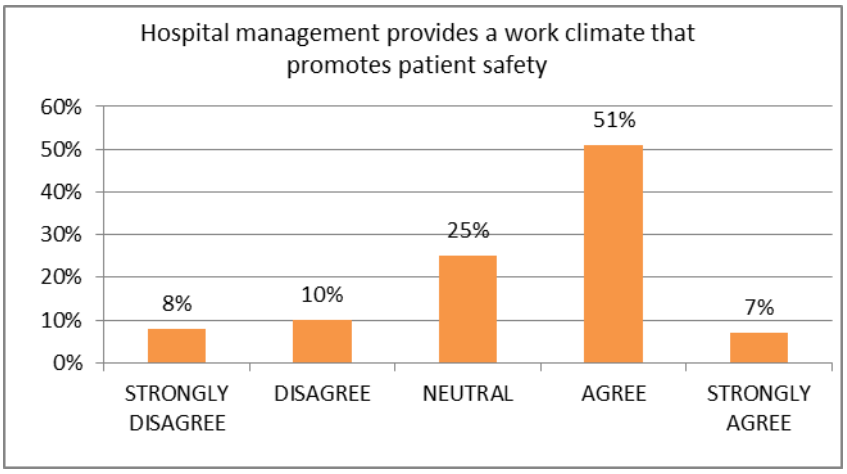
C.21. Nurses ability to verify patient safety care decisions (N=416)



Staff are afraid to ask questions when something does not seem right

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	24	5.8	5.8	5.8
	DISAGREE	139	33.4	33.4	39.2
	NEUTRAL	150	36.1	36.1	75.2
	AGREE	90	21.6	21.6	96.9
	STRONGLY AGREE	13	3.1	3.1	100.0
	Total	416	100.0	100.0	

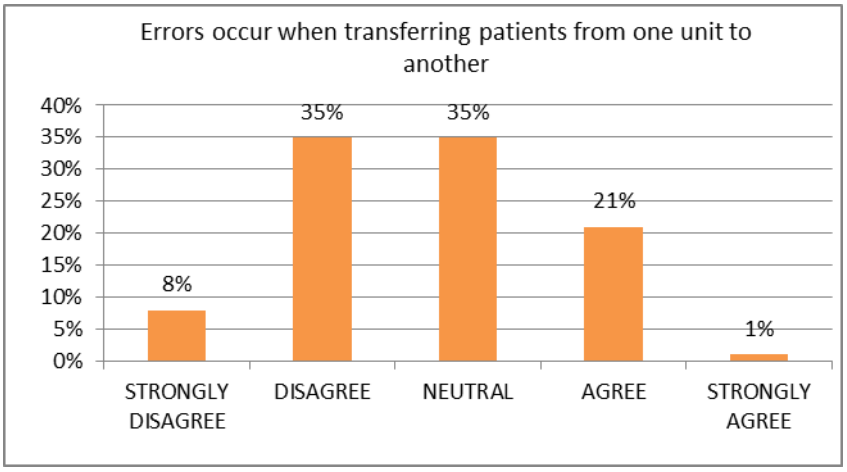
C.22. Hospital management provides a safe work environment (N=416)



Hospital management provides a work climate that promotes patient safety

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	32	7.7	7.7	7.7
	DISAGREE	42	10.1	10.1	17.8
	NEUTRAL	102	24.5	24.5	42.3
	AGREE	210	50.5	50.5	92.8
	STRONGLY AGREE	30	7.2	7.2	100.0
	Total	416	100.0	100.0	

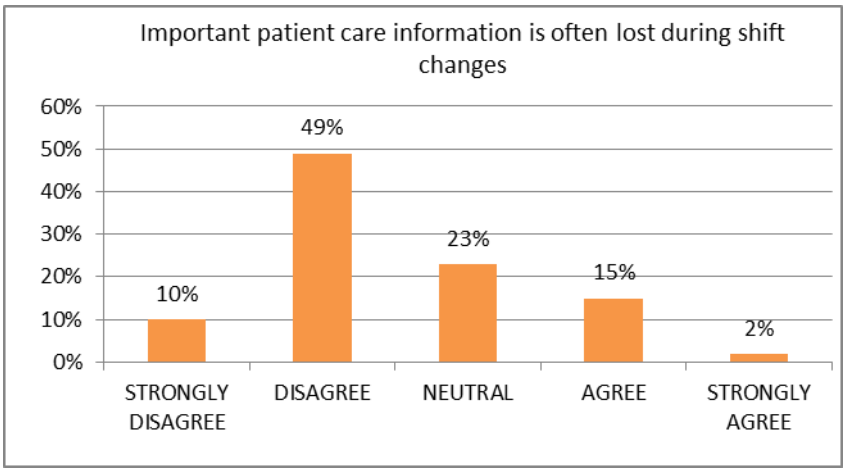
C23. Errors occur when transferring patients from one unit to another (N=416)



Errors occur when transferring patients from one unit to another

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	34	8.2	8.2	8.2
	DISAGREE	145	34.9	35.0	43.2
	NEUTRAL	146	35.1	35.3	78.5
	AGREE	86	20.7	20.8	99.3
	STRONGLY AGREE	3	.7	.7	100.0
	Total	414	99.5	100.0	
Missing	System	2	.5		
Total		416	100.0		

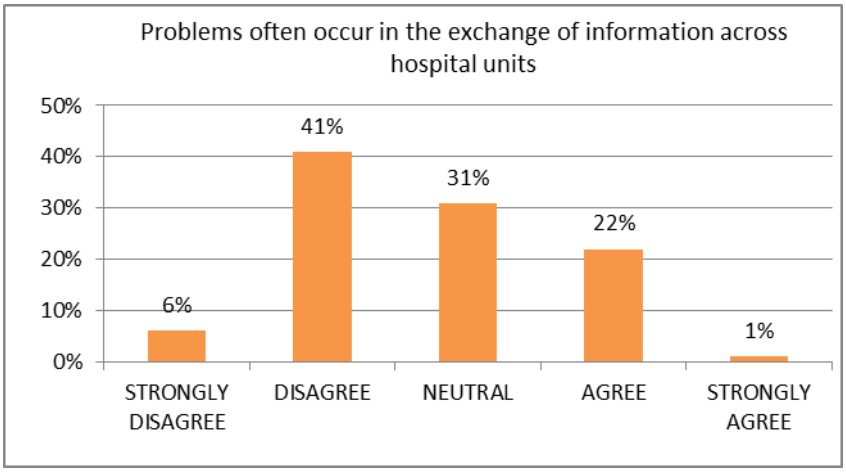
C.24. Important patient care information is often lost during shift changes (N=416)



Important patient care information is often lost during shift changes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	42	10.1	10.1	10.1
	DISAGREE	205	49.3	49.3	59.4
	NEUTRAL	96	23.1	23.1	82.5
	AGREE	64	15.4	15.4	97.8
	STRONGLY AGREE	8	1.9	1.9	99.8
	Total	416	100.0	100.0	

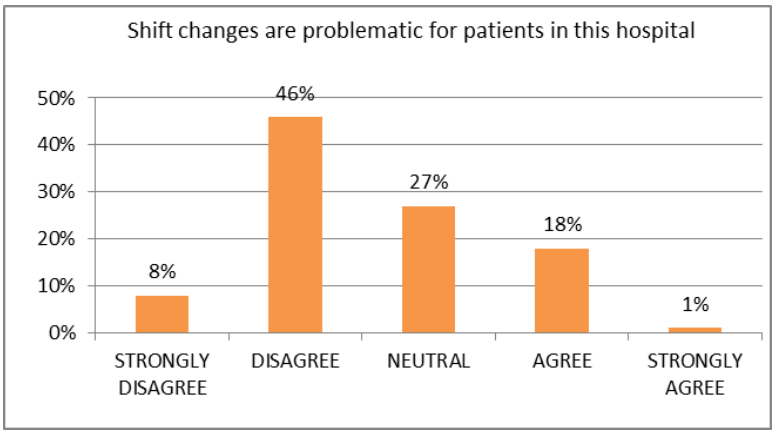
C.25. Problems often occur in the exchange of information across hospital units (N=416)



Problems often occur in the exchange of information across hospital units

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	23	5.5	5.5	5.5
	DISAGREE	169	40.6	40.6	46.2
	NEUTRAL	130	31.2	31.2	77.4
	AGREE	90	21.6	21.6	99.0
	STRONGLY AGREE	4	1.0	1.0	100.0
	Total	416	100.0	100.0	

C.26. Shift changes are problematic for patients in this hospital (N=416)

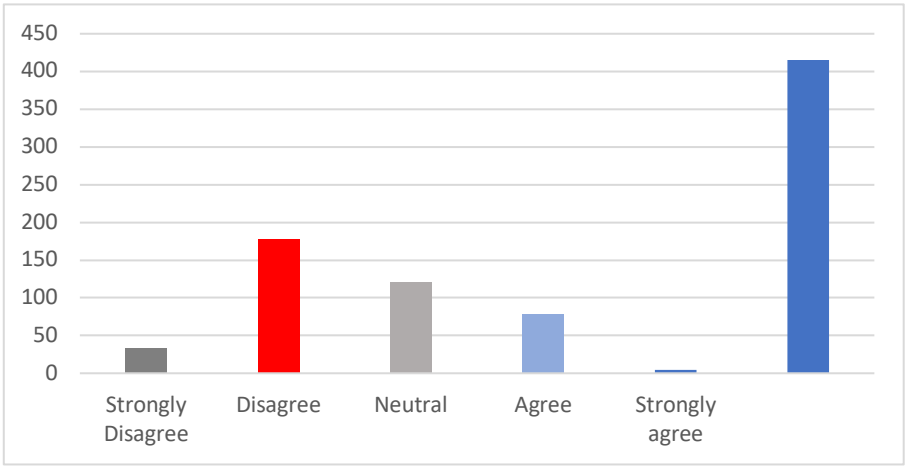


Shift changes are problematic for patients in this hospital

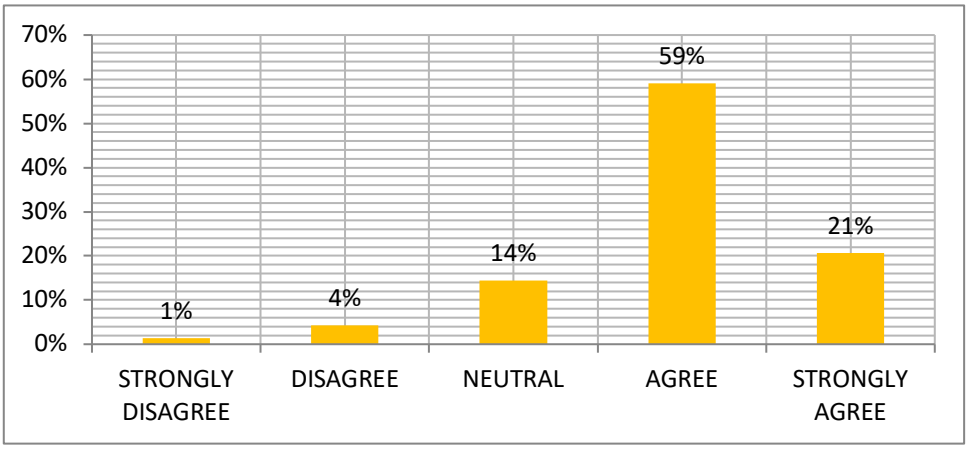
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	34	8.2	8.2	8.2
	DISAGREE	192	46.2	46.2	54.3
	NEUTRAL	112	26.9	26.9	81.2
	AGREE	74	17.8	17.8	99.0
	STRONGLY AGREE	4	1.0	1.0	100.0
	Total	416	100.0	100.0	

Comparing C.23, C24, C25, C.26. Sharing Patient Information between Units/ Transfers and Shift Changes (N=416)

Combining question 23 to 26 data indicated that 204 (N=416; f= 49%) off the respondents had a negative perception that handoff of patient's information being lost between units, during patient transfers and with shift changes. The data therefore suggests that the handoff policies in place for patient safety were not being adhered to during all patient handoff encounters which are a safety concern.



C.27. Nurses perception of team member's competence to care for the patients on unit (N=416)



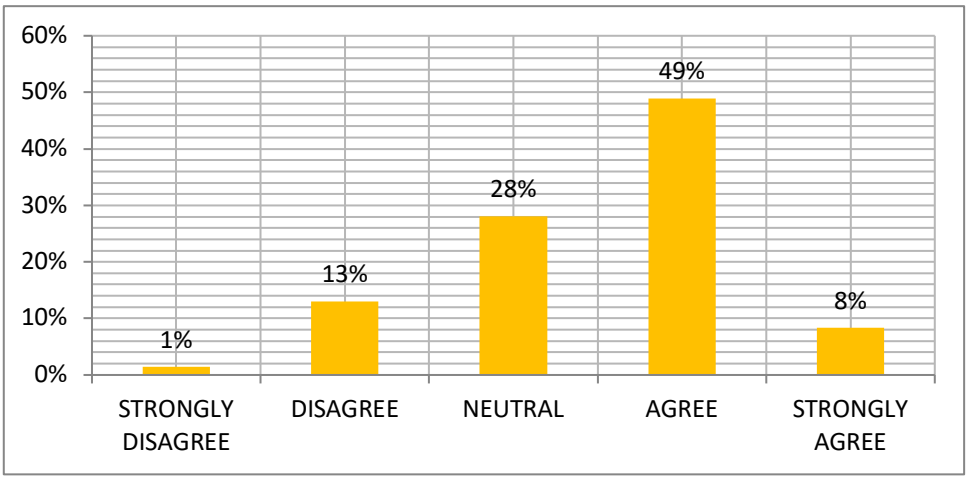
I feel confident that the team has the competencies to care for the patients on this unit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	6	1.4	1.4	1.4
	DISAGREE	18	4.3	4.3	5.8
	NEUTRAL	60	14.4	14.4	20.2
	AGREE	246	59.1	59.1	79.3
	STRONGLY AGREE	86	20.7	20.7	100.0
	Total	416	100.0	100.0	

C.28. My nurse manager ensures I have time to attend education session to uphold my skills (N=416)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	9	2.2	2.2	2.2
	DISAGREE	45	10.8	10.8	13.0
	NEUTRAL	105	25.2	25.2	38.2
	AGREE	212	51.0	51.0	89.2
	STRONGLY AGREE	45	10.8	10.8	100.0
	Total	416	100.0	100.0	

C.29. Nurses ability to request training when required (N=416)



I am able to request training when I feel that I have a need for more training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	6	1.4	1.4	1.4
	DISAGREE	54	13.0	13.0	14.5
	NEUTRAL	117	28.1	28.2	42.7
	AGREE	203	48.8	48.9	91.6
	STRONGLY AGREE	35	8.4	8.4	100.0
	Total	415	99.8	100.0	
Missing	System	1	.2		
Total		416	100.0		

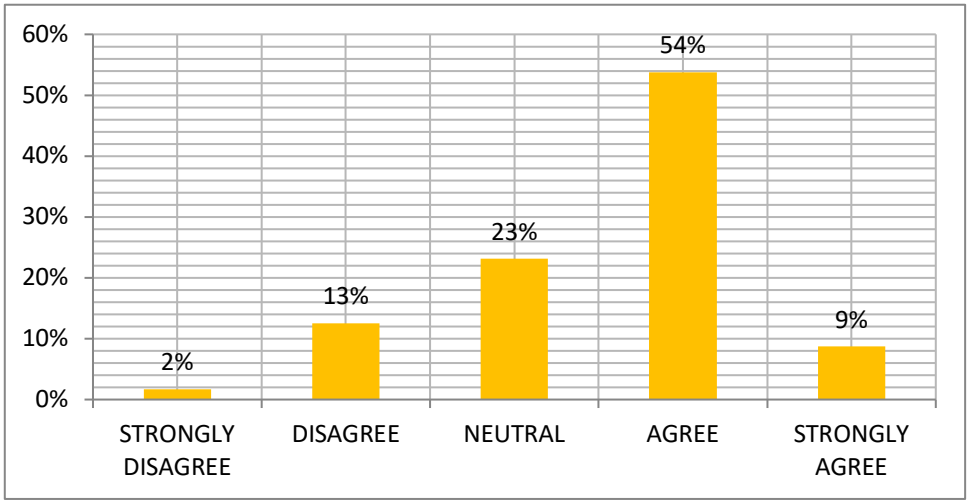
C.30. My nurse manager manages our patient safety practices through patient outcomes data (N=416)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	4	1.0	1.0	1.0
	DISAGREE	28	6.7	6.7	7.7
	NEUTRAL	97	23.3	23.3	31.0
	AGREE	248	59.6	59.6	90.6
	STRONGLY AGREE	39	9.4	9.4	100.0
	Total	416	100.0	100.0	

C.31. My nurse managers is constantly auditing our patient safety practices (N=416)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	4	1.0	1.0	1.0
	DISAGREE	24	5.8	5.8	6.7
	NEUTRAL	83	20.0	20.0	26.7
	AGREE	260	62.5	62.5	89.2
	STRONGLY AGREE	45	10.8	10.8	100.0
	Total	416	100.0	100.0	

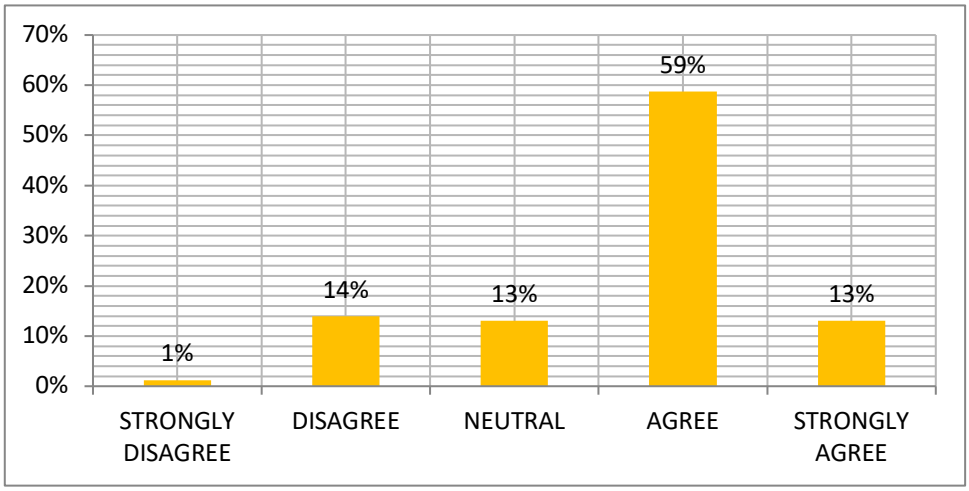
C.32. Nurse involvement in root cause analysis identify system issues (N=416)



My nurse manager involves me in root cause analysis when an event has occurred to identify issues in systems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	7	1.7	1.7	1.7
	DISAGREE	52	12.5	12.5	14.2
	NEUTRAL	96	23.1	23.1	37.3
	AGREE	224	53.8	54.0	91.3
	STRONGLY AGREE	36	8.7	8.7	100.0
	Total	415	99.8	100.0	
Missing	System	1	.2		
Total		416	100.0		

C.33. Nurse manager proactively address system issues affecting patient safety (N=416)



My nurse manager is proactively addressing system issues affecting patient safety

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	5	1.2	1.2	1.2
	DISAGREE	58	13.9	14.0	15.2
	NEUTRAL	54	13.0	13.0	28.2
	AGREE	244	58.7	58.8	87.0
	STRONGLY AGREE	54	13.0	13.0	100.0
	Total	415	99.8	100.0	
Missing	System	1	.2		
Total		416	100.0		

C.34. Recommendations to improve PWE (N=94)

Theme	Direct quotes underpinning the theme	Number responses= F
Communication	*'we need manager(s) to have effective communication with us'*	82
Teamwork	*'it requires all the nurses to help each other not to affect patient care'*	71
Leadership Support	*'our nurse leaders must support safe environment to allow us to speak up on safety concerns'*	43
	'the nurse manager should not hold mistakes on staff as punishment'	10
	'the nurse manager needs to ensure we follow daily safety huddle, so we can all debrief (the) situation in unit'	20
	'the nurse manager must keep us all accountable for our safety practices'	18
Patient Allocation	*'the nurse manager needs to balance workload among nurses'*	73
	'to follow staffing matrix in proper nurse patient ratio'	71

	'ensure that nurses do not float staff other units when our unit not busy as unsafe'	20
Nurse Recognition	*'to constantly provide recognition and acknowledgement of our safety practices and good work'*	64
Nurse Manager Visibility	*'to ensure that the nurse manager more frequently on unit to help us with our concerns and issues'*	45

APPENDIX H

Data Analysis Nurse Managers Questionnaire

Phase 2

Correlations Biographical & Culture Data

		Gender	Age	Nationality	Home Language	English Training	English Training Yes	Current Work Area	Position	Years in Position	Education	Own Culture Affect	Patient Culture Affect
Gender	Pearson Correlation	1	0.032	0.327	0.281	-0.038	0	0.026	-0.071	0.031	-0.173	-0.1	0.042
	Sig. (2-tailed)		0.856	0.063	0.114	0.836	1	0.885	0.695	0.865	0.342	0.58	0.817
	N	34	34	33	33	32	34	33	33	33	32	33	33
Age	Pearson Correlation	0.032	1	0.341	0.207	.456**	-0.022	0.046	-0.198	0.086	-0.325	-0.176	0.336
	Sig. (2-tailed)	0.856		0.052	0.247	0.009	0.902	0.799	0.271	0.635	0.07	0.326	0.056
	N	34	34	33	33	32	34	33	33	33	32	33	33
Nationality	Pearson Correlation	0.327	0.341	1	0.163	0.248	-0.14	0.164	-0.296	-0.174	-0.016	-0.066	-0.078
	Sig. (2-tailed)	0.063	0.052		0.363	0.17	0.436	0.363	0.095	0.334	0.929	0.716	0.668
	N	33	33	33	33	32	33	33	33	33	32	33	33

Home Language	Pearson Correlation	0.281	0.207	0.163	1	-0.284	0.255	-0.114	0.248	0.202	-0.078	-0.086	0.035
	Sig. (2-tailed)	0.114	0.247	0.363		0.115	0.153	0.529	0.164	0.259	0.669	0.633	0.848
	N	33	33	33	33	32	33	33	33	33	32	33	33
English Training	Pearson Correlation	-0.038	.456**	0.248	-0.284	1	-.354*	0.193	-0.268	0.123	0.027	-0.011	.413*
	Sig. (2-tailed)	0.836	0.009	0.17	0.115		0.047	0.29	0.137	0.502	0.884	0.954	0.019
	N	32	32	32	32	32	32	32	32	32	31	32	32
English Training Yes	Pearson Correlation	0	-0.022	-0.14	0.255	-.354*	1	-0.021	0.213	0.03	-0.119	0.256	-0.055
	Sig. (2-tailed)	1	0.902	0.436	0.153	0.047		0.908	0.234	0.87	0.516	0.15	0.763
	N	34	34	33	33	32	34	33	33	33	32	33	33
Current Work Area	Pearson Correlation	0.026	0.046	0.164	-0.114	0.193	-0.021	1	-0.083	-0.04	0.209	0.218	0.167
	Sig. (2-tailed)	0.885	0.799	0.363	0.529	0.29	0.908		0.645	0.824	0.252	0.224	0.354
	N	33	33	33	33	32	33	33	33	33	32	33	33
Position	Pearson Correlation	-0.071	-0.198	-0.296	0.248	-0.268	0.213	-0.083	1	-0.218	-0.242	0.319	-0.017
	Sig. (2-tailed)	0.695	0.271	0.095	0.164	0.137	0.234	0.645		0.222	0.182	0.07	0.925
	N	33	33	33	33	32	33	33	33	33	32	33	33
Years in Position	Pearson Correlation	0.031	0.086	-0.174	0.202	0.123	0.03	-0.04	-0.218	1	0.254	-0.205	0.074
	Sig. (2-tailed)	0.865	0.635	0.334	0.259	0.502	0.87	0.824	0.222		0.161	0.252	0.684

	N	33	33	33	33	32	33	33	33	33	32	33	33
Education	Pearson Correlation	-0.173	-0.325	-0.016	-0.078	0.027	-0.119	0.209	-0.242	0.254	1	-0.137	-0.018
	Sig. (2-tailed)	0.342	0.07	0.929	0.669	0.884	0.516	0.252	0.182	0.161		0.456	0.92
	N	32	32	32	32	31	32	32	32	32	32	32	32
Own Culture Affect	Pearson Correlation	-0.1	-0.176	-0.066	-0.086	-0.011	0.256	0.218	0.319	-0.205	-0.137	1	0.239
	Sig. (2-tailed)	0.58	0.326	0.716	0.633	0.954	0.15	0.224	0.07	0.252	0.456		0.18
	N	33	33	33	33	32	33	33	33	33	32	33	33
Patient Culture Affect	Pearson Correlation	0.042	0.336	-0.078	0.035	.413*	-0.055	0.167	-0.017	0.074	-0.018	0.239	1
	Sig. (2-tailed)	0.817	0.056	0.668	0.848	0.019	0.763	0.354	0.925	0.684	0.92	0.18	
	N	33	33	33	33	32	33	33	33	33	32	33	33

FREQUENCIES:

4. BIOGRAPHICAL DATA

Gender (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	8	23.5	23.5	23.5
	Female	26	76.5	76.5	100.0
	Total	34	100.0	100.0	

Gender and Age* of Nurse Managers (N=34)

	Age	F
Female n=26	18-24	0
	25-34	1
	35-44	8
	45-54	12
	55-64	5
Male n=8	18-24	0
	25-34	0
	35-44	3
	45-54	4
	55-64	1

Age (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25-34	1	2.9	2.9	2.9
	35-44	11	32.4	32.4	35.3
	45-54	16	47.1	47.1	82.4
	55-64	6	17.6	17.6	100.0
	Total	34	100.0	100.0	

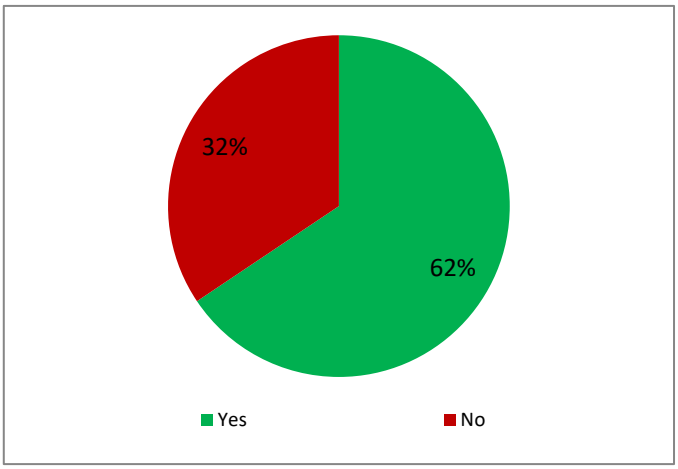
Nationality (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	JORDANIAN	7	20.6	21.2	21.2
	PHILIPINE	5	14.7	15.2	36.4
	INDIAN	5	14.7	15.2	51.5
	SOUTH AFRICAN	7	20.6	21.2	72.7
	EMIRATI	2	5.9	6.1	78.8
	BRITISH	3	8.8	9.1	87.9
	EGYPTIAN	1	2.9	3.0	90.9
	FINISH	1	2.9	3.0	93.9
	NEW ZEALAND	1	2.9	3.0	97.0
	Romanian	1	2.9	3.0	100.0
	Total	33	97.1	100.0	
Missing	System	1	2.9		
Total		34	100.0		

Home Language (N =34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ARABIC	10	29.4	30.3	30.3
	ENGLISH	6	17.6	18.2	48.5
	AFRIKAANS	3	8.8	9.1	57.6
	TAGALOG	5	14.7	15.2	72.7
	Finish	1	2.9	3.0	75.8
	Zulu	1	2.9	3.0	78.8
	Konkani	1	2.9	3.0	81.8
	Tsonga	1	2.9	3.0	84.8
	Malayalam	2	5.9	6.1	90.9
	Romanian	1	2.9	3.0	93.9
	Hindi	2	5.9	6.1	100.0
	Total	33	97.1	100.0	
Missing	System	1	2.9		
Total		34	100.0		

English Training received by nurse manager (N=32)



English Training (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	21	61.8	65.6	65.6
	No	11	32.4	34.4	100.0
	Total	32	94.1	100.0	
Missing	System	2	5.9		
Total		34	100.0		

If Yes where received English Training (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Home language	3	8.8	8.8	8.8
	School	17	50.0	50.0	58.8
	Nursing School	8	23.5	23.5	82.4
	Country	6	17.6	17.6	100.0
	Total	34	100.0	100.0	

Current Work Area (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ED	4	11.8	12.1	12.1
	MED	5	14.7	15.2	27.3
	SURG	8	23.5	24.2	51.5
	PEADS	3	8.8	9.1	60.6
	STEPDOWN	2	5.9	6.1	66.7
	CCU	2	5.9	6.1	72.7
	ICU	6	17.6	18.2	90.9
	NURSING ADMIN	2	5.9	6.1	97.0
	Psychiatry	1	2.9	3.0	100.0
	Total	33	97.1	100.0	
Missing	System	1	2.9		
Total		34	100.0		

Nationality * Education Crosstabulation

Count

		Education			
		DIPLOMA	BSN	MSN	Total
Nationality	JORDANIAN	1	3	2	6
	PHILIPINE	0	5	0	5
	INDIAN	2	1	2	5
	SOUTH AFRICAN	2	3	2	7
	EMIRATI	1	0	1	2
	BRITISH	1	1	1	3
	EGYPTIAN	0	1	0	1
	FINISH	1	0	0	1
	NEW ZEALAND	0	0	1	1
	Romanian	0	1	0	1
Total		8	15	9	32

Nationality * Education Crosstabulation

Nationality * Position Crosstabulation (N=33)

Count

		Postion			
		ADON	Unit Manager	SCN	Total
Nationality	JORDANIAN	1	3	3	7
	PHILIPINE	0	1	4	5
	INDIAN	0	2	3	5
	SOUTH AFRICAN	0	4	3	7
	EMIRATI	0	1	1	2
	BRITISH	0	2	1	3
	EGYPTIAN	0	0	1	1
	FINISH	0	1	0	1
	NEW ZEALAND	1	0	0	1
	Romanian	0	1	0	1
Total		2	15	16	33

Position (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ADON	2	5.9	6.1	6.1
	Unit Manager	15	44.1	45.5	51.5
	SCN	16	47.1	48.5	100.0
	Total	33	97.1	100.0	
Missing	System	1	2.9		
Total		34	100.0		

Years of Experience (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5YRS	16	47.1	48.5	48.5
	6-10YRS	13	38.2	39.4	87.9
	11-15YRS	3	8.8	9.1	97.0
	16YRS AND ABOVE	1	2.9	3.0	100.0
	Total	33	97.1	100.0	
Missing	System	1	2.9		
Total		34	100.0		

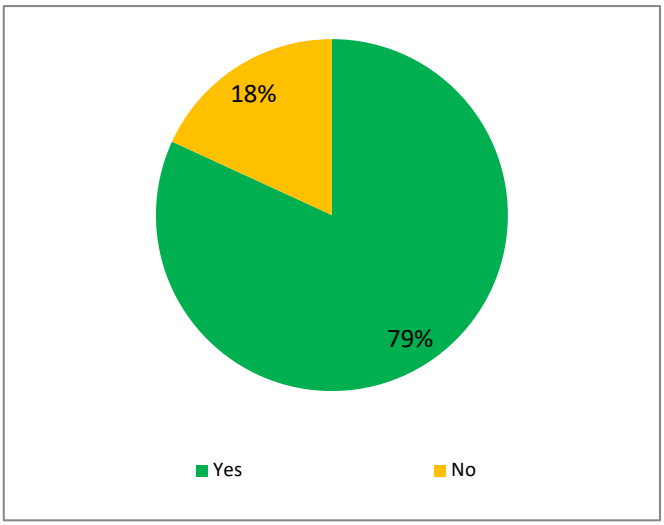
Education (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DIPLOMA	8	23.5	25.0	25.0
	BSN	15	44.1	46.9	71.9
	MSN	9	26.5	28.1	100.0
	Total	32	94.1	100.0	
Missing	System	2	5.9		
Total		34	100.0		

5. CULTURE

5.1 Culture of Nurse Managers and Patient Safety

Manager's Culture Affects Patient Safety (N=34)



Manager's Culture Affects Patient Safety (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	27	79.4	81.8	81.8
	No	6	17.6	18.2	100.0
	Total	33	97.1	100.0	
Missing	System	1	2.9		
Total		34	100.0		

Gender * Own Culture Affect Cross tabulation (N=33)

		Nurse Manager own Culture Affect patient care				
		Yes	Yes	No	No	
		n	f=%	n	f =%	Total
Gender	Male	6	18.18	2	6.06	8
	Female	21	63.63	4	12.12	25
Total		27		6		33

Age / Culture* Affect Cross tabulation (N=33)

	Patient Culture Affect patient safety	Total

Age Nurse Manager	Yes	Yes	No	No	
	n=	f=%	n=	f=%	
25-34	1	3.03	0	0	1
35-44	7	21.21	4	12.12	11
45-54	14	42.42	1	3.03	15
55-64	5	14.15	1	3.03	6
Total	27		6		33

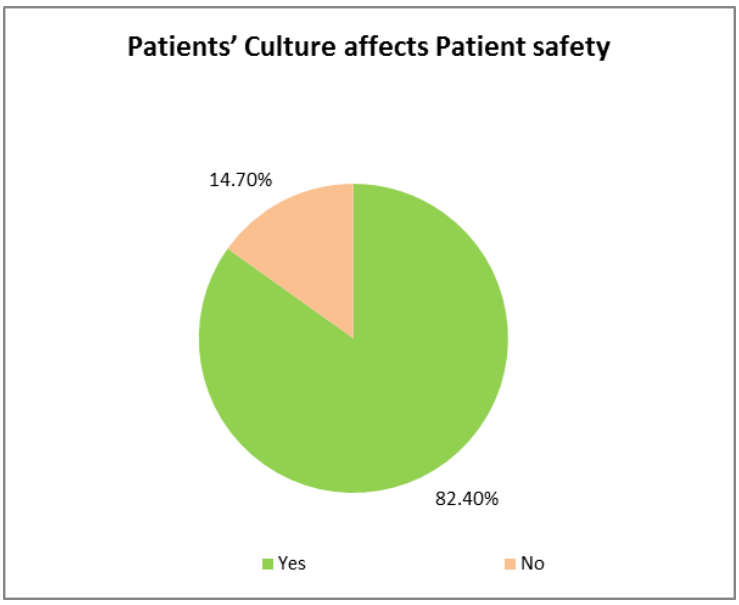
Reasons for Nurse Manager Culture Affecting Patient Safety

Theme	Direct Quotes underpinning the theme
Cultural Competency	*'it forms part of our values and beliefs to care for patients safely'*
	'we are required to employ cultural sensitivity in caring patients from diverse cultures
	'it was the way we were raised from our culture to care for others'
	'we are required to care with integrity and honesty'
Patient Safety	*'it forms part of our work ethic'*
	'it's part of our safety beliefs'
	'a positive work climate ensures patient safety'
	'it is part of our personal learning and development'
	'as it is required by law to provide cultural sensitive care'

5.2 Culture of Patient and Patient Safety

Patients' Culture affects Patient safety (N=34)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	28	82.4	84.8	84.8
	No	5	14.7	15.2	100.0
	Total	33	97.1	100.0	
Missing	System	1	2.9		
Total		34	100.0		



Age * Patient Culture Affect Cross tabulation (N=33)

Age Nurse Manager	Patient Culture Affect				Total
	Yes	Yes	No	No	
	F=	f=%	F=	f=%	
25-34	1	3.03	0	0	1
35-44	11	33.33	0	0	11
45-54	12	36.36	3	9.09	15
55-64	4	12.12	2	6.06	6
Total	28		5		33

Nationality / Patient Culture* Affect Cross tabulation (N=26)

Nationality of Nurse Manager	Effect of Patient Culture on Safety				Total
	Yes	Yes	No	No	
	n=	f=%	n=	f=%	
JORDANIAN	4	15.38	3	11.53	7
PHILIPINE	5	19.23	0	0	5
INDIAN	4	15.38	1	3.84	5
SOUTH AFRICAN	7	26.92	0	0	7
EMIRATI	2	7.69	0	0	2
BRITISH	2	7.69	1	3.84	3

EGYPTIAN	0	0	1	3.84	1
FINISH	1	3.84	0	0	1
NEW ZEALAND	1	3.84	0	0	1
ROMANIAN	1	3.84	0	0	1

Reasons why Patient Culture Affects Patient Safety (N=32)

Theme	Direct Quotes underpinning the theme
Cultural	*'we have different values and beliefs than the patients'*
	'the gender issues and privacy concerns always are a barrier in providing safe care'
Educational aspects	*'more patient and family education to allow patient and family to understand safety concerns when admitted'*
Language Barriers	*'language barriers hindering safe care as no translator always available'*

Training received on Culture (N=32)

Theme	Direct Quotes underpinning the theme
Hospital Orientation	*'there is different cultural topics during orientation such as Ramadaan, cultural awareness, dress code, culturally offensive gestures, patient rights, cultural communication'*
Formal Training	*'no formal cultural training program available in our hospital'*

Culture training assisting Nurse Managers to provide Culturally Congruent Care

Theme	Direct Quotes underpinning the theme
Communication	*'the training improved communication with the different cultures coming for care & services'*
Cultural Congruent Care	*'ensured cultural sensitivity caring different cultures'*
	'allowed better understanding religions and health beliefs of our patients'
	'provided us the knowledge to treat all patients equal'
	'ensure that we respect different cultures'

Culture training assisted Nurse Managers to provide Culturally Congruent Care

Response Categories	**Number responses**
Cultural sensitivity	60
Interactions others	12

3. PATIENT SAFETY

3.1. Positive Safety Culture contribution of the Nursing Team for Patient Safety (n=33)

Themes: Element of system care delivery	Direct Quotes underpinning the theme
Prevent Errors	*'through improved communication with our teams'*
	'encouraging reporting of incidents and follow up on (corrective) action plans'
	'support structured handover reports'
	'implementing risk prevention programs'
	'apply continuous quality improvement programs to identify system defects'
	'ensure regulatory compliance and license to practice safely'
	'by implementing the CUSP program in ICU'
Learn from Errors	*'by sharing safety information with team'*
	'follow continuous survey readiness approach to close safety gaps'
Facilitate a Culture of Safety	*'encourage teamwork: collaboration among team'*
	'through implementation of daily safety huddles (debriefings)'
	'through formal evidence-based education programs'
	'by supporting and motivating nurses'
	'implementing Hourly Rounding Principles'
	'ensure nurses follow hospital policies'
	'by involvement and interaction of patients'
	'daily leadership rounds to verify practices'
	'create safe work environment by senior leadership'
	'to observe for safety issues'
	'by ensuring nurses comply with International Patient Safety Goals (IPSG)'

3.2. Positive Work Environment (Hospital climate) and patient safety (structures and processes) (n=33).

Theme	**Direct Quotes underpinning the theme**
Safe Staffing	*'ensure safe staff allocation and coverage'*
	'to address the skill mix for nurses'
	'provide professional support for caring for patients'
	'conduct recruitment of staff to ensure no shortages'
Improved Communication	*'conduct daily safety Huddles (debriefs)'*
	'provide safety guidelines and workflows'
	'utilize the reporting system to address safety concerns'
	'introduce the Comprehensive Unit Safety Program (CUSP) on all units'
Education	*'provide advanced training to manage patient acuity'*
Adequate Resources	*'ensure that we have the supplies and equipment available'*
	'address the Electronic Medical Record (EMR) system concerns'
Recognition Programs	*'provide frequent reward and recognition programs to acknowledge our work'*

3.3. Communication and Management of Patient Outcomes Data to nurses (n=33).

Theme	Direct Quotes underpinning the theme
Meetings	*'it is shared during our monthly meetings'*
	'during our shift huddles (debrief)'
Electronic and Visual Display of Data	*'shared via e-mails to the concerned nurses'*
	'we display it monthly on units Quality Boards'
	'nurses have access to the shared electronic intranet dashboard'
Training Programs	*'Staff education'*
	'through our Comprehensive Unit Safety Program (CUSP)'
	'dedicated link nurses to train and update staff'
Monthly Reports	*'review and trend incident report data'*
	'update nursing monthly report to demonstrate safety concerns'
	'conduct monthly audit on nursing key performance indicators'
Nurse Manager Support	*'structured daily leadership rounding to identify safety concerns'*

3.4. Managing Patient Outcomes Data

A. Managing HAPU Patient Outcomes Data (n= 33)

Themes	Direct Quotes underpinning the theme
Frequency of Braden Skin Risk Assessment	*'ensure nurses conduct risk assessment of the patient as stipulated in the Skin Integrity Policy'*
Training	*'annual evaluation and re-training on competence for nurse to enable them to conduct risk assessment & implement preventative measures for HAPU'*
Monitoring	*'by regular checks to determine issues with documenting risks in electronic system'*
	'monthly audit nurse performance assessment and documenting NAA'
	'sharing NAA statistical data in monthly meeting'
	'report nurses that's non-compliant to HR disciplinary actions'
	'use NDNQI nursing assessment data to manage nurse performances'

B. Managing Falls Outcomes Data (n=26)

Themes	Direct Quotes underpinning the theme
Falls Risk Assessment	*'ensure nurses conduct Falls risk assessment & apply preventative measures accordingly'*
Reactive Monitoring	*'to investigate and act on non-compliant nurses with counselling'*
	'conduct process review and action plan for reason of falls'
	'coach them when patient falls'

C. Managing Hand Hygiene Patient Outcomes Data (n=33)

Themes	***Direct Quotes underpinning the theme***
Leadership Support	*'the infection control link nurses conduct training and support on the unit'*
	'the nurse managers rounding on units daily to review practices HH'
Monitoring	*'we conduct frequent HH audit to determine compliance from nurses'*
	'we conduct process reviews based on hand hygiene data'

D. Nursing Admission Assessment Outcomes Data (n=6)

Theme	Direct Quotes underpinning the theme
Reactive Monitoring	*'we audit documentation practices'*
	'coaching nurses that is non-compliant'

3.5. SAFETY CULTURE IN PRACTICE

Nurse Managers Description of Culture of Safety Domains (n=33)

Domains as Themes	**Direct Quotes underpinning the theme**
Informational Culture	*'compliance with hospital policies'*
Flexible Culture	*'provide safe environment and system through frequent risk assessments'*
	'proactive approach to prevent harm to patients and staff through rounds'
	'adapt and provide care that is based on patient needs and culture'
	'use incidents as opportunity to learn from errors'
Just Culture	*'proactively address nurse performance behavior's and attitudes affecting patient safety'*
	'enforce nurse accountability and just culture to ensure safety'
	Staffs understand concepts of doing things
Reporting Culture	*No quotes*
Learning Culture	*No quotes*

Training received on the Culture of Safety (n=33)

Themes	**Direct Quotes underpinning the theme**
Culture of Safety Training	*'we do the Culture of Safety Survey every year'*
	'attended the Culture of safety workshop'
Basic Quality Methodology	*'we had training on how to report incidents electronically'*
	'hospital provided root cause analysis (RCA) training'
	'we were taught Risk Management'
	'awareness sessions during Quality week'
	'implementing Comprehensive Unit Safety Program (CUSP)'
	'ensuring that we remain Continuous Survey Ready (CSR)'
	'ensuring environmental Health and safety (EHS) through rounds'
Team Strategies and Tools to Enhance Performance and Patient Safety Training	*'apply TeamSTEPPS for improved patient safety and team performance'*

Hospital management support for nurse manager on Culture of safety (n=33)

Themes	Direct Quotes underpinning the theme
Structures to support safety	*'provided advanced technology to facilitate patient safety'*
	'provided policies to guide practices'
	'annual risk assessment to identify gaps affecting safety'
	'quarterly town hall meetings to provide forum to discuss concerns patient safety'
	'enforce mandatory safety training all healthcare providers'
	'prescribe the competency requirements that's unit specific'
Processes in Place	*'provided anonymous incident reporting system'*
	'provided access to National Data Nursing Quality Indicators (NDNQI) to evaluate nurse performance against international peers'
	'provided key safety processes like transfusion safety, fire and disaster management as examples'
	'provided Root Cause Analysis Process to review system defects'
	'robust education and training process to update skills'
	'provide all nurses the ability to attend best practices conferences'
	'encourage Performance Improvement Projects'
Outcomes Expectation	*'engaging us in Continuous Survey Readiness (CSR) activities to constantly improve patient care for safety'*
	'provide data on nursing key indicators with action plan to improve'

3.6. JUST CULTURE PRACTICES OF NURSE MANAGERS

Reliability Statistics

Cronbach's Alpha	N of Items
.848	9

Questions Outlay:

D.1 The disciplinary process of my hospital is clear to guide me managing my nurses behaviors
D.2. System issues is frequently reviewed through the incidents occurring in my unit
D.3. Process reviews is part of how we manage system defects affecting patient safety
D.4. Process reviews is part of how we manage nurse behaviors affecting patient safety
D.5. The current incident reporting system provides me the data to manage patient safety issues
D.6. Hospital Management support me in addressing system issues affecting patient safety
D.7. Incidents are managed on this unit through appropriate quality methodologies
D.8. Nurses safety performance is managed immediately to avoid safety concerns.
D.9. All incidents are reviewed for patient safety

Regression

Variables Entered/ Removed[b]

Model	Variables Entered	Variables Removed	Method
1	D9, D2, D4, D6, D1, D3, D5, D7[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: D8

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.919[a]	.844	.792	.27385

a. Predictors: (Constant), D9, D2, D4, D6, D1, D3, D5, D7

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.715	8	1.214	16.194	.000[a]
	Residual	1.800	24	.075		
	Total	11.515	32			

a. Predictors: (Constant), D9, D2, D4, D6, D1, D3, D5, D7

b. Dependent Variable: D8

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.107	.402		2.756	.011
	D1	.102	.064	.177	1.594	.124
	D2	-.121	.091	-.162	-1.332	.195
	D3	.384	.153	.451	2.515	.019
	D4	.144	.139	.167	1.033	.312
	D5	-.217	.102	-.293	-2.130	.044
	D6	-.259	.089	-.281	-2.919	.008
	D7	.096	.183	.093	.524	.605
	D9	.601	.096	.724	6.260	.000

a. Dependent Variable: D8

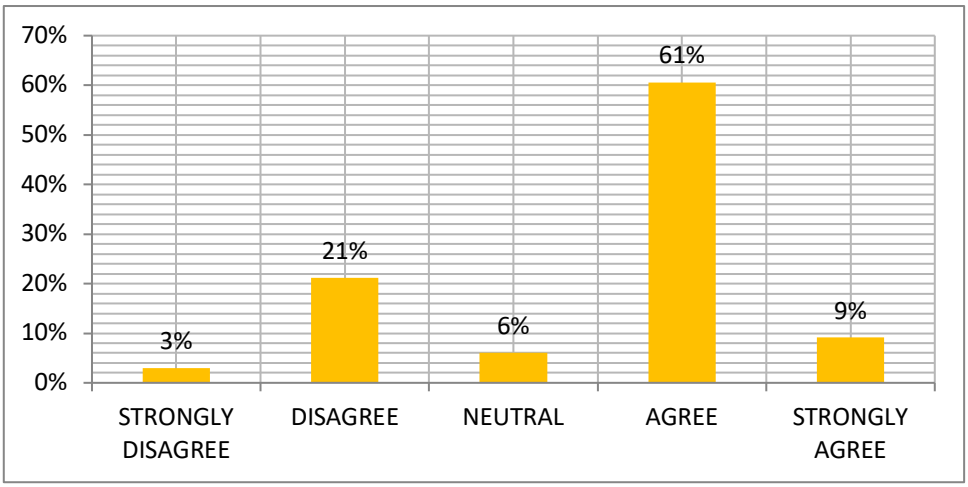
Correlations Just Culture

		D1	D2	D3	D4	D5	D6	D7	D8	D9
D1	Pearson Correlation	1	.552**	0.342	.350*	0.131	0.261	.394*	.450**	0.311
	Sig. (2-tailed)		0.001	0.052	0.046	0.467	0.143	0.023	0.009	0.078
	N	33	33	33	33	33	33	33	33	33

D2	Pearson Correlation	.552**	1	.473**	0.163	0.131	0.185	.618**	0.331	0.26
	Sig. (2-tailed)	0.001		0.005	0.365	0.466	0.301	0	0.06	0.144
	N	33	33	33	33	33	33	33	33	33
D3	Pearson Correlation	0.342	.473**	1	.653**	0.332	0.302	.780**	.648**	0.296
	Sig. (2-tailed)	0.052	0.005		0	0.059	0.088	0	0	0.095
	N	33	33	33	33	33	33	33	33	33
D4	Pearson Correlation	.350*	0.163	.653**	1	.659**	.356*	.437*	.485**	0.333
	Sig. (2-tailed)	0.046	0.365	0		0	0.042	0.011	0.004	0.058
	N	33	33	33	33	33	33	33	33	33
D5	Pearson Correlation	0.131	0.131	0.332	.659**	1	.463**	.394*	0.265	.539**
	Sig. (2-tailed)	0.467	0.466	0.059	0		0.007	0.023	0.136	0.001
	N	33	33	33	33	33	33	33	33	33
D6	Pearson Correlation	0.261	0.185	0.302	.356*	.463**	1	.362*	0.148	.441*
	Sig. (2-tailed)	0.143	0.301	0.088	0.042	0.007		0.038	0.411	0.01
	N	33	33	33	33	33	33	33	33	33
D7	Pearson Correlation	.394*	.618**	.780**	.437*	.394*	.362*	1	.663**	.543**
	Sig. (2-tailed)	0.023	0	0	0.011	0.023	0.038		0	0.001
	N	33	33	33	33	33	33	33	33	33
D8	Pearson Correlation	.450**	0.331	.648**	.485**	0.265	0.148	.663**	1	.694**
	Sig. (2-tailed)	0.009	0.06	0	0.004	0.136	0.411	0		0
	N	33	33	33	33	33	33	33	33	33
D9	Pearson Correlation	0.311	0.26	0.296	0.333	.539**	.441*	.543**	.694**	1
	Sig. (2-tailed)	0.078	0.144	0.095	0.058	0.001	0.01	0.001	0	
	N	33	33	33	33	33	33	33	33	33
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

Frequencies:

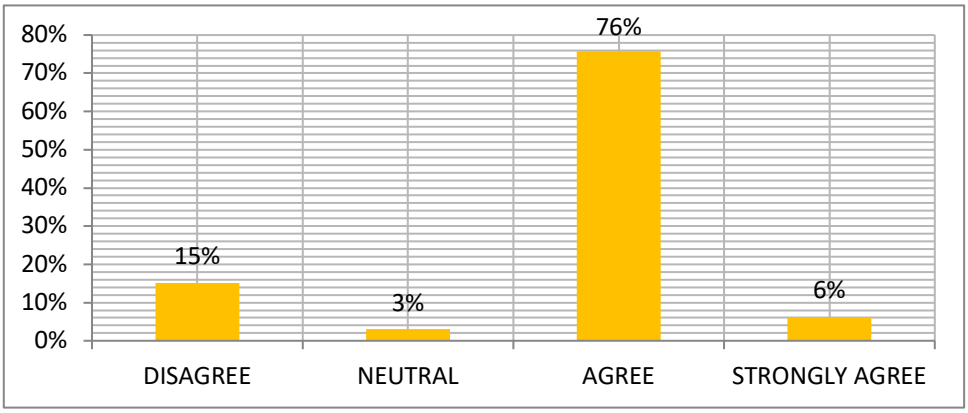
3.6.1. Clear disciplinary process to manage nurses' behaviours (N=33)



Clear disciplinary process to manage nurses' behaviours

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGREE	1	3.0	3.0	3.0
	DISAGREE	7	21.2	21.2	24.2
	NEUTRAL	2	6.1	6.1	30.3
	AGREE	20	60.6	60.6	90.9
	STRONGLY AGREE	3	9.1	9.1	100.0
	Total	33	100.0	100.0	

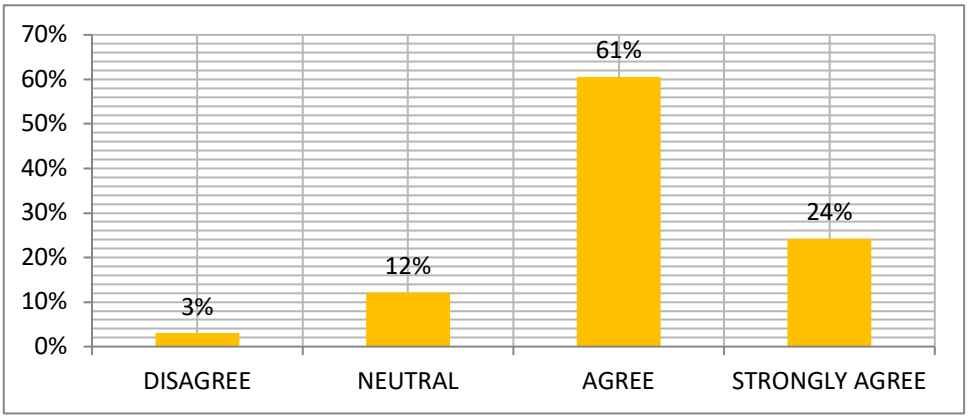
3.6.2. Proactive review of Systems affecting patient safety (N=33)



Proactive review of Systems affecting patient safety

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISAGREE	5	15.2	15.2	15.2
	NEUTRAL	1	3.0	3.0	18.2
	AGREE	25	75.8	75.8	93.9
	STRONGLY AGREE	2	6.1	6.1	100.0
	Total	33	100.0	100.0	

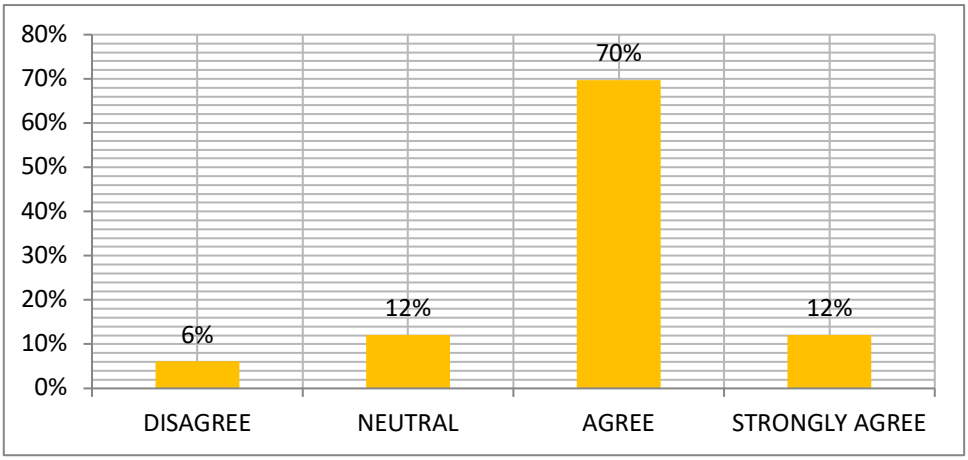
3.6.3. Structured Process Reviews used to manage system defects (N=33)



Structured Process Reviews used to manage system defects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISAGREE	1	3.0	3.0	3.0
	NEUTRAL	4	12.1	12.1	15.2
	AGREE	20	60.6	60.6	75.8
	STRONGLY AGREE	8	24.2	24.2	100.0
	Total	33	100.0	100.0	

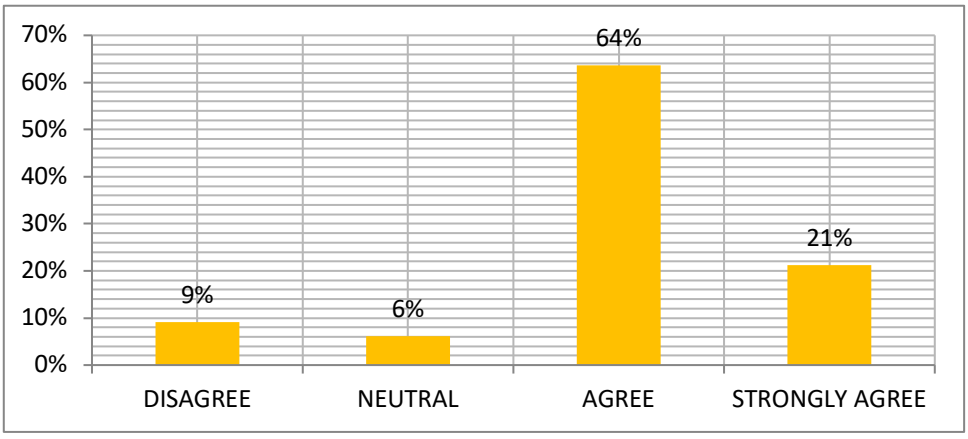
3.6.4. Structured Performance Reviews used to manage nurse's safety behaviours (N=33)



Structured Performance Reviews used to manage nurse's safety behaviours

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISAGREE	2	6.1	6.1	6.1
	NEUTRAL	4	12.1	12.1	18.2
	AGREE	23	69.7	69.7	87.9
	STRONGLY AGREE	4	12.1	12.1	100.0
	Total	33	100.0	100.0	

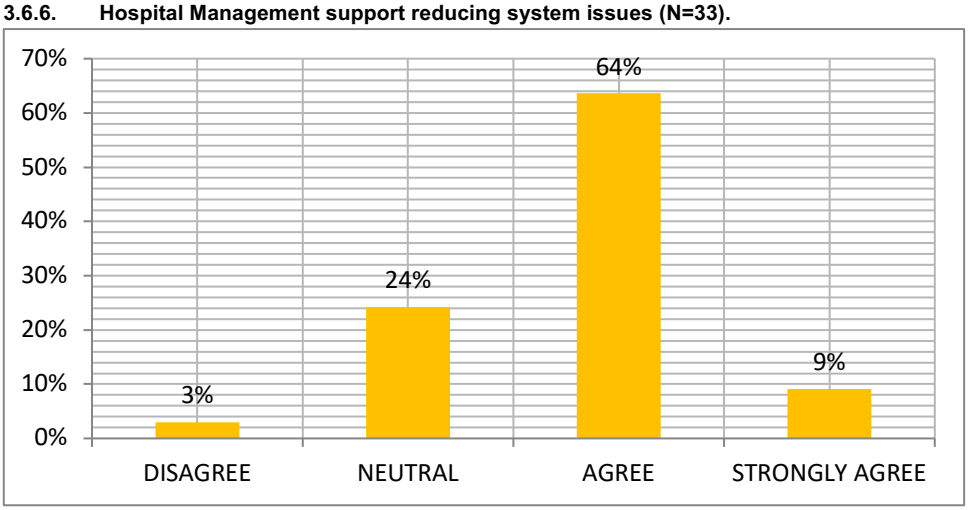
3.6.5. Reporting System provides data to do analysis of safety events (N=33)



Reporting System provides data to do analysis of safety events

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISAGREE	3	9.1	9.1	9.1
	NEUTRAL	2	6.1	6.1	15.2
	AGREE	21	63.6	63.6	78.8
	STRONGLY AGREE	7	21.2	21.2	100.0
	Total	33	100.0	100.0	

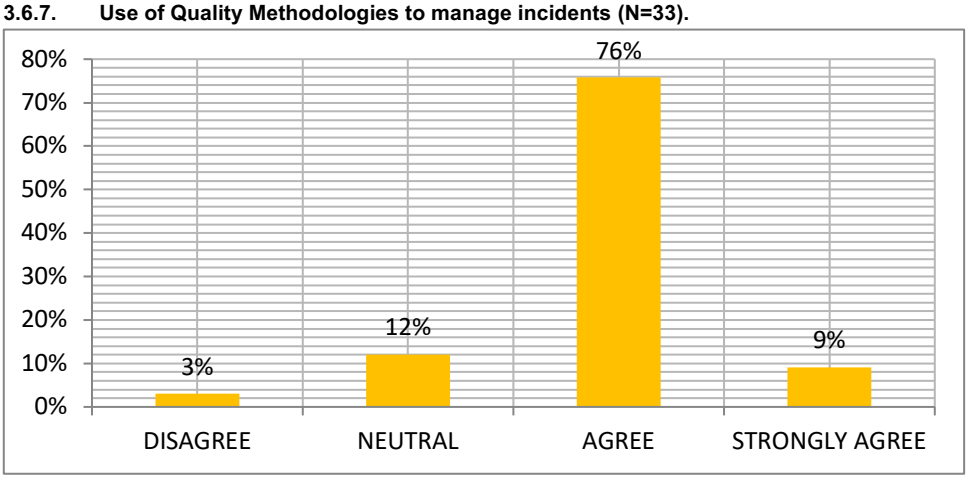
3.6.6. Hospital Management support reducing system issues (N=33).



Hospital Management support reducing system issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISAGREE	1	3.0	3.0	3.0
	NEUTRAL	8	24.2	24.2	27.3
	AGREE	21	63.6	63.6	90.9
	STRONGLY AGREE	3	9.1	9.1	100.0
	Total	33	100.0	100.0	

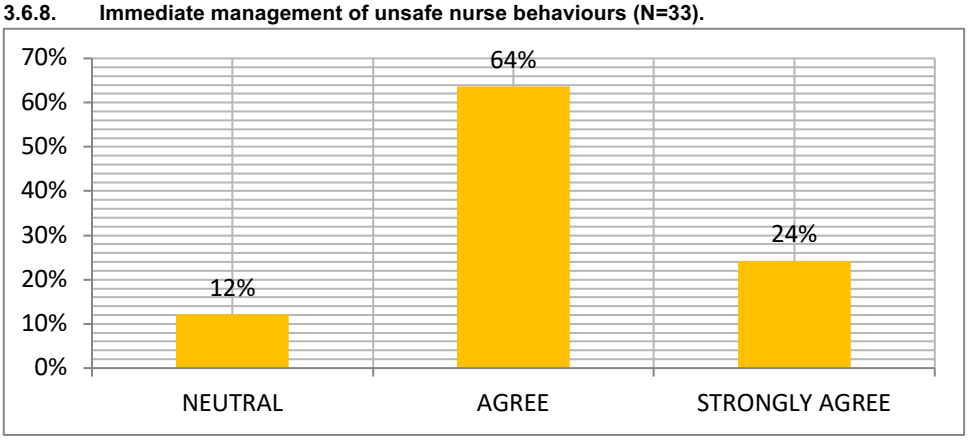
3.6.7. Use of Quality Methodologies to manage incidents (N=33).



Use of Quality Methodologies to manage incidents.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISAGREE	1	3.0	3.0	3.0
	NEUTRAL	4	12.1	12.1	15.2
	AGREE	25	75.8	75.8	90.9
	STRONGLY AGREE	3	9.1	9.1	100.0
	Total	33	100.0	100.0	

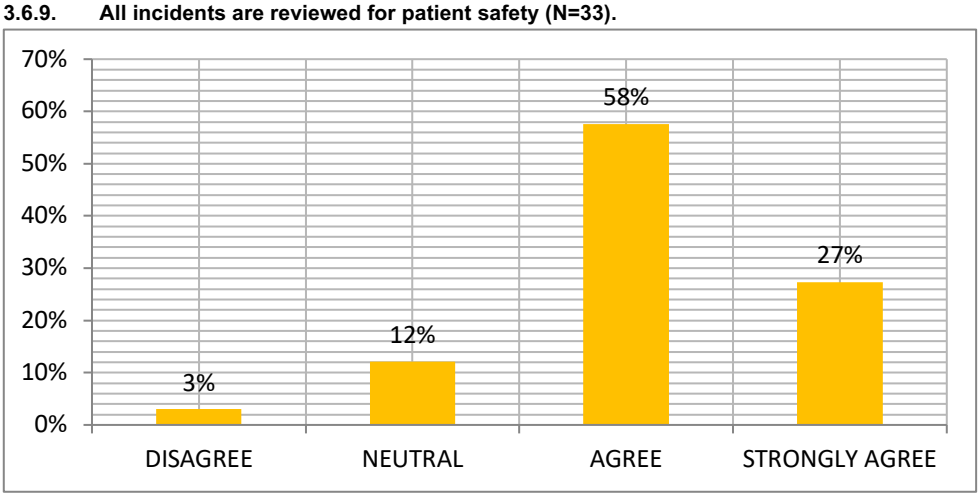
3.6.8. Immediate management of unsafe nurse behaviours (N=33).



Immediate management of unsafe nurse behaviours

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NEUTRAL	4	12.1	12.1	12.1
	AGREE	21	63.6	63.6	75.8
	STRONGLY AGREE	8	24.2	24.2	100.0
	Total	33	100.0	100.0	

3.6.9. All incidents are reviewed for patient safety (N=33).



Incidents are reviewed for patient safety

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISAGREE	1	3.0	3.0	3.0
	NEUTRAL	4	12.1	12.1	15.2
	AGREE	19	57.6	57.6	72.7
	STRONGLY AGREE	9	27.3	27.3	100.0
	Total	33	100.0	100.0	

3.6.10. Nurse Manager Recommendation for a Just Culture (n=28)

Themes	Direct quotes underpinning the theme
Human Resource Policy	*' the need for the Human Resource Department effective response to nurse's non-compliance'*
	'to develop mentoring programs'
	'to have a robust reward and recognition program for nurse'
Safe Systems	*'managers must keep staff accountable'*
	'to conduct regular rounding on patients and staff'
	'ensure resources are available'
	'must drive standardised care practices'
	'investigating system issues'
	'to develop action plans for gaps identified'
	'Nurse Manager Support in clinical setting'
	Communicate performance issue
Monitoring Performances	*'provide regular feedback on gaps in practices'*
	'to monitor practices daily'

	'provide on-going education when gaps in practice identified'

APPENDIX I

UNISA university of south africa

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

REC-012714-039

HSHDC/375/2014

Date: 10 December 2014 Student No: 3260-064-3

Project Title: An action plan to enhance a sustainable safety culture to improve patient outcomes.

Researcher: Helena Elizabeth Maria Haskins

Degree: D Litt et Phil Code: DPCHS04

Supervisor: Prof L Roets
Qualification: PhD
Joint Supervisor: -

DECISION OF COMMITTEE

Approved [√] **Conditionally Approved** [ ]

Prof L Roets
for **CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE**

L.L. Roets (Prof)

Prof MM Moleki
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

APPENDIX J

managed by Cleveland Clinic

Institutional Review Board

Research Ethics Committee

APPROVAL LETTER

26th February 2015

Ms Linda Haskins
Assistant Director of Nursing
Nursing Administration, SKMC
Abu Dhabi, UAE

Ethics Approval Reference No: *Please quote this ref # in all correspondence*	**REC-26.02.2015 [RS-357]**
Research Title:	**An Action Plan to Enhance a Sustainable Safety Culture to Improve Patient Outcomes.**

Dear Ms Linda,

Thank you for submitting your research project for ethical approval.

An expedited review of your submitted proposal aiming to develop an action plan to facilitate a sustainable safety culture in nursing that can contribute to improve patient outcomes found no ethical issues from IRB's perspective; the proposal was approved as presented.

Kindly note that approval is given on the understanding that the research team complies on the applicable guidelines and regulations governing the conduct of clinical trials[1] particularly as to the following:

- *Any amendments or significant change which occurs in connection with this study and/or which may alter its ethical consideration, premature suspension or termination of the study must be reported immediately to the Research Ethics Committee Office.*
- *IRB has an authority to suspend or terminate approval of this research study if not being conducted in accordance with the IRB's requirements or has been associated with unexpected serious harm to subjects.*
- *The investigator should provide the Research Ethics Committee office with a **final report** within **three (3) months** after Termination or Completion of a research study or the investigator's part of the research study.*

[1] http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html

APPENDIX K

مستشفى العين
AL AIN HOSPITAL

AAH Research & Ethics Governance Committee

TO: Helena E. M Haskins; lhaskins@skmc.ae
Assistant Director of Nursing
Sheikh Khalifa Medical Center

CC: AAH Research and Ethics Governance Committee

Date: 09 March 2015

RE: **Proposed Research Study:** *An action plan to enhance a sustainable safety culture to improve patient outcomes*

Ref: *AAH/EC-03-15-002*

Dear Ms. Helen:

On behalf of the Al Ain Hospital Research and Ethics Governance Committee, I am pleased to confirm a favorable ethical opinion for the above research on the basis described in the application form and supporting documentation.

The favorable opinion is given provided that you comply as per the context set out in your research study.

You are hereby advised to commence your research study at Al Ain Hospital. In keeping with our policy, the AAH Research and Ethics Governance Committee is kindly requesting you to report any ethical concerns/considerations that may arise during the course of your research, in a timely manner.

The Committee is wishing you a success for this project.

Yours sincerely,

Mouza Al Kuwaiti
Medical Officer

09/03/15

Dr. Mouza A. Al Kuwaiti
Chair, AAH Research & Ethics Governance Committee
Chief Medical Officer
Al Ain Hospital

APPENDIX L

e-DELPHI ROUND 1 VALIDATION ASSESSMENT INSTRUMENT

INTRODUCTION LETTER

Dear Colleague

My name is Linda (H.E.M) Haskins. I am a Ph.D. candidate at the University of South Africa (UNISA) in the Department of Health Sciences. I am conducting a study with the title: AN ACTION PLAN TO ENHANCE A SUSTAINABLE SAFETY CULTURE TO IMPROVE PATIENT OUTCOMES. You were identified as a nursing practice resource expert by your Chief Nursing Officer and Assistant Director of Nursing to be part of a panel of experts to assess the action plan by using the Delphi technique. The e-Delphi will consist of three rounds in which experts like you are presented with the same set of proposed statements which will make up the action plan. In each round of the survey you, together with the other experts, will review the importance of these statements in the clinical practice. I will continue to incorporate the suggestions by the panelists and adapt the action plan until at least 80% consensus is reached by you as the participants.

Ethical approval for this study was granted by the Research Ethics Committee of the UNISA (REC-012714-039) as well your hospital's Institutional Review Board. Participation is voluntary and you may withdraw from the study at any time. Participation in this online survey process is anonymous and completion of the survey implies consent. Should you agree to participate, please read the Informed Consent Information Sheet below. **If you agree to participate the link to provide you with access to the action plan is provided to you at the end of all the information. You can just click on the link to obtain access.**

Information Sheet:

Background

You are invited to participate in this final stage of a 3-part research study designed to reach consensus on the proposed Action Plan to enhance a sustainable safety culture in an attempt to improve patient outcomes.

In Phase 1 of this study, the clinical outcomes data for the respective hospitals revealed that Nursing Admission Assessment within 24-hour period, Falls Risk Assessment, Hospital Acquired Pressure Ulcers (HAPU) and Hand Hygiene (HH) practices were not sustained during 2016.

In Phase 2, the data from clinical nurse managers and nurses revealed a lack of knowledge, understanding and consistency with regards to Culture, Patient Safety Practices (NAA, Falls, HAPU, HH), Positive Practice Environment Processes (Hospital Climate) and some aspects pertaining to Safety Culture

The action plan is developed by using the data received during phases 1 and 2. The action plan is organized into four broad themes which my research and the literature identified as essential to sustaining safe patient care:

The first part of the study is the Biographical Data pertaining to you as the clinical expert.

1. Culture (10 action items)
2. Patient safety (19 action items)
3. Positive Work Environment - Hospital climate (8 action items)
4. Safety culture (20 action items). This has five distinct components (informed/ flexible/reporting/just/learning)

If you agree to participate you will receive no compensation. You will complete an online survey that consists of 55 action statements. Your responses, together with those of the other experts, will be analysed by myself who will then, use your inputs who will then adapt the action plan. This modified plan will then be made available to you for review in the next round of the e-Delphi. It will take approximately 2 weeks for me to provide you with the adapted plan. Your contribution will take approximately 35 minutes per round.

Please click on link below if you agree to assist me with the validation of the proposed action plan to do the survey

https://www.surveymonkey.com/r/6RVX5LC

Your inputs are very much appreciated.

Thank you

H. E. M (Linda) Haskins -32800843

Haslin12@yahoo.com

BIOGRAPHICAL DATA

Please indicate your answer to the following questions with a tick in the appropriate box.

7. What is your gender?

Male □ Female □

8. Indicate your age

18-24 years □

25-34 years □

35-44 years □

45-54 years □

55-65 ears □

9. Please specify your Nationality:

Emirati □

Jordanian □

South African □

Philippine □

Indian □

English □

Other _____

10. Where do you currently work:

Medical □

Surgical □

Peads □

Critical Care (ICU's, Step Down/ Telemetry etc) □

11. **Please indicate your specific position in the institution:**

Unit Manager □

Senior Charge Nurse □

Clinical Resource Nurse □

Charge Nurse □

Staff Nurse □

12. How long have you been in this current position?

1-5 years □

6-10 years □

11-15 years □

16 years and above □

2. Please indicate your highest level of nursing education

Diploma in Nursing □

Bachelor's Degree □

Master's Degree □

Any Others: Please specify _____

<u>Theme 1 - Culture</u>:

Participants in Phase 2 identified a lack of knowledge of how culture affects patient safety; how to deliver culturally congruent care; proficiency in English as questions interpreted differently than intended due to the different language dialects of the nursing team; and nurse comments that disables them to communicate with patients in Arabic.

Proposed Strategic Action Goal: Develop and implement a structured, behavioural-based education program that supports nurses to cultural competence, proficiency in English and conversational Arabic

Please read through the action statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required for the action statement)	**Time frame-** select most appropriate timeframe for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
1. Develop a standardized and structured Behavioral Based Cultural Orientation Program that is supported by a theory.	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge Nurses) □	60 days □				
	All of the above □					
2. Implement the standardized and structured Behavioural Based Cultural	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/					

Orientation Program developed to ensure patient Satisfaction is at 95% for culturally congruent care	Charge Nurses) □					
	All of the above □					
3.Develop a person-centered interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families and guide decision making in the clinical setting	Nurse manager□	14 days□				
	Nurse educator (CRN) □	30days □				
	Registered Nurse (Staff/ Charge Nurses) □	60 days □				
	All of the above □					
4. Implement a person-centered interview framework to assist nurses to elicit relevant information to engage appropriately	Nurse manager □	Every Shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					

with patients and their families and guide decision making in the clinical setting						
5. Develop and implement an audit tool to monitor that the person centered, theory-based interview assessment is used 100% of the time	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge Nurses) □	Monthly □				
	All of the above □	Quarterly □				
6. Audit compliance with applying person centered, theory-based interview assessment is used 100% of the time	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge Nurses) □	Monthly □				
	All of the above □	Quarterly □				
7. Involve the nursing team through unit	Nurse manager □	Daily □				

meetings in the development of a clear policy which describes the behavioural expectations for the application of cultural congruent care for patient safety and satisfaction.	Nurse educator (CRN) □	Weekly □				
	Registered Nurses (Staff/Charge Nurses) □	Monthly □				
	All of the above □	Quarterly □				
8. Conduct audits to determine if cultural congruent care policies are applied into clinical practice and act to address gaps.	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge Nurses) □	Monthly □				
	All of the above □	Quarterly □				
9. Identify and act on cultural specific needs in each individual patient care plan	Nurse manager □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □	Weekly □				
		Monthly □				
10. Identify English proficiency	Senior Nurse Leadership (Chief Nursing	During application Interview □				

through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English dialect.	Officer and Assistant Director of Nursing) □					
	Human Resource Department □	Joining the hospital □				
	Nurse manager □					
11. Provide basic Arabic language training to improve conversational Arabic for patient safety.	Senior Nurse Leadership (Chief Nursing Officer and Assistant Director of Nursing) □	30days □				
	Human Resource Department	60 days □				
	Nurse manager □	90 days □				

Theme 2 – Patient Safety: - Participants in Phase 1 identified that NAA, Falls, HAPU, HH compliance was inconsistent. Participants in Phase 2 identified a lack of knowledge and consistency among the nursing team in conducting nursing admission assessment (NAA) within the 24-hour timeframe, preventing Falls, and hospital acquired pressure ulcers (HAPU), and hand hygiene (HH) to prevent Hospital Acquired Infections. Additionally, system issues were listed that affects patient safety.

Proposed Strategic Action Goal: Develop and implement structured, standardized behavioural-based training programs for NAA, Falls Prevention, HAPU and Hand Hygiene. Develop a clear policy to ensure compliance with NAA, Falls and HAPU Prevention, and Hand Hygiene Practices. Annual competency re-validation linked to compliance audit results for NAA, Falls, HAPU, HH. Conduct and share Performance Audit Data in structured process with team on NAA, Falls, HAPU, HH compliance and system defects being addressed.

Please read through the statements and then click ok to continue

Action Statement	**Responsible person (**choose	**Time frame-** select most appropriate	**Essential** to ensure patient	**Important** to ensure patient	**Not important** for patient	**Comments:** Recommendation

	appropriate role/s that is required to enact the action statement)	timeframe required for the action statement	safety and satisfaction (3)	safety and satisfaction (2)	safety and satisfaction (1)	to improve action statement
12. Develop a Standardized and Structured Behavioural Based Training Program that is supported by the Nursing Process Theory.	Nurse manager□	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge Nurses) □	60 days □				
	All of the above □					
13. Implement the Standardized and Structured Behavioural Based Training Program that is supported with the Nursing Process Theory in order for Nursing Assessment (NAA) to be sustained at 100%	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					
	Nurse manager □	Every shift □				

14. Assess the nurse's competencies regarding: 1. Patient Health Assessment on Admission 2. Development of an appropriate individualized nursing care plan. 3. The parameters required within the Admission Assessment Policy	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					
15. Ensure an evidence-based, acuity-driven nurse: patient ratio that will positively influence compliance with regards to patient care activities provided.	Nurse manager □	Every shift □				
	Registered Nurse (Staff/ Charge Nurses) □	Daily □				
	All of the above □	Change in patients' condition □				

16. Educate nurses to perform a Risk Assessment on the electronic medical record to identify and report connectivity systems issues affecting compliance with completion of the NAA within timeframe.	Nurse manager □	Immediate when issue identified □				
	Registered Nurse (Staff/ Charge) □	Next shift □				
	All of the above □	All the above □				
17. Develop an evidence-based behavioral Falls risk program that incorporates Morse and Humpty Dumpty algorithm to support standard practice	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge Nurses) □	60 days □				
	All of the above □					
18. Implement the Standardized and Structured	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				

Behavioural Based Falls Training Program to ensure that all nurses comply with the Falls Prevention Algorithm to prevent falls	Registered Nurse (Staff/ Charge Nurses) □					
	All of the above □					
19. Assess the nurse's competencies regarding: 1. Morse & Humpty Dumpty Scoring 2. Falls Risk Assessment 3. Use of preventative safety measures based on risks identified. 4. Verbalization on frequency for conducting Falls Risk. 5. Application of visual cues to alert others to falls risk. 6. The application of the Falls Prevention	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □					
	All the above □					

Policy in practice.						
20. Ensure a nurse: patient ratio of 1;1, 1;2 or 1;3 based on patient acuity	Senior Nurse Leadership (Chief Nursing Officer & Assistant Director of Nursing) □	Every shift □				
	Nurse manager □	Daily □				
	Charge Nurse □	Change patient's condition □				
	All the above □					
21. Develop a Standardized and Structured Behavioural Based Skin Risk Integrity Training Program that is supported by a theory.	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge) □	60 days □				
	All the above □					
22. Implement the Standardized and Structured Behavioural Based Skin Risk	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □					

Integrity Training Program to reduce Hospital Acquired Pressure Ulcers.	All the above □					
23. Assess nurse competency on: 1. The use of the Braden Skin Risk Assessment tool. 2. The interpretation of the Braden scoring to identify skin risk 3. The implementation of the appropriate pressure reduction measures based on risk. 4. Frequency for conducting Braden Risk Assessment. 5. Appropriate referral to physician and	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □					
	All the above □					

dietician when skin risk is high. 6. Staging Pressure Ulcers 7. The application of the Skin Integrity Policy in practice.						
24. Develop a Standardized and Structured Behavioural Hand Hygiene Training Program that's supported by a theory.	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge) □	60 days □				
	All the above □					
25. Implement the Standardized and Structured Behavioural Hand Hygiene Training Program in clinical setting to reduce hospital acquired infections.	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □	Every patient encounter □				
	All the above □					
26. Assess nurse competency on:	Nurse manager □	Every Patient Encounter □				

1. The application of the '5' moments of Hand Hygiene 2. Demonstrate aseptic hand washing technique 3. Educating others on hand hygiene 5. Appropriate use of Gloves before and after a procedure 6. Hand Hygiene in Bundle Compliance to prevent infections 6. The application of the Hand Hygiene Policy in practice.	Nurse educator (CRN) □	Every shift □				
	Registered Nurse (Staff/ Charge) □					
	All the above □					
27. Educate nurses to conduct a Risk Assessment to determine if the hand wash stations are appropriately placed in the unit to ensure that nurses are	Nurse manager □	Immediate when identified no hand wash station □				
	Nurse educator (CRN) □	Next shift □				
	Registered Nurse (Staff/ Charge) □	Unit Meetings □				
	All the above □					

able to wash their hands.						
28. Report skin irritations incurred from hand washing solutions in order to find an alternative	Nurse manager □	Immediate after irritations are experienced □				
	Nurse educator (CRN) □	Next shift □				
	Registered Nurse (Staff/ Charge) □					
	All the above □					
29. Communicate to the nursing team the behavioural expectations required to comply with NAA, Falls, HAPU, HH processes in order to avoid consequences	Nurse manager □	During educational sessions □				
	Nurse educator (CRN) □	Daily Safety Debrief Meetings (Huddles) □				
	Registered Nurse (Staff/ Charge) □	Monthly unit meetings □				
	All the above □					

<u>Theme 3 – Positive Work Environment (Hospital Climate):</u> - Participants in Phase 2 identified the absence of a standardized, structured process to proactively assess system issues and identify resource needs such as: nurse manager visibility and support, team work, scheduling, patient allocations and communication were identified as gaps to ensuring patient safety.

Proposed Strategic Action Goal: Establish a standardized and structured Positive Work Environment process to improve work environment to be supportive of patient and staff safety to illustrate Leadership, support and guidance, Teamwork, Staff Scheduling and patient allocation clearly listed for team to refer to when required. Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact the action statement)	**Time frame-** (select most appropriate timeframe for the action statement)	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
30. Develop a structured and standardized Positive Work Environment Process (based on elements listed in Strategic Action Goal) to ensure nurses safe care practices	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge) □	60 days □				
	All the above □					
31. Implement the structured and standardized Positive Work Environment Process to ensure work environment for nurse to perform safe care	Nurse manager □	Every shift □				
	Registered Nurse (Staff/ Charge) □	Daily □				
	All the above □	When change is introduced □				
32. Use the patient	Nurse manager □	Every shift □				

outcomes data to ensure that individual nurse performance evaluations for nursing admission assessment within the 24-hour timeframe at 100%, Falls and HAPU rates at zero and 100% hand hygiene compliance is directed towards improvement for patient safety.	Nurse educator (CRN) □	Monthly □				
	Registered Nurse (Staff/ Charge) □	Quarterly □				
	All the above □	During Performance Appraisal (iPerform only) □				
33. Implement the minimum safe, evidence-based staffing and skills mix guidelines for unit to support safe patient staffing levels.	Senior Nurse Leadership (Chief Nursing Officer & Assistant Director of Nursing) □	Every shift □				
	Nurse manager □	Daily □				
	Registered Nurse (Staff/ Charge) □	Changes in patient acuity □				
	All the above □					
34. Monitor through	Nurse manager □	Daily □				

incident reports whether nurse: patient allocations resulted in safety for: 1.nursing admission assessment within timeframe; 2.Falls 3. HAPU rates to zero 4. and hand hygiene compliance	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge) □	Monthly □				
	All the above □					
35. Provide a structured guideline for communication channels in units to: 1. Report if experience patient related issues that might affect patient safety. 2. Request if assistance of team members is required.	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □	When safety concern identified □				
	All the above □					

3. Speak up if another healthcare provider compromise patient safety.						
36. Establish a process for nurse managers visibility and participation to include: 1. Intentional Rounding on all new patients to determine if any issues with care provided. 2. Rounding with a Purpose on all staff - every shift to identify resource deficits and needs. 3. Environmental monitoring to identify patient safety risks.	Nurse manager □	Daily □				
	Charge Nurses □	During shift changes □				
	All the above □	Weekly □				
37. Establish a structured process to: 1. Acknowledge nurses' patient safety achievements	Senior Nurse Leadership (Chief Nursing Officer & Assistant Director of Nursing)	14 days □				

2. Enforce professional development activities 3. Identify individual professional development needs of nurses 4. Share the performance management data 5. Provide feedback on performance	Nurse manager □	30 days □				
	Registered Nurses (Staff/ Charge) □	Annually □				
	SNL & Nurse Manager □					
Theme 4 – Safety Culture has five distinct sections which will be discussed individually (1. INFORMED CULTURE/ 2. FLEXIBLE CULTURE/ 3. REPORTING CULTURE/ 4. JUST CULTURE / 5. LEARNING CULTURE) Participants in Phase 2 identified the general absence of awareness of Safety Culture and their own roles and responsibilities **Proposed Strategic Action Goal:** Develop and implement a structured, standardized competency-based Culture of Safety education program that supports nurses to integrate safety principles into general nursing practice **Please read through the statements and then click ok to continue**						
4.1 Informed Culture: - Results from Phase 2 of study identified that there is no standardized and structured process used by nurse manager to share and communicate safety information with nurses to sustain practices and align nurse's safety efforts. **Proposed Strategic Action Goal:** Engage nurses in process improvement activities through structured processes to address factors that affect patient safety and sustainment of patient safety practices, based on regular data analysis from audits, errors, near misses and incident report data **Please read through the statements and then click ok to continue**						
Action Statement	**Responsible person (**choose	**Time frame-** select most appropriate	**Essential** to ensure patient	**Important** to ensure patient	**Not important** for patient	**Comments:** Recommendation

	appropriate role/s that is required to enact the action statement)	timeframe for the action statement	safety and satisfaction (3)	safety and satisfaction (2)	safety and satisfaction (1)	to improve action statement
38. Share the performance management data (HAPU/HH/ Falls/ NAA) through: 1. Unit meetings to engage nurses in process improvement activities required for change. 2. Quality Boards as visual reminder on process improvement actions pending 3. Daily safety huddles to alert nurses to safety concerns. 4. Individual nurse coaching if practice gaps identified.	Nurse manager □	Daily when issue identified □				
	Registered Nurse (Staff/ Charge) □	Weekly □				
	All the above □	Monthly Unit Meetings □				
39. Utilize a structured process to facilitate:	Senior Nurse Leadership (Chief Nursing Officer &	Daily □				

1. That Corrective Actions identified are completed to ensure process improvement is implemented for a Culture of Safety. 2. Ensure that the Comprehensive Unit Safety Program (CUSP) is implemented in unit to sustain practices	Assistant Director of Nursing) □					
	Nurse manager □	Weekly □				
	All the above □	Monthly □				
40. Identify trends in incidents reported and provide feedback to nurses to facilitate process improvement and education activities	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurses (Staff/ Charge) □	Monthly □				
	All the above □					
4.2 Flexible Culture: - Results from Phase 2 of study identified no standardized and structured process to assist nurses to adapt to changes brought about in ever changing healthcare environment. **Proposed Strategic Action Goal:** Develop and implement a structured and standardized communication process to allow nurse manager and nurse to adapt and change in emergent situations to ensure that an immediate decision can be taken to prevent harm to a patient **Please read through the statements and then click ok to continue**						

Action Statement	**Responsible person** (choose appropriate role/s that is required enact the action statement)	**Time frame-** select most appropriate timeframe for the action statement	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
41. Implement structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe handoff of patient care.	Nurse manager □	During every Shift change □				
	Nurse educator (CRN) □	During break times □				
	Registered Nurse (Staff/ Charge) □	Transfer of patients □				
	All the above □	All the above □				
42. Promote active participation of nurses in audits to monitor compliance with: 1. Handoff of patient practices to ensure patient continuity of care 2. Team briefing (Huddles) as	Nurse manager □	Daily □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge) □	Monthly □				
	All the above □					

tool to align team on patient care concerns 3. Use of SBAR during shifts and break times to communicate patient information in a structured way						
43. Develop structured process to involve the nursing team in: 1. Unit risk assessment to involve nurses in improving system gaps. 2. Root cause analysis when incident reported that affect patient safety	Nurse manager □	Annually □				
	Nurse educator (CRN)	When safety concern identified □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					
4.3 Reporting Culture: - Results from Phase 2 of study indicates that there is a punitive environment that exists within units that stops nurses from reporting incidents that affects patient safety. **Proposed Strategic Action Goal**: Apply a structured and standardized Positive Work Environment process in which the nursing team feel safe and are prepared to report their errors and near misses to ensure patient safety **Please read through the statements and then click ok to continue**						
Action Statement	**Responsible person (**choose	**Time frame- (**select most appropriate	**Essential** to ensure patient	**Important** to ensure patient	**Not important** for patient	**Comments:** Recommendation

	appropriate role/s that is required to enact the action statement)	timeframe for the action statement)	safety and satisfaction (3)	safety and satisfaction (2)	safety and satisfaction (1)	to improve action statement
44. Communicate the Culture of Safety Process in unit meetings to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls.	Nurse manager □	Daily shift Debrief (Huddles) □				
	Nurse educator (CRN) □	Monthly Unit Meetings □				
	Registered Nurse (Staff/ Charge) □	All the above □				
45. Apply Positive work environment process listed above as guide for nurses to: 1. Report behavioural practices of others affecting patient safety. 2. Report system defects affecting patient safety.	Nurse manager □	Every time safety concern identified □				
	Nurse educator (CRN) □	Daily □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					
<u>4.4 Just Culture</u>: -						

Results from Phase 2 of study identified a punitive environment, system issues not being proactively addressed, and nurse's behavioural practices not managed in a safe and just manner.

Proposed Strategic Action Goals:

(a) Ensure a standardized safety-supportive system of shared accountability where nurse managers are accountable for the systems they have designed and also for responding to the behaviours of their nursing staff in a fair and just manner and apply processes to facilitate behavioural management of safety,

(b) Ensure nurse accountability for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact action statement)	**Time frame-** (select most appropriate timeframe for the action statement)	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
46. Develop a structured Risk Assessment Program to proactively avoid patient harm	Environment and Safety Department □	Annually □				
	Nurse manager □	When new risk for patient safety identified □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					
47. Implement the structured Risk Assessment Program to:	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	When safety change in environment identified (Air conditioning				

1. Identify system defects 2. Involve nurses in Units Environment Risk Assessment 3. Mitigate risks identified		system, Water leaks, electricity or equipment concerns etc.) □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					
48. Assess nurses` competence with patient Hourly Rounding Principles for: 1.Explaination of the principles of Hourly Rounding to patient/family 2. Use of drafted wording (script) in every patient encounter to ensure patient hears same message from all the nurses. 3. Ensure that nurse physically checks to determine if the 5 "P" is addressed (Position, Potty, Pain, Possessions	Nurse manager □					
	Nurse educator (CRN) □					
	Charge Nurse □					
	All the above □					

and IV Pump) to avoid HAPU, Falls and ensure patient satisfaction. 4. Use of the Whiteboard as tool to communicate the 5 “P” with patients 5. Informing patients based on drafted wording (script) what is next in term of returning to room and care activities						
49. Audit nurse compliance in applying Hourly Rounding Principles	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Weekly □				
	Registered Nurse (Staff/ Charge) □	Monthly □				
	All the above □					
50. Implement action plans for gaps identified in Safety Culture Results to prevent patient safety concerns for NAA/ HH/	Nurse manager □	Daily □				
	Registered Nurse (staff/ Charge) □	Weekly □				
	All the above □	Monthly □				

HAPU/ patient harm from falls.						
51. Apply structured process to communicate patient safety expectation to nurses: 1. Ensure nurse understands responsibility and accountability for safe practice behaviours affecting sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls patient safety 2. Ensure that nurse reports system issues affecting patient safety.	Nurse manager □	Every shift □				
	Clinical Resource Nurse (CRN) □	During Annual Competency Assessment □				
	Registered Nurse (Staff/ Charge) □	All the above □				
	All the above □					

<u>4.5. Learning Culture</u>: - Results from Phase 2 of the study identified that equal training opportunity for all nurses and not just some; that there is no standardized and structured process for professional and career development to ensure nurses are competent and skilled to perform safely. Additionally, based on patient safety results there is a lack of knowledge and consistency in performing key nursing activities listed for NAA/ Falls/ HAPU/ HH.

Proposed Strategic Action Goals: Develop and implement a structured and standardized process to identify learning and training needs supported on reviews and analyses safety-related data and reports and incidence reported. Ensure training is Behavioral Based to allow expectation and consequences clearly understood and supported by a theory to apply the hospital Safety Management Plan

Please read through the statements and then click ok to continue

Action Statement	**Responsible person** (choose appropriate role/s that is required to enact the action statement)	**Time frame-** (select most appropriate timeframe for the action statement)	**Essential** to ensure patient safety and satisfaction (3)	**Important** to ensure patient safety and satisfaction (2)	**Not important** for patient safety and satisfaction (1)	**Comments:** Recommendation to improve action statement
52. Develop a Standardized and Structured Behavioural Based **Culture of Safety** Training Program to align nurse's safety efforts to sustain patient safety practices	Nurse manager □	14 days □				
	Nurse educator (CRN) □	30 days □				
	Registered Nurse (Staff/ Charge) □	60 days □				
	All the above □					
53. Implement the Standardized and Structured Behavioral Based **Culture of Safety** Training Program to align team safety efforts to sustain patient safety practices	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Every patient encounter □				
	Registered Nurse (Staff/ Charge) □	When safety concern identified □				
	All the above □	All the above □				
54. Implement standardized training programs on basic quality	Nurse manager □	During annual competency assessments □				
	Nurse educator (CRN) □	When safety risk is identified □				

methodologies to: 1. Conduct Plan Do Check Act - PDCA to improve process gaps 2. Perform a Root Cause analysis -RCA if incidents identified affecting patient safety 3. Respond and act conducting Process Improvement - PI to allow nursing team to identify gaps in performance for NAA, Falls Incidence, HAPU Rate and HH based on targets set.	Registered Nurse (Staff/ Charge) □	Monthly Unit Meetings □				
	All the above □	All the above□				
55. Implement training programs to conduct standardized performance audits for: 1. Nursing admission assessment within timeframe, 2. Falls,	Nurse manager □	Every shift □				
	Nurse educator (CRN) □	Annually during competency assessment □				
	Registered Nurse (Staff/ Charge) □	Monthly □				
	All the above □	All the above □				

3. HAPU and 4. Hand hygiene.						

APPENDIX M

RESULTS e-DELPHI ROUND 1 VALIDATION ASSESSMENT INSTRUMENT

Panellist Gender (N=18)

Gender	n	f=%
Female	15	83.33
Male	3	16.67

Panellist Age (N=18)

Age	n	f=%
18- 24 years	0	0
25 -34 years	1	5.56
35 – 44 years	3	16.67
45 – 54 years	10	55.56
55 – 64 years	4	22.22

Panellist Nationality (N=18)

Nationality	n	f=%
South African	7	38.89
Jordanian	4	22.22
Philippine	3	16.67
Indian	2	11.11
Emirati	1	5.56
English	1	5.56

Current work area (N=18)

Answer Choices	Responses	
Medical	27.78%	5
Surgical	33.33%	6
Pediatrics	11.11%	2
Critical Care (ICU, Step down, Telemetry, etc)	27.78%	5
	Answered	**18**

Panellist Position (N=18)

Answer Choices	Responses	
Unit Manager	33.33%	6
Senior Charge Nurse	11.11%	2
Clinical Resource Nurse	16.67%	3
Charge Nurse	27.78%	5
Staff Nurse	11.11%	2
	Answered	**18**

Panellist Years in Current Position (N=18)

Answer Choices	Responses	
1-5 years	16.67%	3
6-10 years	33.33%	6
11-15 years	38.89%	7
16 years and above	11.11%	2
	Answered	**18**

Panellist Highest Nursing Qualification (N=18)

Answer Choices	Responses	
Diploma in Nursing	27.78%	5
Bachelor's Degree	44.44%	8
Master's Degree	27.78%	5
Other (please specify)		1
	Answered	**18**

1. Theme 1- Culture

Proposed Strategic Action Goal: This section was to develop and implement a structured, behavioural-based education program that supports nurses to cultural competence, proficiency in English and conversational Arabic.

1. Develop a standardized and structured Behavioural Based Cultural Orientation Program that is supported by a theory.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	11.11%	2
Nurse Educator (CRN)	11.11%	2
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	72.22%	13
Time frame to achieve action statement		
14 days	16.67%	3
30 days	44.44%	8
60 days	38.89%	7

Recommendations to improve action statements: 1) *allows sufficient time to evaluate and make necessary changes and 2) Make Structured Safety Goals Mandatory For Everyone*

2. **Implement the standardized and structured Behavioural Based Cultural Orientation Program developed for culturally congruent care.**		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	88.89%	16
Important for patient safety & satisfaction	11.11%	2
Not important for patient safety & satisfaction	0%	0
Responsible Person for Action		
Nurse Manager	0%	**0**
Nurse Educator (CRN)	22.22%	4
Registered Nurse (Staff/ Charge Nurses)	11.11%	2
All of the above	66.67%	12
Time frame to achieve action statement		
Every shift	66.67%	12
Daily	33.33%	6

Recommendations to improve action statements: *1)* Creating a culture of safety is only possible when every employee is free of any health risk and safe from accidental injuries even when the nature of operations is highly variable. Safe operations can be ensured when safe working becomes a behaviour across functions and processes. When every operation runs on structured safety goals and everyone takes up the responsibility of making operations safe, every action becomes symbiotic. *2) to ensure consistency and establish it as a habit*

3. Develop a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	22.22%	4
Nurse Educator (CRN)	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	16.67%	3
All of the above	44.44%	8
Time frame to achieve action		
14 days	11,11%	2
30 days	61.11%	11
60 days	27.78%	5

Recommendations to improve action statements: *When nurses have the correct and appropriate skills, they will be able to illicit relevant information on which to base their plan of care to ensure better outcomes.*

4. Implement a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families and guide decision making in the clinical setting.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	61.11%	11
Important for patient safety & satisfaction	38.89%	7
Not important for patient safety & satisfaction	0%	0
Responsible Person for Action		
Nurse Manager	11.11%	2
Nurse Educator (CRN)	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	16.67%	3
All of the above	55.56%	10
Time frame to achieve action statement		
Every shift	55.56%	10
Daily	44.44%	8

Recommendations to improve action statements: *It would be better to implement on every shift to prevent a breakdown in the relaying of information. Also it can assist the nurse in determining if the information gathered is new or different from what was obtained during the previous shift. Measures ca then be initiated without delay.*

5. Develop an audit tool to monitor that the person centred, theory-based interview assessment is used 100% of the time.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	38.89%	7
Nurse Educator (CRN)	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	0%	0
All of the above	44.44%	8
Time frame to achieve action statement		
Daily	11.11%	2

Weekly	27.78%	5
Monthly	44.44%	8
Quarterly	16.67%	3

Recommendations to improve action statements: *on the spot reinforcement and teaching can be done, so that the nurses can become familiar with how, when and what to focus on during the interview.*

6. Audit compliance with applying person centred, theory-based interview assessment is used 100% of the time.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	61.11%	11
Important for patient safety & satisfaction	38.89%	7
Not important for patient safety & satisfaction	0%	0
Responsible Person for Action		
Nurse Manager	27.78%	5
Nurse Educator (CRN)	22.22%	4
Registered Nurse (Staff/ Charge Nurses)	11.11%	2
All of the above	38.89%	7
Time frame to achieve action statement		
Daily	11.11%	2
Weekly	11.11%	2
Monthly	66.67%	12
Quarterly	11.11%	2

Recommendations to improve action statements: *When every operation runs on structured safety goals and everyone takes up the responsibility of making operations safe, every action becomes a behaviour across functions and processes.*

7. Involve the nursing team through unit meetings in the development of a clear policy which describes the behavioural expectations for the application of cultural congruent care for patient safety and satisfaction.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	38.89%	7

Nurse Educator (CRN)	0%	0
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	55.56%	10
Time frame to achieve action statement		
Daily	0%	0
Weekly	0%	0
Monthly	88.89%	16
Quarterly	11.11%	2

Recommendations to improve action statements: *1) Making the shift to safe operations requires Nursing Leaders to participate in the supervisory process and guide everyone takes up the responsibility of making operations safe and maintenance workforce at the point of execution. Supervisory efficiency can be enforced through one-on-one coaching, clarity of roles, and active management of responsibilities. 2) Nursing staff involvement creates a sense of responsibility and ownership*

8. Conduct audits to determine if cultural congruent care policies are applied into clinical practice and act to address gaps.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	50.00%	9
Nurse Educator (CRN)	22.22%	4
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	22.22%	4
Time frame to achieve action statement		
Daily	11.11%	2
Weekly	16.67%	3
Monthly	55.56%	10
Quarterly	16.67%	3

Recommendations to improve action statements: *Supervisory efficiency can be enforced through one-on-one coaching, clarity of roles, and active management of responsibilities.*

9. Identify and act on culturally specific needs in each individual patient care plan		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	61.11%	11
Important for patient safety & satisfaction	38.89%	7
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	5.56%	1
Nurse Educator (CRN)	0%	0
Registered Nurse (Staff/ Charge Nurses)	94.44%	17
All of the above	0%	0
Time frame to achieve action statement		
Daily	77.78%	14
Weekly	11.11%	2
Monthly	11.11%	2

Recommendations to improve action statements: *Nursing staff should recognize each patient's individuality, and design their interactions based on those needs. There should be no assumption that ethnicity implies culture, for e.g. a Christian Arab's cultural needs will be very different from a Muslim Arab's, even though they may have the same ethnicity.*

10. Identify English proficiency through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English dialect.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Senior Nurse Leadership	33.33%	6
Human Resource Department	66.67%	12
Nurse Manager	0%	0
Time frame to achieve action statement		
During Interview Application	55.00%	10
Joining the Hospital	44.44%	8
90 days	0%	0

Recommendations to improve action statement: No recommendations

11. Provide basic Arabic language training to improve conversational Arabic for patient safety.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	61.11%	11
Important for patient safety & satisfaction	38.89%	7
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Senior Nurse Leadership	5.56%	1
Human Resource Department	94.44%	17
Nurse Manager	0.00 %	0
Time frame to achieve action statement		
30 days	27.78%	5
60 days	5.56%	1
90 days	66.67%	12

Recommendations to improve action statement: *sufficient time to learn the basics of the Arabic language, to enable the nurse to understand when the patient has a problem or requires assistance.*

Theme 2 – Patient Safety

Proposed Strategic Action Goal: Develop and implement structured, standardised behavioural-based training programs for NAA, Falls Prevention, HAPU and Hand Hygiene. Develop a clear policy to ensure compliance with NAA, Falls and HAPU Prevention, and Hand Hygiene Practices. Annual competency re-validation linked to compliance audit results for NAA, Falls, HAPU, HH. Conduct and share Performance Audit Data in structured process with team on NAA, Falls, HAPU, HH compliance and system defects being addressed.

12. Develop a Standardized and Structured Behavioural Based Training Program that is supported by the Nursing Process Theory.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	5.56%	1
Nurse Educator (CRN)	33.33%	6
Registered Nurse (Staff/ Charge Nurses)	0%	0

All of the above	61.11%	11
Time frame to achieve Action		
14 days	11.11%	2
30 days	44.44%	8
60 days	44.44%	8

Recommendations to improve action statements: *Sufficient time to develop the training program and submit for review to peers and to incorporate recommendations, etc., before rolling it out to frontline staff.*

13. Implement the Standardized and Structured Behavioural Based Training Program that is supported with the Nursing Process Theory in order for Nursing Assessment (NAA) to be sustained		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0%	0
Nurse Educator (CRN)	27.78%	5
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	66.67 %	12
Time frame to achieve action statement		
Every shift	55.56%	10
Daily	44.44%	8

Recommendations to improve action statements: No recommendations

14. Assess the nurse's competencies regarding: (1) Patient Health Assessment on Admission (2) Development of an appropriate individualized nursing care plan and (3) The parameters required within the Admission Assessment Policy.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0%	0
Nurse Educator (CRN)	44.44%	8

Registered Nurse (Staff/ Charge Nurses)	22.22%	4
All of the above	33.33 %	6
Time frame to achieve action statement		
Every shit	55.56%	10
Daily	44.44%	8

Recommendations to improve action statements: *Assess admission assessment as soon as possible with the primary nurse, so that remediation can be done at the same time and if necessary, to provide the justification, so that the nurse can gain insight into the reason what could have been done in a more appropriate manner. Also assist the nurse in how to formulate an individualized care plan based on their assessment. In addition, it will create awareness about minimum requirements as per policy governing patient assessment, be it on admission or ongoing.*

15. Ensure an evidence-based, acuity-driven nurse: patient ratio that will positively influence compliance with regards to patient care activities provided.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	33.33%	6
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	66.67%	12
Time frame to achieve action statement		
Every shit	61.11%	11
Daily	5.56%	1
Change patient condition	33.33%	6

Recommendations to improve action statements: *Although the nurse: patient ratio is determined initially from managerial level, patient acuity can change during the course of a shift, so the primary nurse should be able to accurately assess deterioration in a patient's condition and escalate the level of care to the charge nurse, so that appropriate safe nurse: patient staffing levels can be attained.*

16. Educate nurses to perform a Risk Assessment on the electronic medical record (EMR) to identify and report connectivity systems issues affecting compliance with completion of the NAA within timeframe.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6

Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	38.89%	7
Registered Nurse (Staff/ Charge Nurses)	11.11%	2
All of the above	50.00%	9
Time frame to achieve action statement		
Immediate when issue identified	55.56%	10
Next shift	0.00%	0
All of the above	44.44%	8

Recommendations to improve action statements: No recommendations

17. *Develop an evidence-based behavioural Falls risk program that incorporates Morse and Humpty Dumpty algorithm to support standard practice*.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0%	0
Nurse Educator (CRN)	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	77.78%	14
Time frame to achieve action statement		
30 days	16.67%	3
60 days	55.56%	10
90 days	27.78%	5

Recommendations to improve action statements: *Important to engage all the members*.

18. Implement the Standardised and Structured Behavioural Based Falls Training Program to ensure that all nurses comply with the Falls Prevention Algorithm to prevent falls.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	88.89%	16
Important for patient safety & satisfaction	11.11%	2
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	11.11%	2

Nurse Educator (CRN)	0%	0
Registered Nurse (Staff/ Charge Nurses)	11.11%	2
All of the above	77.78%	14
Time frame to achieve action statement		
Daily	11.11%	2
Every Shift	88.89%	16

Recommendations to improve action statements: *the nursing staff need to be aware of factors, such as medication, procedures etc., that affects the Morse score, and which can change from shift to shift and thus they need to*

19. Assess the nurse's competencies regarding:1. Morse & Humpty Dumpty Scoring, 2. Falls Risk Assessment, 3. Use of preventative safety measures based on risks identified, 4. Verbalization on frequency for conducting Falls Risk, 5. Application of visual cues to alert others to fall risk, .6. The application of the Falls Prevention Policy in practice.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0.00%	0
Nurse Educator (CRN)	38.89%	7
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	55.56%	10
Time frame to achieve action statement		
Every Shift	66.67%	12
Daily	33.33%	6

Recommendations to improve action statements: *assessment of nurses' compliance can be conducted during ward rounds, huddles and retrospectively after weekends and after hours by reviewing the electronic documentation.*

20. Ensure a nurse: patient ratio of 1;1, 1;2 or 1;3 based on patient acuity.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		

Senior Nurse Leadership	0.00%	0
Nurse Manager	16.67%	3
Charge Nurse	16.67%	3
All of the above	66.67%	12
Time frame to achieve action statement		
Every shift	77.78%	14
Daily	0.00%	0
Change patient condition	22.22%	4

Recommendations to improve action statements: *The charge nurses usually determine the level of care based on her independent assessment of the patient. If it is during normal working hours, it is escalated to the CNC/UM, to ensure adequate staffing is provided, other than that, the charge nurses will make the decision to call in staff required to provide the appropriate level of care.*

21. Develop a Standardised and Structured Behavioural Based Skin Risk Integrity Training Program that is supported by a theory.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	5.56%	1
Nurse Educator (CRN)	22.22%	4
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	72.22%	13
Time frame to achieve action statement		
14 days	22.22%	4
30 days	55.56%	10
60 days	22.22%	4

Recommendations to improve action statements: No recommendations

22. Implement the Standardised and Structured Behavioural Based Skin Risk Integrity Training Program to reduce Hospital Acquired Pressure Ulcers.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	83.33%	15
Important for patient safety & satisfaction	16.67%	3
Not important for patient safety & satisfaction	0.00%	0

Responsible Person for Action		
Nurse Manager	0.00%	0
Nurse Educator (CRN)	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	77.78%	14
Time frame to achieve action statement		
Every shift	77.78%	14
Daily	22.22%	4

Recommendations to improve action statements: No recommendations

23. Assess nurse competency on: (1) The use of the Braden Skin Risk Assessment tool, (2) The interpretation of the Braden scoring to identify skin risk, (3) The implementation of the appropriate pressure reduction measures based on risk, (4) Frequency for conducting Braden Risk Assessment, (5) Appropriate referral to physician and dietician when skin risk is high, (6) Staging Pressure Ulcers, (7) The application of the Skin Integrity Policy in practice.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0.00%	0
Nurse Educator (CRN)	44.44%	8
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	50.00%	9
Time frame to achieve action statement		
Every shift	77.78%	14
Daily	22.22%	4

Recommendations to improve action statements: *Assess nurse competency on:1. The use of the Braden Skin Risk Assessment tool. 2. The interpretation of the Braden scoring to identify skin risk3. The implementation of the appropriate pressure reduction measures based on risk.4. Frequency for conducting Braden Risk Assessment.5. Appropriate referral to physician and dietician when skin risk is high.6. Staging Pressure Ulcers, 7. The application of the Skin Integrity Policy in practice.*

24. Develop a Standardised and Structured Behavioural Hand Hygiene Training Program that's supported by a theory.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14

Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	5.56%	1
Nurse Educator (CRN)	27.78%	5
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	66.67%	12
Time frame to achieve action statement		
14 days	22.22%	4
30 days	55.56%	10
60 days	22.22%	4

Recommendations to improve action statements: No recommendations

25. Implement the Standardised and Structured Behavioural Hand Hygiene Training Program in clinical setting to reduce hospital acquired infections.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	83.33%	15
Important for patient safety & satisfaction	16.67%	3
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0.00%	0
Nurse Educator (CRN)	22.22%	4
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	77.78%	14
Time frame to achieve action statement		
Every shift	44.44%	8
Daily	11.11%	2
Every patient encounter	44.44%	8

Recommendations to improve action statements: No recommendations

26. Assess nurse competency on: (1) The application of the '5' moments of Hand Hygiene, (2) Demonstrate aseptic hand washing technique, (3) Educating others on hand hygiene, (4) Appropriate use of Gloves before and after a procedure, (5) Hand Hygiene in Bundle Compliance to prevent infections, (6) The application of the Hand Hygiene Policy in practice.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13

Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0.00%	0
Nurse Educator (CRN)	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	83.33%	15
Time frame to achieve action statement		
Every patient encounter	77.78%	14
Every shift	22.22%	4

Recommendations to improve action statements: No recommendations

27. Educate nurses to conduct a Risk Assessment to determine if the hand wash stations are appropriately placed in the unit to ensure that nurses are able to wash their hands.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	33.33%	6
Nurse Educator (CRN)	11.11%	2
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	55.56%	10
Time frame to achieve action statement		
Immediate when issue identified	77.78%	14
Next shift	0.00%	0
Unit Meetings	22.22%	4

Recommendations to improve action statements: No recommendations

28. Report skin irritations incurred from hand washing solutions in order to find an alternative.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	44.44%	8

Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	55.563%	10
Time frame to achieve action statement		
Immediate after irritation experienced	94.44%	17
Next shift	0.00%	0
Unit Meeting	5.56%	1

Recommendations to improve action statements: *Assessment can be conducted by EHS doctor and an alternative can be found to ensure that the nurse is still able to practice hand hygiene to ensure safe patient outcomes*

29. Communicate to the nursing team the behavioural expectations required to comply with NAA, Falls, HAPU, HH processes in order to avoid consequences.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	38.89%	7
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	55.56%	10
Time frame to achieve action statement		
During educational sessions	0.00%	0
Daily Safety Debrief Meetings (Huddles)	16.67%	3
Monthly Unit Meetings	5.56%	1
All the above	77.78%	14

Recommendations to improve action statements: *To display results on quality boards, to act on non-compliance immediately, discuss the implications if these are not done correctly and appropriately.*

Theme 3 – Hospital Climate (Positive Work Environment)

Proposed Strategic Action Goal: Establish a standardized and structured Positive Work Environment process to improve the work environment and to be supportive of patient and staff safety in order to illustrate leadership, support and guidance, teamwork, staff scheduling, and patient allocation as clearly listed for the team to refer to when required

30. Develop a structured and standardized Positive Work Environment Process (PWE) to ensure nurses safe care practices.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	22.22%	4
Nurse Educator (CRN)	5.56%	1
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	72.22%	13
Time frame to achieve action statement		
14 days	22.22%	4
30 days	55.56%	10
60 days	22.22%	4

Recommendations to improve action statements: *The Nurse manager should obtain feedback from the staff to the process from being driven by what the Nurse manger thinks constitutes a positive work environment. Also, the staff need to have some ownership in developing the process.*

31. Implement the structured and standardized Positive Work Environment Process to ensure work environment for nurse to perform safe care.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	11.11%	2
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	88.89%	16
Time frame to achieve action statement		
Every Shift	61.11%	11
Daily	16.67%	3
When change is introduced	22.22%	4

Recommendations to improve action statement*: Rounding to get immediately feedback and also to address any concerns or issues. Transparency through e-mails, during unit meetings and face to face interaction.*

32. Use the patient outcomes data to ensure that individual nurse performance evaluations for nursing admission assessment within the 24-hour time frame at 100%, Falls and HAPU rates at zero and 100% hand hygiene compliance is directed towards improvement for patient safety.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	44.44%	8
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	55.56%	10
Time frame to achieve action statement		
Every Shift	38.89%	7
Daily	16.67%	2
Quarterly	44.44%	8
During annual performance appraisals (iPerform)	5.56%	1

Recommendations to improve action statements*: If these are addressed on a regular basis, the practice will become a habit and with that comes consistency and sustainability.*

33. Implement the minimum safe, evidence-based staffing and skills mix guidelines for unit to support safe patient staffing levels.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Senior Nurse Leadership	0.00%	0
Nurse Manager	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	77.78%	14
Time frame to achieve action statement		
Every shift	72.22%	13
Daily	5.56%	1
Change patient acuity	22.22%	4

Recommendations to improve action statements: *1) Sometimes changes in the patient's acuity necessitates the use of overtime and for that it is important to have the support from senior leadership. It is also essential that the nursing staff have the necessary skills to practice their critical reasoning and clinical judgment skills, when assessing the patient's deterioration. 2) Everyone should be involved to ensure we have a skill mix.*

34. Monitor through incident reports whether nurse: patient allocations resulted in safety for:(1) nursing admission assessment within timeframe; (2) Falls, (3) HAPU rates to zero and (4) hand hygiene compliance.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	83.33%	15
Important for patient safety & satisfaction	16.67%	3
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	27.78%	5
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	72.22%	13
Time frame to achieve action statement		
Daily	61.11%	11
Weekly	22.22%	4
Monthly	16.67%	3

Recommendations to improve action statements: *attend to SI reports as soon as possible and also to do root cause analysis, this will help the staff to identify how to respond when they face a similar situation. Pre-empt actions that they will initiate.*

35. Provide a structured guideline for communication channels in units to (1) report if experience patient related issues that might affect patient safety, (2) request if assistance of team members is required, and (3) speak up if another healthcare provider compromise patient safety.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	22.22%	4
Nurse Educator (CRN)	0.00%	0

Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	77.78%	14
Time frame to achieve action statement		
Every shift	22.22%	4
Daily	0.00%	0
When patient safety concern identified	11.11%	2
All the above	66.67%	12

Recommendations to improve action statements: *Staff should feel "protected" when they want to report any issues that could lead to any issues that will harm or compromise patient care and safety.*

36. Establish a process for nurse managers visibility and participation to include (1) intentional rounding on all new patients to determine if any issues with care provided, (2) rounding with a purpose on all staff - every shift to identify resource deficits and needs, and (3) environmental monitoring to identify patient safety risks.

Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	83.33%	15
Important for patient safety & satisfaction	16.67%	3
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	38.89%	7
Charge Nurses	11.11%	2
All of the above	50.00%	9
Time frame to achieve action statement		
Daily	77.78%	14
Weekly	16.67%	2
During shift changes	16.67%	2

Recommendations to improve action statements: *When a new patient is visited by a Nurse Manager, it makes them feel that they are not just a person occupying a bed in the ward, but that there is someone who cares about their well-being.*

37. Establish a structured process to (1) acknowledge nurses' patient safety achievements, (2) enforce professional development activities, (3) identify individual professional development needs of nurses, (4) share the performance management data, and (5) provide feedback on performance.

Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	61.11%	11

Important for patient safety & satisfaction	38.89%	7
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Senior Nurse Leadership	5.56%	1
Nurse Manager	27.78%	5
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	66.67%	12
Time frame to achieve action statement		
Weekly	5.56%	1
Every 30 days	55.56%	10
Annually	38.89%	7

Recommendations to improve action statements: *When nurses receive recognition for their performing their duty, it boosts their morale and increases their motivation to further excel in the care they are delivering. This then has a domino effect because they feel more enthusiastic when engaging with the patients.*

Theme 4 – Culture of Safety (Informed, Flexible, Reporting, Just and Learning)

Proposed Strategic Action Goal: Develop and implement a structured, standardised competency-based Culture of Safety education program that supports nurses to integrate safety principles into general nursing practice

1. **Informed Culture**:

Proposed Strategic Action Goal: Engage nurses in process improvement activities through structured processes to address factors that affect patient safety and sustainment of patient safety practices, based on regular data analysis from audits, errors, near misses and incident report data

38. Share the performance management data (HAPU/HH/ Falls/ NAA) through (1) unit meetings to engage nurses in process improvement activities required for change, (2) quality boards as visual reminder on process improvement actions pending, (3) daily safety huddles to alert nurses to safety concerns, and (4) individual nurse coaching if practice gaps identified.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.56%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	38.89%	7
Registered Nurse (Staff/ Charge Nurses)	0.00%	0

All of the above	61.11%	11
Time frame to achieve action statement		
Daily when issue identified	38.89%	7
Weekly	5.56%	1
Monthly Unit Meetings	55.56%	10

Recommendations to improve action statements: *Maybe if some of the nursing staff will present the feedback regarding the above, they will feel more engaged. If it is done by the manager, it just becomes something vague, they hear it but they are not taking ownership in how their actions affects the outcomes.*

39. Utilize a structured process to facilitate (1) that corrective actions identified are completed to ensure process improvement is implemented for a Culture of Safety, and (2) ensure that the Comprehensive Unit Safety Program (CUSP) is implemented in unit to sustain practices.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	44.44%	8
Important for patient safety & satisfaction	55.56%	10
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Senior Nurse Leadership	5.56%	1
Nurse Manager	16.67%	3
All of the above	77.78%	14
Time frame to achieve action statement		
Daily	27.78%	5
Weekly	22.22%	4
Monthly	50.00%	9

Recommendations to improve action statements: *Introduce the CUSP concept to everyone, and also to ensure that all staff understand what is meant by Culture of Safety and how it can be utilized in the ward.*

40. Identify trends in incidents reported and provide feedback to nurses to facilitate process improvement and education activities.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	66.67%	12

Nurse Educator (CRN)	5.56%	1
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	27.78%	5
Time frame to achieve action statement		
Daily	22.22%	4
Weekly	11.11%	2
Monthly	66.67%	12

Recommendations to improve action statements: *If the nurses are identified who consistently are non-compliant with certain practices, they will realize that they need improve themselves or risks being coached. Many a time, it has been identified that the knowledge and the skills are present, but their actions as a result of taking shortcuts and not following the recommended guidelines and protocols.*

2. Flexible Culture:

Proposed Strategic Action Goal: Develop and implement a structured and standardised process to allow nurse managers to adapt and change in emergent situations to ensure that an immediate decision can be taken to prevent patient harm.

41. Implement structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe handoff of patient care.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	16.67%	3
Nurse Educator (CRN)	11.11%	2
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	66.67%	12
Time frame to achieve action statement		
During every shift change	16.67%	3
During break times	0.00%	0
Transfer of patients	5.56%	1
All the above	77.78%	14

Recommendations to improve action statements: *important for all team members to be involved in team steps.*

42. Promote active participation of nurses in audits to monitor compliance with (1) handoff of patient practices to ensure patient continuity of care, (2) team briefing (Huddles) as tool to

align team on patient care concerns, and (3) use of SBAR during shifts and break times to communicate patient information in a structured way.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	5.56%	1
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	83.33%	15
Time frame to achieve action statement		
Daily	72.22%	13
Weekly	11.11%	2
Monthly	16.67%	3

Recommendations to improve action statements: No recommendations

43. Develop structured process to involve the nursing team in (1) unit risk assessment to involve nurses in improving system gaps and (2) root cause analysis when incident reported that affect patient safety.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	44.44%	8
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	55.56%	10
Time frame to achieve action statement		
Annually	5.56%	1
When safety concern identified	22.22%	4
All the above	72.22%	13

Recommendations to improve action statements: No recommendations

3. **Reporting Culture**:

Proposed Strategic Action Goal: Apply a structured and standardised Positive Work Environment process in which the nursing team feel safe and are prepared to report their errors and near misses to ensure patient safety

44. Communicate the Culture of Safety Process in unit meetings to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	83.33%	15
Nurse Educator (CRN)	5.56%	1
Registered Nurse (Staff/ Charge Nurses)	11.11%	2
Time frame to achieve action statement		
Daily shift debriefs (huddles)	16.67%	3
Monthly Unit meetings	5.56%	1
All the above	77.78%	14

Recommendations to improve action statements: *When nurses understand what Culture of Safety implies, then they will be more engaged in reporting.*

4. **Just Culture***:*

Proposed Strategic Action Goals:

(a) Ensure a standardised safety-supportive system of shared accountability where nurse managers are accountable for the systems they have designed and also for responding to the behaviours of their nursing staff in a fair and just manner and apply processes to facilitate behavioural management of safety,

(b) Ensure nurse accountability for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.

45. Apply Positive work environment process listed above as guide for nurses to (1) report behavioural practices of others affecting patient safety, and (2) report system defects affecting patient safety.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6

Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	16.67%	3
Nurse Educator (CRN)	5.56%	1
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	72.22%	13
Time frame to achieve action statement		
Every time safety concern identified	16.67%	3
Daily	0.00%	0
All the above	83.33%	15

Recommendations to improve action statements: *These concerns must be addressed as soon as possible so that 'bad' practices can be stopped immediately. Sometimes, staff are not even aware that their practice standards are not in line with best practice because they observe the behaviour in their colleagues. It important that constant reminders and random checking is done to prevent these from slipping through the cracks.*

46. Develop a structured Risk Assessment Program to proactively avoid patient harm.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	22.22%	4
Environment Health & Safety Team	11.11%	2
All of the above	66.56%	12
Time frame to achieve action statement		
Annually	0.00%	0
When new risk identified	5.56%	1
All the above	94.44%	17

Recommendations to improve action statements: *Involvement of the frontline staff is important so that they are aware of what constitutes risks and it will also encourage more engagement when the plan is rolled out.*

47. Implement the structured Risk Assessment Program to (1) identify system defects, (2) involve nurses in Units Environment Risk Assessment, and (3) mitigate risks identified.		
Importance for including the action statement	**Responses**	
	f=%	**n=**

Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above	77.78%	14
Time frame to achieve action statement		
Every shift	5.56%	1
When safety change in environment identified	0.00%	0
All the above	94.44%	17

Recommendations to improve action statements: *It should be done every shift because there are constant risk elements, for e.g. oxygen administration, found throughout the hospital setting, so staff must be vigilant at all times. They should approach each scenario consciously looking or identifying what are the possible risks, not only to the patient, but to them, visitors, cleaning staff and the environment.*

48. Assess nurses` competence with patient Hourly Rounding Principles for (1) explanation of the principles of Hourly Rounding to patient/family, (2) use of drafted wording (script) in every patient encounter to ensure patient hears same message from all the nurses, (3) ensure that nurse physically checks to determine if the 5 "P" is addressed (Position, Potty, Pain, Possessions and IV Pump) to avoid HAPU, Falls and ensure patient satisfaction, (4) use of the Whiteboard as tool to communicate the 5 "P" with patients, and (5) informing patients based on drafted wording (script) what is next in term of returning to room and care activities..

Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	100%	18
Time frame to achieve action statement		
Every Shift	27.78%	5
All New Patients	0.00%	0
All the above	72.22%	13

Recommendations to improve action statements: *random checking with patients if they have been informed what hourly rounding means and entails.*

49. Audit nurse compliance in applying Hourly Rounding Principles.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	5.56%	1
Nurse Educator (CRN)	5.56%	1
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	88.89%	16
Time frame to achieve action statement		
Daily	66.67%	12
Weekly	11.11%	2
Monthly	22.22%	4

Recommendations to improve action statements: *If possible daily as this will make staff more aware to inform their patients and for them to apply the concept as it is intended to be implemented.*

50. Implement action plans for gaps identified in Safety Culture Results to prevent patient safety concerns for NAA/ HH/ HAPU/ patient harm from falls.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	77.78%	14
Important for patient safety & satisfaction	22.22%	4
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	16.67%	3
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	88.33%	15
Time frame to achieve action statement		
Daily	61.11%	11
Weekly	22.22%	4
Monthly	16.67%	3

Recommendations to improve action statements: *Rounding by Nurse manager, SCN and CRN to follow up if plans are implemented and if it obtains the desired outcomes*.

51. Apply structured process to communicate patient safety expectation to nurses (1) ensure nurse understands responsibility and accountability for safe practice behaviours affecting sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls patient safety, and (2) ensure that nurse reports system issues affecting patient safety.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	16.67%	3
Nurse Educator (CRN)	5.56%	1
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	77.78%	14
Time frame to achieve action statement		
During every shift	16.67%	3
During annual competency assessment	5.56%	1
All the above	77.78%	14

Recommendations to improve action statements: *if the practices are observed more frequently and unannounced, it will ensure that practice standards are sustained. Also, if there are habitual defaulters, then the issue about their practices should be escalated to coaching, especially if the staff have the knowledge and understands the consequences, but they chose not to follow the protocols.*

5. Learning Culture:

Proposed Strategic Action Goals: Develop and implement a structured and standardised process to identify learning and training needs supported on reviews and analyses safety-related data and reports and incidence reported. Ensure training is Behavioural Based to allow expectation and consequences clearly understood and supported by a theory to apply the hospital Safety Management Plan

52. Develop a Standardized and Structured Behavioural Based Culture of Safety Training Program to align nurse's safety efforts to sustain patient safety.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0

Responsible Person for Action		
Nurse Manager	11.11%	2
Nurse Educator (CRN)	27.78%	5
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	61.11%	11
Time frame to achieve action statement		
14 days	5.56%	1
30 days	61.11%	11
60 days	33.33%	6

Recommendations to improve action statements: No recommendations

53. Implement the Standardized and Structured Behavioural Based Culture of Safety Training Program to align team safety efforts to sustain patient safety.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	72.22%	13
Important for patient safety & satisfaction	27.78%	5
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	0.00%	0
Nurse Educator (CRN)	27.78%	5
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	72.22%	13
Time frame to achieve action statement		
Every Shift	5.56%	1
Every patient encounter	0.00%	0
When safety concern identified	16.67%	3
All the above	77.78%	14

Recommendations to improve action statements: *should be implemented all the time to ensure consistently and sustainability*

54. Implement standardized training programs on basic quality methodologies to:1. Conduct Plan Do Check Act -PDCA to improve process gaps, 2. Perform a Root Cause analysis -RCA if incidents identified affecting patient safety, 3. Respond and act conducting Process Improvement -PI to allow nursing team to identify gaps in performance for NAA, Falls Incidence, HAPU Rate and HH based on targets set.	
Importance for including the action statement	**Responses**

	f=%	n=
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	22.22%	4
Nurse Educator (CRN)	11.11%	2
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	66.67%	12
Time frame to achieve action statement		
During annual competency assessment	0.00%	0
When safety risk identified	11.11%	2
Monthly unit meetings	16.67%	3
All the above	72.11%	13

Recommendations to improve action statements: *Maybe by having small groups of nursing staff involved with PDCA and PI, can improve outcomes because they need to come up with the action plan, currently they are just involved during the RCA. If they understood why and how of PDCA and PI, it can lead to better outcomes.*

55. Implement training programs to conduct standardised performance audits for (1) nursing admission assessment within timeframe, (2) falls, (3) HAPU and (4) hand hygiene.		
Importance for including the action statement	**Responses**	
	f=%	**n=**
Essential for patient safety & satisfaction	66.67%	12
Important for patient safety & satisfaction	33.33%	6
Not important for patient safety & satisfaction	0.00%	0
Responsible Person for Action		
Nurse Manager	22.22%	4
Nurse Educator (CRN)	16.67%	3
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above	61.11%	11
Time frame to achieve action statement		
Every shift	16.67%	3
During annual competency	5.56%	1
Monthly unit meetings	16.67%	3
All the above	61.11%	11

Recommendations to improve action statements: *What I have found is that nurses think that the assessment done at the beginning of a shift is all that is required, the concept that assessment is ongoing throughout the shift is not always evidenced. For e.g. the patient was turned and the heels*

were noted to be red, the nurse did not update her integumentary assessment or her care plan or initiate measures to address this. Heels are subject to developing pressure ulcers as well, but the focus was more on the sacral area.

APPENDIX N

e-DELPHI ROUND TWO VALIDATION ASSESSMENT INSTRUMENT

INTRODUCTION LETTER

Dear Colleague

My name is Linda (H.E.M) Haskins. I am a Ph.D. candidate at the University of South Africa (UNISA) in the Department of Health Sciences. I am conducting a study with the title: AN ACTION PLAN TO ENHANCE A SUSTAINABLE SAFETY CULTURE TO IMPROVE PATIENT OUTCOMES. You were identified as a nursing practice resource expert by your Chief Nursing Officer and Assistant Director of Nursing to be part of a panel of experts to assess the action plan by using the Delphi technique. This is round 2 of the e e-Delphi, and similar to round 1 you are presented with the same set of proposed statements which will make up the action plan. I will continue to incorporate the suggestions by the panelists and adapt the action plan until at least 80% consensus is reached by you as the participants.

Ethical approval for this study was granted by the Research Ethics Committee of the UNISA (REC-012714-039) as well your hospital's Institutional Review Board. Participation is voluntary and you may withdraw from the study at any time. Participation in this online survey process is anonymous and completion of the survey implies consent. Should you agree to participate, please read the Informed Consent Information Sheet below. **If you agree to participate the link to provide you with access to the action plan is provided to you at the end of all the information. You can just click on the link to obtain access.**

Information Sheet:

Background

You are invited to participate in this final stage of a 3-part research study designed to reach consensus on the proposed Action Plan to enhance a sustainable safety culture in an attempt to improve patient outcomes.

In Phase 1 of this study, the clinical outcomes data for the respective hospitals revealed that Nursing Admission Assessment within 24-hour period, Falls Risk Assessment, Hospital Acquired Pressure Ulcers (HAPU) and Hand Hygiene (HH) practices were not sustained during 2016.

In Phase 2, the data from clinical nurse managers and nurses revealed a lack of knowledge, understanding and consistency with regards to Culture, Patient Safety Practices (NAA, Falls, HAPU, HH), Positive Practice Environment Processes (Hospital Climate) and some aspects pertaining to Safety Culture

The action plan is developed by using the data received during phases 1 and 2. The action plan is organized into four broad themes which my research and the literature identified as essential to sustaining safe patient care:

The first part of the study is the Biographical Data pertaining to you as the clinical expert.

1. Culture (10 action items)
2. Patient safety (19 action items)
3. Positive Work Environment - Hospital climate (8 action items)
4. Safety culture (20 action items). This has five distinct components (informed/ flexible/reporting/just/learning)

If you agree to participate you will receive no compensation. You will complete an online survey that consists of 55 action statements. Your responses, together with those of the other experts, will be analysed by myself who will then, use your inputs who will then adapt the action plan. This modified plan will then be made available to you for review in the next round of the e-Delphi. It will take approximately 2 weeks for me to provide you with the adapted plan. Your contribution will take approximately 35 minutes per round.

Please click on link below if you agree to assist me with the validation of the proposed action plan to do the survey

https://www.surveymonkey.com/r/6RVX5LC

Your inputs are very much appreciated.

Thank you

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e-Delphi Round Two Validation Assessment Instrument

Theme 1 - Culture:

Strategic Action Goal: Develop and implement a structured, behavioural-based education program that supports nurses to cultural competence, proficiency in English and conversational Arabic.

Action statement	**Responsible person** – indicate whether you agree that below persons is appropriate to sustain action and motivate answer.	**Time frame-** select only one that is the most appropriate timeframe for each action statement
2. Develop a standardized and structured Behavioural Based Cultural Orientation Program that is supported by a theory.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for completion of the development of this Program 30 Days ◯ 60 Days ◯
2. Implement the standardized and structured Behavioral Based Cultural Orientation Program	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯	Please indicate your choice of timeframe for implementation of this Program

developed for culturally congruent care	must take responsibility for this action. Motivate your choice: _____	Every shift ◯ Daily ◯
3. Develop a person-centered interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families and guide decision making in the clinical setting	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for completion of the development of this Program Every shift ◯ Daily ◯
4. Develop an audit tool to monitor that the person centered, theory-based interview assessment is used 100% of the time	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse Manager ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for completion of the development of this program Every shift ◯ Daily ◯
5. Audit compliance with applying a person centered, theory-based interview assessment is used 100% of the time	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for conducting this audit Monthly ◯ Quarterly ◯
6. Involve the nursing team through unit meetings in the development of a clear policy which describes the behavioral expectations for the application of cultural congruent care for patient safety and satisfaction.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for completion of the development of this policy. Monthly ◯ Quarterly ◯
7. Conduct audits on a monthly basis to determine if cultural congruent care policies are applied into clinical practice and act to address gaps.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action.	Monthly

	Motivate your choice: _____	
8. The nurse should identify and act on cultural specific needs in each individual patient care plan	The Registered Nurse (Staff & Charge)	Please indicate your choice of timeframe for identification and acting on cultural specific needs Daily ◯ Every shift ◯
9. Identify English proficiency through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English dialect.	Human Resource Department ◯ Nursing Department ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for the identification of English Proficiency During application interview ◯ In joining the hospital ◯
10. The Human Resource Department provide basic Arabic language training to improve conversational Arabic for patient safety	Human Resource Department	Please indicate your choice of timeframe for providing this Arabic Training Within 60 Days ◯ Within 90 Days ◯
Theme 2 – Patient Safety: - **Strategic Action Goal:** Develop and implement structured, standardized behavioral-based training programs for NAA, Falls Prevention, HAPU and Hand Hygiene. Develop a clear policy to ensure compliance with NAA, Falls and HAPU Prevention, and Hand Hygiene Practices. Annual competency re-validation linked to compliance audit results for NAA, Falls, HAPU, HH. Conduct and share Performance Audit Data in structured process with team on NAA, Falls, HAPU, HH compliance and system defects being addressed.		
Action statement	Responsible person – indicate whether you agree that the below mentioned persons are appropriate to sustain action statement/ Please motivate choice	**Timeframe** - select only one that is the most appropriate timeframe for each action statement
11. Develop a Standardized and Structured Behavioral Based Training Program that is supported by the Nursing Process Theory.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for completion of the development of this program 30 Days ◯ 60 Days ◯

12. Implement the Standardized and Structured Behavioral Based Training Program that is supported with the Nursing Process Theory in order for Nursing Assessment (NAA) to be sustained at 100%	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice for the timeframe for implementation of this Program Daily ◯ Every shift ◯
13. Assess the nurse's competencies regarding: 1. Patient Health Assessment on Admission 2. Development of an appropriate individualized nursing care plan. 3. The parameters required within the Admission Assessment Policy	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice for the timeframe for conducting Competency Assessments When issue identified in documentation review ◯ All (every shift, and when issue identified in documentation review) ◯
14. Ensure an evidence-based, acuity-driven nurse: patient ratio that will positively influence compliance with regards to patient care activities provided.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for reviewing acuity driven nurse patient ratio Daily ◯ Every shift ◯
15. Educate nurses to perform a Risk Assessment on the electronic medical record to identify and report connectivity systems issues affecting compliance with completion of the NAA within timeframe.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for educating nurses EMR system issues Next shift ◯ Immediate when issue identified ◯
16. Develop an evidence-based behavioral Falls risk program that incorporates Morse and Humpty Dumpty algorithm to support standard practice	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action.	Please indicate your choice of timeframe for completion of the development of this Program 30 Days ◯ 60 Days ◯

	Motivate your choice: _____	
17. Implement the standardized and Structured Behavioural Based Falls Training Program every shift to ensure that all nurses comply with the Falls Prevention Algorithm to prevent falls	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Every shift
18. Assess the nurse's competencies regarding: 1. Morse & Humpty Dumpty Scoring 2. Falls Risk Assessment 3. Use of preventative safety measures based on risks identified. 4. Verbalization on frequency for conducting Falls Risk. 5. Application of visual cues to alert others to falls risk. 6. The application of the Falls Prevention Policy in practice.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for implementation of this program Daily ◯ When patient fall occurs ◯
19. Ensure a nurse: patient ratio of 1;1, 1;2 or 1;3 based on patient acuity	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for ensuring acuity driven nurse patient ratio Every shift ◯ Change patient condition ◯
20. Develop a Standardized and Structured Behavioral Based Skin Risk Integrity Training Program that is supported by a theory.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for completion of the development of this program 30 Days ◯ 60 Days ◯

21. Implement the Standardized and Structured Behavioral Based Skin Risk Integrity Training Program to reduce Hospital Acquired Pressure Ulcers.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for implementation of this program Daily ◯ Every shift ◯
22. Assess nurse competency on: 1. The use of the Braden Skin Risk Assessment tool. 2. The interpretation of the Braden scoring to identify skin risk 3. The implementation of the appropriate pressure reduction measures based on risk. 4. Frequency for conducting Braden Risk Assessment. 5. Appropriate referral to physician and dietician when skin risk is high. 6. Staging Pressure Ulcers 7. The application of the Skin Integrity Policy in practice.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Charge Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for assessment of the nurse competency Every shift ◯ When a new Pressure Ulcer occurs ◯
23. Develop a Standardized and Structured Behavioral Hand Hygiene Training Program that's supported by a theory.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for completion of the development of this program 30 Days ◯ 60 Days ◯
24. Implement the Standardized and Structured Behavioral Hand Hygiene Training Program in clinical setting to reduce hospital acquired infections.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for implementation of this program Daily ◯ Every shift ◯

25. The Nursing Team assess nurse competency on: 1. The application of the '5' moments of Hand Hygiene 2. Demonstrate aseptic hand washing technique 3. Educating others on hand hygiene 5. Appropriate use of Gloves before and after a procedure 6. Hand Hygiene in Bundle Compliance to prevent infections 6. The application of the Hand Hygiene Policy in practice.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	Please indicate your choice of timeframe for assessment of nurse competency Every shift ◯ With Every patient encounter ◯
26. Educate nurses to conduct a Risk Assessment to determine if the hand wash stations are appropriately placed in the unit to ensure that nurses are able to wash their hands.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for reporting of this system issue Next shift ◯ Immediate when issue identified with hand wash station ◯
27. Immediately report skin irritations incurred from hand washing solutions in order to find an alternative.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Immediate when skin irritation experienced
28. Communicate to the nursing team the behavioral expectations required to comply with NAA, Falls, HAPU, HH processes in order to avoid consequences	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	Please indicate your choice of timeframe for completion of the implementation of this communication Daily Safety Meetings (Huddles) ◯ Monthly unit meetings ◯
Theme 3 – Positive Work Environment (Hospital Climate): - **Strategic Action Goal**: Establish a standardized and structured Positive Work Environment process to improve the work environment and to be supportive of patient and staff safety in order to illustrate leadership,		

support and guidance, teamwork, staff scheduling, and patient allocation as clearly listed for the team to refer to when required.		
Action statement	**Responsible person** – indicate whether you agree that below persons is appropriate to sustain action and motivate answer.	**Time frame-** select only one that is the most appropriate timeframe for each action statement
29. Develop a structured and standardized Positive Work Environment Process (based on elements listed in Strategic Action Goal) to ensure nurses safe care practices	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Charge Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for completion of the development of this program 30 Days ◯ 60 Days ◯
30. The Nursing Team implement the structured and standardized Positive Work Environment Process to ensure work environment for nurse to perform safe care.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	Please indicate with a tick your choice of timeframe for implementation of this program Daily ◯ All (Daily and When change is introduced) ◯
31. Use the patient outcomes data to ensure that individual nurse performance evaluations for nursing admission assessment within the 24-hour timeframe at 100%, Falls and HAPU rates at zero and 100% hand hygiene compliance is directed towards improvement for patient safety.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for conducting of this evaluation of nurses Monthly ◯ All (Every shift, daily and monthly) ◯
32. Implement the minimum safe, evidence-based staffing and skills mix guidelines for unit to support safe patient staffing levels	The Leadership Team (Senior Nurse Leadership, Nurse Manager and Charge Nurse) ◯ Charge Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for implementation of this Safe Staffing Guidelines Every shift ◯ All (Every shift and changes patient condition) ◯

33. Monitor through incident reports whether nurse: patient allocations resulted in safety for: 1.nursing admission assessment within timeframe; 2.Falls 3. HAPU rates to zero 4. and hand hygiene compliance	The Leadership Team (Nurse Manager, Nurse Educator and Charge Nurse) ◯ Charge Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for monitoring of patient outcomes based safe staffing Daily ◯ Daily and during monthly unit meetings◯
34. Provide a structured guideline for communication channels in units to: 1. Report if experience patient related issues that might affect patient safety. 2. Request if assistance of team members is required. 3. Speak up if another healthcare provider compromise patient safety.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for providing this structured communication process Every shift ◯ All (Every shift and when safety concern identified) ◯
35. Establish a process for nurse managers visibility and participation to include: 1. Intentional Rounding on all new patients to determine if any issues with care provided. 2. Rounding with a Purpose on all staff - every shift to identify resource deficits and needs. 3. Environmental monitoring to identify patient safety risks.	The Leadership Team (Senior Nurse Leadership, Nurse Manager and Charge Nurse) ◯ Charge Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for monitoring of patient outcomes based Safe Staffing Every shift ◯ All (Every shift and during shift change) ◯
36. Establish a structured process to: 1. Acknowledge nurses' patient safety achievements 2. Enforce professional development activities 3. Identify individual professional development needs of nurses	The Leadership Team (Senior Nurse Leadership, Nurse Manager, Nurse Educator and Charge Nurse) ◯ Charge Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for establishing of this structured process Monthly ◯ All (Monthly and Annually) ◯

4. Share the performance management data 5. Provide feedback on performance		

Theme 4 – Safety Culture has five distinct sections which will be discussed individually (1. INFORMED CULTURE/ 2. FLEXIBLE CULTURE/ 3. REPORTING CULTURE/ 4. JUST CULTURE / 5. LEARNING CULTURE)

4.1 Informed Culture: -

Strategic Action Goal: Engage nurses in process improvement activities through structured processes to address factors that affect patient safety and sustainment of patient safety practices, based on regular data analysis from audits, errors, near misses and incident report data

Action statement	**Responsible person** – indicate whether you agree that below persons is appropriate to sustain action and motivate answer.	**Time frame-** select only one that is the most appropriate timeframe for each action statement
37. Share the performance management data (HAPU/HH/ Falls/ NAA) through: 1. Unit meetings to engage nurses in process improvement activities required for change. 2. Quality Boards as visual reminder on process improvement actions pending 3. Daily safety huddles to alert nurses to safety concerns. 4. Individual nurse coaching if practice gaps identified.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for sharing of this management outcomes data Daily when issue identified ◯ All (Daily when issue identified, Weekly and Monthly Unit Meetings) ◯
38. Utilize a structured process to facilitate: 1. That Corrective Actions identified are completed to ensure process improvement is implemented for a Culture of Safety. 2. Ensure that the Comprehensive Unit Safety Program (CUSP) is implemented in unit to sustain practices	The Management Team (Senior Nurse Leadership and Nurse Manager) ◯ Nurse Manager ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for utilizing of this structured improvement process Monthly ◯ All (Monthly and Annually) ◯

39. Identify trends in incidents reported and provide feedback to nurses to facilitate process improvement and education activities.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse Manager ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for identifying trends from incident reports Daily ◯ All (Daily & in Monthly Unit Meetings) ◯
5.2 Flexible Culture: - **Strategic Action Plan:** Develop and implement a structured and standardized process to allow nurse managers and nurses to adapt to changes in emergent situations to ensure that an immediate decision can be taken to prevent harm.		
Action statement	**Responsible person** – indicate whether you agree that below persons is appropriate to sustain action and motivate answer.	**Time frame-** select only one that is the most appropriate for each action statement
40. Implement structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe handoff of patient care.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for implementing a structured communication process Every shift ◯ All (Every shift, during break times & transfer of patients) ◯
41.The Nursing Team must promote active participation of nurses in audits to monitor compliance with: 1. Handoff of patient practices to ensure patient continuity of care 2. Team briefing (Huddles) as tool to align team on patient care concerns 3. Use of SBAR during shifts, break times and transfer of patients to communicate patient information in a structured way	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	Please indicate your choice of timeframe for engaging nurses in audit to monitor compliance Daily ◯ All (Daily and monthly) ◯
42. Develop structured process to involve the nursing team in:	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	Please indicate your choice of timeframe for developing

1. Unit risk assessment to involve nurses in improving system gaps. 2. Root cause analysis when incident reported that affect patient safety		structured process to involve team Annually ◯ All (Annually & when safety concern identified) ◯
4.3 Reporting Culture: **Strategic Action Goal**: Apply a structured and standardized Positive Work Environment process in which the nursing team feel safe and are prepared to report their errors and near misses to ensure patient safety.		
Action statement	**Responsible person – indicate whether you agree that below persons is appropriate to sustain action and motivate answer.**	**Time frame- select only one that is the most appropriate timeframe for each action statement**
43. The Nurse Manager communicate the Culture of Safety Process in unit meetings to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls	The Nurse Manager	Please indicate your choice of timeframe for communicating the Culture of Safety Process Daily shift Debrief (Huddles) ◯ All (Daily shift Debrief (Huddles) and monthly unit meetings) ◯
44. Apply Positive work environment process listed above as guide for nurses during daily shift debriefs (huddles) and every time safety concern identified: 1. Report behavioural practices of others affecting patient safety. 2. Report system defects affecting patient safety.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Charge Nurse ◯ must take responsibility for this action. Motivate your choice: _____	All (Daily shift Debrief (Huddles) and every time safety concern identified)
<u>4.4 Just Culture</u>: - **Strategic Action Goals:** (a) Ensure a standardized safety-supportive system of shared accountability where nurse managers are accountable for the systems they have designed and also for responding to the behaviours of their nursing staff in a fair and just manner and apply processes to facilitate behavioural management of safety, (b) Ensure nurse accountability for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.		
Action statement	**Responsible person** – indicate whether you agree that below persons	**Time frame-** select only one that is the most appropriate

	is appropriate to sustain action and motivate answer.	timeframe for each action statement
45. Develop a structured Risk Assessment Program to proactively avoid patient harm annually and when new risk is identified	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	All (When new risk identified, and annually)
46. Implement the structured Risk Assessment Program every shift and when environmental change identified to: 1. Identify system defects 2. Involve nurses in Units Environment Risk Assessment 3. Mitigate risks identified	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	All (When new environment change identified, and every shift)
47. The Nursing Team assess nurses` competence with patient Hourly Rounding Principles for: 1.Explaination of the principles of Hourly Rounding to patient/family 2. Use of drafted wording (script) in every patient encounter to ensure patient hears same message from all the nurses. 3. Ensure that nurse physically checks to determine if the 5 “P” is addressed (Position, Potty, Pain, Possessions and IV Pump) to avoid HAPU, Falls and ensure patient satisfaction. 4. Use of the Whiteboard as tool to communicate the 5 “P” with patients 5. Informing patients based on drafted wording (script) what is next in term of returning to room and care activities	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	Please indicate your choice of timeframe for implementation of this risk assessment program Every shift ◯ All (Every shift & all new patients) ◯

48. The Nursing Team audit nurse compliance in applying Hourly Rounding Principles.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	Please indicate your choice of timeframe for conducting this audits for Hourly Rounding Every shift ◯ All (Every shift and monthly) ◯
49. The Nursing Team implement the action plans for gaps identified in Safety Culture Results to prevent patient safety concerns for NAA/ HH/ HAPU/ patient harm from falls.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	Please indicate your choice of timeframe for implementing this corrective action plan for safety concerns Every shift ◯ All (Every shift and monthly) ◯
50. Apply structured process to communicate patient safety expectation to nurses: 1. Ensure nurse understands responsibility and accountability for safe practice behaviours affecting sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls patient safety 2. Ensure that nurse reports system issues affecting patient safety.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Charge Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for communicating this structured expectation process Every shift ◯ All (Every shift and during annual competency assessment) ◯
Learning Culture: - **Strategic Action Goals**: Develop and implement a structured and standardized process to identify learning and training needs supported on reviews and analyses safety-related data and reports and incidence reported. Ensure training is Behavioral Based to allow expectation and consequences clearly understood and supported by a theory to apply the hospital Safety Management Plan		
Action statement	**Responsible person – indicate whether you agree that below persons is appropriate to sustain action and motivate answer.**	**Time frame- select only one that is the most appropriate timeframe for each action statement**
51. Develop a Standardized and Structured Behavioral Based Culture of Safety Training Program to align nurse's safety	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯	Please indicate your choice of timeframe for completion of the development of this program

efforts to sustain patient safety practices	The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	30 Days ◯ 60 Days ◯
52. Implement the Standardized and Structured Behavioral Based Culture of Safety Training Program to align team safety efforts to sustain patient safety practices	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for implementation of this program Every shift ◯ All (Every shift, every patient encounter and when safety concern identified) ◯
53. Implement standardized training programs on basic quality methodologies to: 1. Conduct Plan Do Check Act - PDCA to improve process gaps 2. Perform a Root Cause analysis -RCA if incidents identified affecting patient safety 3. Respond and act conducting Process Improvement -PI to allow nursing team to identify gaps in performance for NAA, Falls Incidence, HAPU Rate and HH based on targets set.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse) ◯ The Nurse Manager ◯ must take responsibility for this action. Motivate your choice: _____	Please indicate your choice of timeframe for implementation of this program Monthly Unit Meetings ◯ All (During annual competency assessment, when safety risk identified, monthly unit meetings) ◯
54. Implement training programs to conduct standardized performance audits for: 1. Nursing admission assessment within timeframe, 2. Falls, 3. HAPU and 4. Hand hygiene.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse ◯ The Nurse ◯ must take responsibility for this action. Motivate your choice: _____ _____	Please indicate your choice of timeframe for implementing training to standardized audits Every shift ◯ All (Every shift and during annual competency assessment) ◯

APPENDIX O

Results e-Delphi Validation Assessment Instrument Round 2

1. Theme 1- Culture

Strategic Action Goal: Develop and implement a structured, behavioural-based education program that supports nurses to cultural competence, proficiency in English and conversational Arabic

1. Develop a standardized and structured Behavioural Based Cultural Orientation Program that is supported by a theory.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
30 days	5.56%	1
60 days	94.44%	17

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

2. **Implement the standardized and structured Behavioural Based Cultural Orientation Program developed for culturally congruent care.**		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	94.44%	17
Time frame to achieve action statement		
Every shift	100.00%	18
Daily	0.00%	0

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

3. Develop a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action		
Every shift	94.44%	17
Daily	5.56%	1

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

4. Implement a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families and guide decision making in the clinical setting.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	94.44%	17
Time frame to achieve action statement		
Every shift	100.00%	18
Daily	0.00%	0

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

5. Audit compliance with applying a person centred, theory-based interview assessment is used 100% of the time.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0

All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Within 30 days	100.00%	18
Within 60 days	0.00%	0

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

6. Involve the nursing team through unit meetings in the development of a clear policy which describes the behavioural expectations for the application of cultural congruent care for patient safety and satisfaction.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Monthly	100.00%	18
Quarterly	0.00%	0

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

7. Conduct audits to determine if cultural congruent care policies are applied into clinical practice and act to address gaps.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

8. Identify and act on culturally specific needs in each individual patient care plan		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
Daily	0.00%	**0**
Every shift	100.00%	**18**

9. Identify English Proficiency through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nursing Department	0.00%	0
Human Resource Department	100.00%	18
Time frame to achieve action statement		
During application interview	100.00%	18
In joining the hospital	0.00%	0

Reason for Choosing Responsible Person: *Ensure no confusion joining the hospital, to ensure communication in English appropriate*

10. Provide basic Arabic language training to improve conversational Arabic for patient safety.		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
Within 60 Days	83.33%	15
Within 90 Days	16.67%	3

Theme 2 – Patient Safety

Proposed Strategic Action Goal: Develop and implement structured, standardised behavioural-based training programs for NAA, Falls Prevention, HAPU and Hand Hygiene. Develop a clear policy to ensure compliance with NAA, Falls and HAPU Prevention, and Hand Hygiene Practices. Annual competency re-validation linked to compliance audit results for NAA, Falls, HAPU, HH. Conduct and share Performance Audit Data in structured process with team on NAA, Falls, HAPU, HH compliance and system defects being addressed.

11. Develop a Standardized and Structured Behavioural Based Training Program that is supported by the Nursing Process Theory.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve Action		
Within 30 Days	0.00%	0
Within 60 Days	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

12. Implement the Standardized and Structured Behavioural Based Training Program that is supported with the Nursing Process Theory in order for Nursing Assessment (NAA) to be sustained		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Every shift	100.00%	18
Daily	0.00%	0

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement.*

13. Assess the nurse's competencies regarding: (1) Patient Health Assessment on Admission (2) Development of an appropriate individualized nursing care plan and (3) The parameters required within the Admission Assessment Policy.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0

All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
When issues identified in documentation review	5.56%	1
All (Every shift & when issues identified in documentation review).	94.44%	17

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

14. Ensure an evidence-based, acuity-driven nurse: patient ratio that will positively influence compliance with regards to patient care activities provided.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	94.44%	18
Time frame to achieve action statement		
Every shit	94.44%	17
Daily	5.56%	1

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

15. Educate nurses to perform a Risk Assessment on the electronic medical record (EMR) to identify and report connectivity systems issues affecting compliance with completion of the NAA within timeframe.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Immediate when issue identified	88.89%	16
Next shift	11.11%	2

Reason for choosing responsible person: *Empowering team, teamwork, engagement in process improvemen*

16. Develop an evidence-based behavioural Falls risk program that incorporates Morse and Humpty Dumpty algorithm to support standard practice.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Within 30 Days	5.56%	1
Within 60 Days	94.44%	17

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

17. Implement the Standardised and Structured Behavioural Based Falls Training Program to ensure that all nurses comply with the Falls Prevention Algorithm to prevent falls.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

18. Assess the nurse's competencies regarding:1. Morse & Humpty Dumpty Scoring, 2. Falls Risk Assessment, 3. Use of preventative safety measures based on risks identified, 4. Verbalization on frequency for conducting Falls Risk, 5. Application of visual cues to alert others to fall risk, .6. The application of the Falls Prevention Policy in practice.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0

All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
When patient fall occur	11.11%	2
Daily	88.89%	16

Reason for choosing responsible person: *Empowering team, teamwork, engagement in process improvement*

19. Ensure a nurse: patient ratio of 1;1, 1;2 or 1;3 based on patient acuity.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Every shift	88.89%	16
Change patient condition	11.11%	2

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

20. Develop a Standardised and Structured Behavioural Based Skin Risk Integrity Training Program that is supported by a theory.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Within 30 days	5.56%	1
Within 60 days	94.44%	17

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement*

21. Implement the Standardised and Structured Behavioural Based Skin Risk Integrity Training Program to reduce Hospital Acquired Pressure Ulcers.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	94.44%	17
Time frame to achieve action statement		
Every shift	100.00%	18
Daily	0.00%	0

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concern, ensure resource availability.*

22. Assess nurse competency on: (1) The use of the Braden Skin Risk Assessment tool, (2) The interpretation of the Braden scoring to identify skin risk, (3) The implementation of the appropriate pressure reduction measures based on risk, (4) Frequency for conducting Braden Risk Assessment, (5) Appropriate referral to physician and dietician when skin risk is high, (6) Staging Pressure Ulcers, (7) The application of the Skin Integrity Policy in practice.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Every shift	94.44%	17
When new pressure ulcer occurs	5.56%	1

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concern, ensure resource availability*

23. Develop a Standardised and Structured Behavioural Hand Hygiene Training Program that's supported by a theory.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0

Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Within 30 days	5.56%	1
Within 60 days	94.44%	17

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concern, ensure resource availability*

24. Implement the Standardised and Structured Behavioural Hand Hygiene Training Program in clinical setting to reduce hospital acquired infections.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	17
Time frame to achieve action statement		
Daily		
Every patient encounter		

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concern, ensure resource availability*

25. Assess nurse competency on: (1) The application of the '5' moments of Hand Hygiene, (2) Demonstrate aseptic hand washing technique, (3) Educating others on hand hygiene, (4) Appropriate use of Gloves before and after a procedure, (5) Hand Hygiene in Bundle Compliance to prevent infections, (6) The application of the Hand Hygiene Policy in practice.		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
With every patient encounter	100.00%	18
Every shift	0.00%	0

26. Educate nurses to conduct a Risk Assessment to determine if the hand wash stations are appropriately placed in the unit to ensure that nurses are able to wash their hands.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Immediate when issue identified	100.00%	18
Next shift	0.00%	0

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concern, ensure resource availability*

27. Report skin irritations incurred from hand washing solutions in order to find an alternative.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concern, ensure resource availability*

28. Communicate to the nursing team the behavioural expectations required to comply with NAA, Falls, HAPU, HH processes in order to avoid consequences.		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
Daily Safety Debrief Meetings (Huddles)	94.44%	17
Monthly Unit Meetings	5.56%	1

Theme 3 – Hospital Climate (Positive Work Environment)

Proposed Strategic Action Goal: Establish a standardized and structured Positive Work Environment process to improve the work environment and to be supportive of patient and staff safety in order to illustrate leadership, support and guidance, teamwork, staff scheduling, and patient allocation as clearly listed for the team to refer to when required

29. Develop a structured and standardized Positive Work Environment Process (PWE) to ensure nurses safe care practices.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Within 30 days	0.00%	0
Within 60 days	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concern, ensure resource availability*

30. Implement the structured and standardized Positive Work Environment Process to ensure work environment for nurse to perform safe care.		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
Daily	0.00%	0
All (daily & when change is introduced)	100.00%	18

31. Use the patient outcomes data to ensure that individual nurse performance evaluations for nursing admission assessment within the 24-hour time frame at 100%, Falls and HAPU rates at zero and 100% hand hygiene compliance is directed towards improvement for patient safety.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Monthly	0.00%	0
All (every shift, daily and when change is introduced)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concern, ensure resource availability*

32. Implement the minimum safe, evidence-based staffing and skills mix guidelines for unit to support safe patient staffing levels.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Senior Nurse Leadership	0.00%	0
Nurse Manager	0.00%	0
Charge Nurses	0.00%	0
All of the above (senior Nurse Leadership , Nurse Manager & Charge Nurses)	100.00%	18
Time frame to achieve action statement		
Every shift	0.00%	0
All (every shift, and change patient acuity)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

33. Monitor through incident reports whether nurse: patient allocations resulted in safety for:(1) nursing admission assessment within timeframe; (2) Falls, (3) HAPU rates to zero and (4) hand hygiene compliance.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Daily	0.00%	0
All (daily & monthly meetings)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

34. Provide a structured guideline for communication channels in units to (1) report if experience patient related issues that might affect patient safety, (2) request if assistance of team members is required, and (3) speak up if another healthcare provider compromise patient safety.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0

Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Every shift	0.00%	0
All (every shift & when patient safety concern identified)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

35. Establish a process for nurse managers visibility and participation to include (1) intentional rounding on all new patients to determine if any issues with care provided, (2) rounding with a purpose on all staff - every shift to identify resource deficits and needs, and (3) environmental monitoring to identify patient safety risks.

Responsible Person for Action	**Responses**	
	f=%	**n=**
Senior Nurse Leadership	0.00%	0
Nurse Manager	0.00%	0
Charge Nurses	0.00%	0
All of the above (Senior Nurse Leadership, Nurse Manager & Charge Nurses)	100.00%	18
Time frame to achieve action statement		
Every shift	0.00%	0
All (every shift & during shift changes)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

36. Establish a structured process to (1) acknowledge nurses' patient safety achievements, (2) enforce professional development activities, (3) identify individual professional development needs of nurses, (4) share the performance management data, and (5) provide feedback on performance.

Responsible Person for Action	**Responses**	
	f=%	**n=**
Senior Nurse Leadership	0.00%	0
Nurse Manager	0.00%	0
Charge Nurses	0.00%	0
All of the above (Senior Nursing Team =Senior Nurse Leadership, Nurse Manager, & Charge Nurses)	100.00%	18
Time frame to achieve action statement		
Monthly	0.00%	0

All (monthly & annually)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

Theme 4 – Culture of Safety (Informed, Flexible, Reporting, Just and Learning)

Proposed Strategic Action Goal: Develop and implement a structured, standardised competency-based Culture of Safety education program that supports nurses to integrate safety principles into general nursing practice

1. **Informed Culture**:

Proposed Strategic Action Goal: Engage nurses in process improvement activities through structured processes to address factors that affect patient safety and sustainment of patient safety practices, based on regular data analysis from audits, errors, near misses and incident report data

37. Share the performance management data (HAPU/HH/ Falls/ NAA) through (1) unit meetings to engage nurses in process improvement activities required for change, (2) quality boards as visual reminder on process improvement actions pending, (3) daily safety huddles to alert nurses to safety concerns, and (4) individual nurse coaching if practice gaps identified.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	5.56%	1
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	94.44%	17
Time frame to achieve action statement		
Daily when issue identified	0.00%	0
All (daily when issue identified, weekly & monthly unit meetings)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

38. Utilize a structured process to facilitate (1) that corrective actions identified are completed to ensure process improvement is implemented for a Culture of Safety, and (2) ensure that the Comprehensive Unit Safety Program (CUSP) is implemented in unit to sustain practices.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Senior Nurse Leadership	0.00%	0
Nurse Manager	0.00%	0

All of the above (Senior Nurse Leadership & Nurse Manager)	100.00%	18
Time frame to achieve action statement		
Daily	0.00%	0
All (monthly & annually)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

39. Identify trends in incidents reported and provide feedback to nurses to facilitate process improvement and education activities.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Monthly	0.00%	0
All (monthly & annually)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

2. Flexible Culture:

Proposed Strategic Action Goal: Develop and implement a structured and standardised process to allow nurse managers to adapt and change in emergent situations to ensure that an immediate decision can be taken to prevent patient harm.

40. Implement structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe handoff of patient care.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
During every shift change	0.00%	0

All (during every shift change, during break times & during transfer of patients	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

41. Promote active participation of nurses in audits to monitor compliance with (1) handoff of patient practices to ensure patient continuity of care, (2) team briefing (Huddles) as tool to align team on patient care concerns, and (3) use of SBAR during shifts and break times to communicate patient information in a structured way.		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
Daily	0.00%	0
All (daily & monthly)	100.00%	18

42. Develop structured process to involve the nursing team in (1) unit risk assessment to involve nurses in improving system gaps and (2) root cause analysis when incident reported that affect patient safety.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Annually	0.00%	0
All (annually & when safety concern identified)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

3. **Reporting Culture**:

Proposed Strategic Action Goal: Apply a structured and standardised Positive Work Environment process in which the nursing team feel safe and are prepared to report their errors and near misses to ensure patient safety

43. Communicate the Culture of Safety Process in unit meetings to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls.	
Time frame to achieve action statement	**Responses**

	f=%	n=
Daily shift debriefs (huddles)	0.00%	0
All (daily shift debriefs (huddles) & monthly Unit meetings)	100.00%	18

4. **Just Culture*:***

Proposed Strategic Action Goals:

(a) Ensure a standardised safety-supportive system of shared accountability where nurse managers are accountable for the systems they have designed and also for responding to the behaviours of their nursing staff in a fair and just manner and apply processes to facilitate behavioural management of safety,

(b) Ensure nurse accountability for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.

44. Apply Positive work environment process listed above as guide for nurses to (1) report behavioural practices of others affecting patient safety, and (2) report system defects affecting patient safety.

Responsible Person for Action	Responses	
	f=%	n=
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

45. Develop a structured Risk Assessment Program to proactively avoid patient harm.

Responsible Person for Action	Responses	
	f=%	n=
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

46. Implement the structured Risk Assessment Program to (1) identify system defects, (2) involve nurses in Units Environment Risk Assessment, and (3) mitigate risks identified.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

47. Assess nurses` competence with patient Hourly Rounding Principles for (1) explanation of the principles of Hourly Rounding to patient/family, (2) use of drafted wording (script) in every patient encounter to ensure patient hears same message from all the nurses, (3) ensure that nurse physically checks to determine if the 5 "P" is addressed (Position, Potty, Pain, Possessions and IV Pump) to avoid HAPU, Falls and ensure patient satisfaction, (4) use of the Whiteboard as tool to communicate the 5 "P" with patients, and (5) informing patients based on drafted wording (script) what is next in term of returning to room and care activities..		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
Every Shift	0.00%	0
All (every shift & all new patients)	100.00%	18

48. Audit nurse compliance in applying Hourly Rounding Principles.		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
Every shift	0.00%	0
All (every shift & monthly)	100.00%	18

49. Implement action plans for gaps identified in Safety Culture Results to prevent patient safety concerns for NAA/ HH/ HAPU/ patient harm from falls.		
Time frame to achieve action statement	**Responses**	
	f=%	**n=**
Every shift	0.00%	0
(All (every shift & monthly)	100.00%	18

50. Apply structured process to communicate patient safety expectation to nurses (1) ensure nurse understands responsibility and accountability for safe practice behaviours affecting sustainment of outcomes for NAA/ HH/ HAPU/ patient harm from falls patient safety, and (2) ensure that nurse reports system issues affecting patient safety.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
During every shift	0.00%	0
All (every shift & during annual competency assessment)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

5. Learning Culture:

Proposed Strategic Action Goals: Develop and implement a structured and standardised process to identify learning and training needs supported on reviews and analyses safety-related data and reports and incidence reported. Ensure training is Behavioural Based to allow expectation and consequences clearly understood and supported by a theory to apply the hospital Safety Management Plan

51. Develop a Standardized and Structured Behavioural Based Culture of Safety Training Program to align nurse's safety efforts to sustain patient safety.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Within 30 days	5.56%	1
Within 60 days	94.44%	17

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

52. Implement the Standardized and Structured Behavioural Based Culture of Safety Training Program to align team safety efforts to sustain patient safety.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Every Shift	0.00%	0
All (every shift, every patient encounter & when safety concern identified)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

53. Implement standardized training programs on basic quality methodologies to:1. Conduct Plan Do Check Act -PDCA to improve process gaps, 2. Perform a Root Cause analysis -RCA if incidents identified affecting patient safety, 3. Respond and act conducting Process Improvement -PI to allow nursing team to identify gaps in performance for NAA, Falls Incidence, HAPU Rate and HH based on targets set.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Monthly unit meetings	0.00%	0
All (during annual competency assessment, when safety risk identified & monthly unit meetings)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

54. Implement training programs to conduct standardised performance audits for (1) nursing admission assessment within timeframe, (2) falls, (3) HAPU and (4) hand hygiene.		
Responsible Person for Action	**Responses**	
	f=%	**n=**
Nurse Manager	0.00%	0
Nurse Educator (CRN)	0.00%	0
Registered Nurse (Staff/ Charge Nurses)	0.00%	0
All of the above (Nursing Team = Nurse Manager, Nurse Educator & Registered Nurses)	100.00%	18
Time frame to achieve action statement		
Every shift	0.00%	0
All (every shift & during annual competency assessment)	100.00%	18

Reason for Choosing Responsible Person: *Empowering team, teamwork, engagement in process improvement, patient safety everyone concerns, ensure resource availability*

APPENDIX P

An Action Plan to enhance a sustainable Culture of Safety to improve patient outcomes

THEME 1 - CULTURE:

Strategic Action Goal: Develop and implement a structured, behavioural-based education programme that supports nurses to achieve cultural competence, proficiency in English and conversational Arabic.

Action statement	**Responsible person**	**Time frame**
1. Develop a standardised and structured Behavioural-Based Cultural Orientation Program that is supported by a theory.	The Nursing Team (Nurse Manager, Nurse Educator, Staff & Charge Nurse)	60 Days
2. Implement the standardised and structured Behavioural-Based Cultural Orientation Programme developed for culturally congruent care	The Nursing Team	Every shift
3. Develop a person-centred interview framework to assist nurses to elicit relevant information to engage appropriately with patients and their families, and guide decision making in the clinical setting	The Nursing Team	Every shift
4. Develop an audit tool to monitor that the person-centred, theory-based interview assessment is used 100% of the time	The Nursing Team	Every shift
5. Audit compliance with applying person-centred, theory-based interview assessment; that it is used 100% of the time	The Nursing Team	Monthly

6. Develop a clear policy which describes the behavioural expectations for the application of culturally congruent care for patient safety and satisfaction.	The Nursing Team	Monthly
7. Conduct audits on a monthly basis to determine if culturally congruent care policies are applied in clinical practice and act to address gaps.	The Nursing Team	Monthly
8. Identify and act on culture-specific needs in each individual patient's care plan	The Registered Nurse (Staff and Charge)	Every shift
9. Identify English proficiency through certified testing to ensure that nurses are able to comprehend patient care requirements provided in English.	Human Resource Department	During application interview
10. Provide basic Arabic language training to improve conversational Arabic for patient safety	Human Resource Department	Within 60 Days
THEME 2 – PATIENT SAFETY: - **Strategic Action Goal:** Develop and implement structured, standardised behavioural-based training programmes for NAA, Falls Prevention, HAPU and HH. Develop a clear policy to ensure compliance with NAA, Falls and HAPU Prevention, and HH Practices. Annual competency re-validation linked to compliance audit results for NAA, Falls, HAPU, HH compliance. Conduct and share performance audit data in a structured process with team on NAA, Falls, HAPU, HH compliance and system defects being addressed.		
Action statement	Responsible person	**Time frame**
11. Develop a Standardised and Structured Behavioural-Based Training Programme that is supported by the Nursing Process Theory.	The Nursing Team	60 Days
12.		

Implement the Standardised and Structured Behavioural-Based Training Programme that is supported with the Nursing Process Theory in order for NAA to be sustained at 100%	The Nursing Team	Every shift
13. Assess the nurses' competency regarding: 1. Patient Health Assessment on Admission 2. Development of an appropriate individualized nursing care plan. 3. The parameters required within the Admission Assessment Policy	The Nursing Team	All (every shift, and when issue identified in documentation review)
14. Ensure an evidence-based, acuity-driven nurse: patient ratio that will positively influence compliance with regards to patient care activities provided.	The Nursing Team	Every shift
15. Educate nurses to perform a risk assessment on the EMR to identify and report connectivity system issues affecting their compliance with the completion of the NAA within the specified timeframe.	The Nursing Team	Immediate when issue identified
16. Develop an evidence-based behavioural Falls risk programme that incorporates Morse and Humpty Dumpty algorithms to support standard practice	The Nursing Team	60 Days
17. Implement the standardised and Structured Behavioural-Based Falls Training Programme every shift to ensure that all nurses comply with the Falls Prevention Algorithm to prevent falls	The Nursing Team	Every shift
18.		

Assess the nurses' competencies regarding: 1. Morse & Humpty Dumpty Scoring 2. Falls Risk Assessment 3. Use of preventative safety measures based on risks identified. 4. Verbalisation on frequency for conducting Falls Risk. 5. Application of visual cues to alert others to falls risk. 6. The application of the Falls Prevention Policy in practice.	The Nursing Team	Daily
19. Ensure a nurse: patient ratio of 1:1, 1:2 or 1:3 based on patient acuity.	The Nursing Team	Every shift
20. Develop a Standardised and Structured Behavioural-Based Skin Risk Integrity Training Programme that is supported by a theory.	The Nursing Team	Within 60 Days
21. Implement the Standardised and Structured Behavioural-Based Skin Risk Integrity Training Programme to reduce Hospital Acquired Pressure Ulcers.	The Nursing Team	Every shift
22. Assess nurse competency on: 1. The use of the Braden Skin Risk Assessment tool. 2. The interpretation of the Braden scoring to identify skin risk	The Nursing Team	Every shift

3. The implementation of the appropriate pressure reduction measures based on risk. 4. Frequency for conducting Braden Risk Assessment. 5. Appropriate referral to physician and dietician when skin risk is high. 6. Staging Pressure Ulcers 7. The application of the Skin Integrity Policy in practice.		
23. Develop a Standardised and Structured Behavioural-Based Hand Hygiene Training Programme that is supported by a theory.	The Nursing Team	Within 60 Days
24. Implement the Standardised and Structured Behavioural-Based Hand Hygiene Training Programme in clinical settings to reduce hospital associated infections.	The Nursing Team	Every patient encounter
25. Assess nurse competency on: 1. The application of the '5' moments of HH 2. Demonstrate aseptic hand washing technique 3. Educating others on HH 5. Appropriate use of Gloves before and after a procedure 6. HH in Bundle Compliance to prevent infections 6. The application of the HH Policy in practice.	The Nursing Team	Every shift
26.	The Nursing Team	

Educate nurses to conduct a Risk Assessment to determine if the hand washing stations are appropriately placed in the unit to ensure that nurses are able to wash their hands.		Immediate when issue identified with hand wash station
27. Immediately report skin irritations incurred from hand washing solutions in order to find an alternative.	The Nursing Team	Immediate when skin irritation experienced
28. Communicate the behavioural expectations required to comply with NAA, Falls, HAPU, HH processes in order to avoid consequences	The Nursing Team	Daily Safety Meetings (Huddles)
<u>THEME 3 – POSITIVE WORK ENVIRONMENT (HOSPITAL CLIMATE):</u> - **Strategic Action Goal**: Establish a standardised and structured Positive Work Environment process to improve the work environment <u>and</u> to be supportive of patient and staff safety <u>in order</u> to illustrate leadership, support and guidance, teamwork, staff scheduling, and patient allocation <u>as</u> clearly listed for <u>the</u> team to refer to when required.		
Action statement	**Responsible person**	**Time frame**
29. Develop a structured and standardised Positive Work Environment Process (based on elements listed in Strategic Action Goal) to ensure nurses' safe care practices	The Nursing Team	Within 60 Days
30. Implement the structured and standardised Positive Work Environment Process to ensure a work environment that is conducive for nurses to perform safe care.	The Nursing Team	All (Daily and When change is introduced)

31. Use the patient outcomes data to ensure that individual nurse performance evaluations for NAA within the 24-hour timeframe is at 100%, Falls and HAPU rates are at zero, and 100% HH compliance is directed towards improvement for patient safety.	The Nursing Team	All (Every shift, daily and monthly)
32. Implement the minimum safe, evidence-based staffing and skills mix guidelines for the unit to support safe patient staffing levels	The Nursing Leadership Team (Senior Nurse Leadership, Nurse Manager, Nurse Educator and Charge Nurse)	All (Every shift and changes patient condition)
33. Monitor, through incident reports, whether nurse: patient allocations resulted in safety concerns for: 1.NAA within the specified timeframe; 2.Falls 3. HAPU rates to zero 4. and HH compliance	The Nursing Leadership Team	All (Daily and during monthly unit meetings)
34. Provide structured guidelines for communication channels in units to: 1. Report experiences of patient-related issues that might affect patient safety. 2. Request assistance from team members when required. 3. Speak up if another healthcare provider compromises patient safety.	The Nursing Team	All (Every shift and when safety concern identified)

35. Establish a process for nurse managers' visibility and participation to include: 1. Intentional Rounding on all new patients to determine if there were any issues with the care provided. 2. Rounding with a Purpose on all staff - every shift to identify resource deficits and needs. 3. Environmental monitoring to identify patient safety risks.	The Nursing Leadership Team	All (Every shift and during shift change)
36. Establish a structured process to: 1. Acknowledge nurses' patient safety achievements 2. Enforce professional development activities 3. Identify nurses' individual professional development needs 4. Share the performance management data 5. Provide feedback on performance	The Nursing Leadership Team	All (Monthly and Annually)
THEME 4 – SAFETY CULTURE HAS FIVE DISTINCT SECTIONS WHICH WILL BE DISCUSSED individually (1. Informed culture/ 2. Flexible culture/ 3. Reporting culture/ 4. Just culture / 5. Learning culture) **4.1 Informed Culture:** **Strategic Action Goal**: Engage nurses in process improvement activities through structured processes to address factors that affect patient safety and sustainment of patient safety practices, based on regular data analysis from audits, errors, near misses and incident report data		
Action statement	**Responsible person**	**Time frame**
37. Share the performance management data (HAPU/HH/ Falls/ NAA) through: 1. Unit meetings to engage nurses in process improvement activities required for change.	The Nursing Team	All (Daily when issue identified, Weekly and Monthly Unit Meetings)

2. Quality Boards as visual reminder on pending process improvement actions. 3. Daily safety huddles to alert nurses to safety concerns. 4. Individual nurse coaching if practice gaps are identified.		
38. Utilise a structured process to facilitate: 1. That identified corrective actions are completed to ensure process improvement is implemented for a culture of safety. 2. Ensure that the Comprehensive Unit Safety Programme (CUSP) is implemented in unit to sustain practices	The Nursing Leadership Team	All (Monthly and Annually)
39. Identify trends in incidents reported and provide feedback to nurses to facilitate process improvement and education activities.	The Nursing Team	All (Daily & in Monthly Unit Meetings)
5.2 Flexible culture: **Strategic Action Plan:** Develop and implement a structured and standardised process to allow nurse managers and nurses to adapt to changes in emergent situations to ensure that an immediate decision can be taken to prevent harm.		
Action statement	**Responsible**	**Time frame**
40. Implement the structured communication process (TeamSTEPPS - Team Strategies and Tools to Enhance Performance and Patient Safety) to facilitate safe handoff of patient care.	The Nursing Team	All (Every shift, during break times & transfer of patients)

41. Promote nurses' active participation in audits to monitor compliance with: 1. Handoff of patient practices to ensure patient continuity of care 2. Team briefing (Huddles) as a tool to align the team on patient care concerns 3. Use of SBAR during shifts, break times and transfer of patients to communicate patient information in a structured way	The Nursing Team	All (Daily and monthly)
42. Develop a structured process to involve the nursing team in: 1. Unit risk assessment to involve nurses in improving system gaps. 2. Root cause analysis when incidents are reported that affect patient safety	The Nursing Team	All (Annually & when safety concern identified)
4.3 Reporting Culture: **Strategic Action Goal**: Apply a structured and standardised Positive Work Environment process in which the nursing team feels safe and are prepared to report their errors and near misses to ensure patient safety.		
Action statement	**Responsible person**	**Time frame**
43. Communicate the culture of safety process in unit meetings to eliminate fear of recrimination if nurses report incidents that affect sustainment of outcomes for NAA/ HH/ HAPU/ and patient harm from falls	The Nurse Manager	All (Daily shift Debrief (Huddles) and monthly unit meetings)
44.	The Nursing Team	

Apply the positive work environment process as guide for nurses during daily shift debriefs (huddles) and every time safety concerns are identified: 1. Report behavioural practices of others affecting patient safety. 2. Report system defects affecting patient safety.		All (Daily shift Debrief (Huddles) and every time safety concern identified)
<u>4.4 Just Culture</u>: **Strategic Action Goals:** (a) Ensure a standardised, safe, supportive system of shared accountability where nurse managers are accountable for the systems they have designed, for responding to the behaviours of their nursing staff in a fair and just manner, and applying processes to facilitate behavioural management of safety. (b) Ensure nurses' accountability for the quality of their behavioural choices in clinical practices and for reporting both their errors and system vulnerabilities.		
Action statement	**Responsible person**	**Time frame**
45. Develop a structured Risk Assessment Programme to proactively avoid patient harm annually and when new a risk is identified	The Nursing Team	All (When new risk identified, and annually)
46. Implement the structured Risk Assessment Programme every shift and when environmental change are identified to: 1. Identify system defects 2. Involve nurses in Units' Environment Risk Assessments 3. Mitigate identified risks	The Nursing Team	All (When new environment change identified, and every shift)
47.	The Nursing Team	

Assess nurses' competency with patient Hourly Rounding Principles for: 1.Explanation of the principles of Hourly Rounding to patient/family 2. Use drafted wording (script) in every patient encounter to ensure the patient hears the same message from all the nurses. 3. Ensure that nurses physically check to determine if the 5 "P" is addressed (Position, Potty, Pain, Possessions and IV Pump) to avoid HAPU, Falls and to ensure patient satisfaction. 4. Use of the whiteboard as a tool to communicate the 5 "P" with patients 5. Based on drafted wording (script) inform patients what is next in terms of returning to their room and care activities		All (Every shift & all new patients)
48. Audit nurse compliance in applying Hourly Rounding Principles.	The Nursing Team	All (Every shift and monthly)
49. Implement the action plans for gaps identified in Safety Culture Results to prevent patient safety concerns for NAA/ HH/ HAPU/ and patient harm from falls.	The Nursing Team	All (Every shift and monthly)
50. Apply a structured process to communicate patient safety expectation to nurses: 1. Ensure nurses understand responsibility and accountability for safe practice behaviours affecting sustainment of outcomes for NAA/ HH/ HAPU/ and patient harm from falls patient safety	The Nursing Team	All (Every shift and during annual competency assessment)

2. Ensure that nurses report system issues affecting patient safety.		
4.5 Learning Culture: **Strategic Action Goals**: Develop and implement a structured and standardised process to identify learning and training needs supported on reviews, and analyse safety-related data, reports and incidence reports. Ensure training is behavioural-based to ensure expectations and consequences are clearly understood and supported by a theory to apply the hospital safety management plan		
Action statement	**Responsible person**	**Time frame**
51. Develop a Standardised and Structured Behavioural-Based Culture of Safety Training Programme to align nurses' safety efforts to sustained patient safety practices	The Nursing Team	Within 60 Days
52. Implement the Standardised and Structured Behavioural-Based Culture of Safety Training Program to align team safety efforts to sustained patient safety practices	The Nursing Team	All (Every shift, every patient encounter and when safety concern identified)
53. Implement standardised training programmes on basic quality methodologies to: 1. Conduct Plan Do Check Act (PDCA) to improve process gaps 2. Perform a Root Cause analysis (RCA) if incidents identified affecting patient safety 3. Respond and act conducting Process Improvement (PI) to allow nursing team to identify gaps in performance for NAA, Falls Incidence, HAPU Rate and HH based on targets set.	The Nursing Team	All (During annual competency assessment, when safety risk identified, monthly unit meetings)

54. Implement training programmes to conduct standardised performance audits on: 1. NAA within the specified timeframe, 2. Falls, 3. HAPU, and 4. HH.	The Nursing Team	All (Every shift and during annual competency assessment)