



STRATHMORE UNIVERSITY

**AN ASSESSMENT OF FACTORS INFLUENCING PATIENT SAFETY INCIDENT
REPORTING IN THE INPATIENT DEPARTMENT AT THE GERTRUDE'S CHILDREN
HOSPITAL IN NAIROBI, KENYA**

BY

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**A RESEARCH DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENT FOR AWARD OF DEGREE OF MASTER OF BUSINESS
ADMINISTRATION IN HEALTH CARE MANAGEMENT**

STRATHMORE UNIVERSITY

2018

DECLARATION

I declare that this dissertation is my original work and has not been presented for an award of a degree in any other university for consideration of certification.

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June 2018

Approval

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ABSTRACT

The main purpose of the study was to establish the factors influencing the reporting patient safety incidents at Gertrude's Children hospital. The study employed a descriptive mixed method with both quantitative and qualitative study design. Fifty two nurses from the inpatient units participated in this study. A standard checklist extracted from Q-pulse, a structured questionnaire and in depth interviews guides were used for data collection. Statistical package of social sciences (SPSS) version 21.0 and thematic analysis was used to analyse the data. Eighty nine percent of the nurses were aware of the hospital's reporting system but about half of the nurses rarely reported incidents. There was a significant low rate of reporting patient safety incidents among the nurses in the inpatient units of the hospital. The main challenges faced by staff on reporting patient safety incident were: issues with accessibility of reporting platform, lack of time to report, fear of victimization, fear of unknown, lack of knowledge of what to report, and fear of intimidating colleagues. Some of the key recommendations includes; Provision of management support for patient safety culture, train all health care workers on the incident reporting process, ensure a non-punitive system when handling reported incidents and in all ways discourage victimization of staff reporting patient safety incidents and provision of appropriate timely feedback to staff on corrective measures.

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LIST OF ABBREVIATIONS

CUSP	Comprehensive Unit-Based Program
GCH	Gertrude's Children's Hospital
IOM	Institute of Medicine
IRS	Incident reporting system
MBA	Master of Business Administration
NHS	National Health System
NRLS	National Reporting and Learning System
OT	Operating Theatre
PCCU	Paediatric Critical Care Unit
PSI	Patient Safety Incidents
RLS	Reporting and Learning System
SPSS	Statistical Package for Social Sciences
UK	United Kingdom
WH O	World Health Organisation

OPERATIONAL DEFINITION

An incident: an event or circumstance that could have resulted, or did result, in unnecessary harm to a patient

Adverse events: Incidents that result in harm to patients.

Near misses: Incidents that did not cause harm to patients but has potential to cause harm.

An error: something you have done which is considered to be incorrect or wrong, or which should not have been done.

A report: an account or statement describing in detail an event, situation, or the like, usually as the result of observation or inquiry.

Culture: the way of life, especially the general customs and beliefs, of a particular group of people at a particular time.

System: A set of detailed methods, procedures and routines created to carry out a specific activity, perform a duty, or solve a problem.

Patient safety incidents: any unintended or unexpected incident which could have, or did, lead to harm for one or more patients receiving healthcare.

Incident reporting system: a database used to collect and analyse reports of injuries, illnesses, and other accidents that occur in a place.

ACKNOWLEDGEMENT

I wish to sincerely thank the almighty God, and appreciate all who supported me in one way or another in coming up with this dissertation. In a special way I acknowledge the Management of Gertrude's children hospital for allowing me to conduct my study in the hospital. Special gratitude goes to my University supervisor, Dr Frank Wafula for his guidance and continuous encouragement to complete these studies and for the timely review of my work. I extend my gratitude to Strathmore University School of Business Studies and the Institute of Healthcare Management for facilitating the whole study process. I cannot forget to appreciate the effort of one Mr Collins Owek who continuously proof read my work and made sure to correct grammar and spelling errors.

CHAPTER ONE: BACKGROUND TO THE STUDY

1.1 Background to the study:

Safety is a fundamental and essential attribute of quality health care. In the UK, the Patients Association revealed that 45 % of National Health Service (NHS) organizations had patient safety as their first agenda item in discussions, with an average of 28 per cent of board meeting time taken up discussing patient safety. Reputable organizations like the UK's National Patient Safety Agency (NPSA) leadership encourage professionals to be open about patient safety matters, particularly errors (Blakemore 2009). The European Society for Quality in Health Care (2006) defines the culture of safety as an integrated pattern of individual and organizational behaviour, based upon shared beliefs and values that continuously seek to minimize patient harm, which may result from the processes of care delivery. Patient safety incidents are a well-known challenge in health care, and are by the International Classification for Patient Safety, initiated by the World Health Organization (2009). Evaluating the errors helps us to learn, identify and solve a major problem in health care systems. Despite this, under reporting of incidents has been reported (WHO 2009)

Error reporting as a basic activity has an important role in discovering pitfalls of the health care system. To promote the reporting culture, its non-punitive base must become clear to doctors and staff, as this kind of reporting could lead to fewer medical errors and higher staff awareness about probable errors (Davoodi et al 2013). Reporting errors is fundamental to error prevention.

Article 43(1a) in the constitution of Kenya (2010) states that (1) Every person has the right to the highest attainable standard of health, which includes the right to health

care services, including reproductive health care, and that (2) a person shall not be denied emergency medical treatment. This requires that the health facilities at all levels are adequately staffed and equipped to provide quality health services to all patients. However, patient safety has been difficult to achieve due to long standing beliefs that when errors occur individuals must be blamed or punished (Kizito, 2014). Macharia et al, (2016) identified that review of medical records is preferable to incident reporting in determining the prevalence of adverse events in health facilities with limited inpatient quality improvement experience. They however recommended further research to determine whether staff education and a positive culture change through promotion of non-punitive unexpected clinical event reporting or a combination of approaches would improve the comprehensiveness of adverse event reporting.

According to the institute of medicine (2000) adverse events in hospitals were a leading cause of death in the United States. This report emphasized findings from the Harvard Medical Practice Study that found that more than 70 % of errors resulting in adverse events were considered to be secondary to negligence, and more than 90 % were judged to be preventable. The International Organization of Migration (IOM) report also emphasized the importance of reporting errors, using systems to hold providers accountable for performance, and provide information that leads to improved safety. Conceptually these purposes are not incompatible, but in reality they can prove difficult to satisfy simultaneously. Nonetheless, reporting potentially harmful errors that were intercepted before harm was done, errors that did not cause harm, and near-miss errors is as important as reporting the ones that do harm patients. Patient safety initiatives target systems- related failures that contribute to errors within the complex environment of health care. Because many errors are never reported voluntarily or captured through other mechanisms, these improvement efforts may fail.

Patient safety has always been important for all health care providers. Nurses are involved in the provision of health care in every area of the health care system, 24 hours a day, and seven days a week. This “presence” of nurses and their sound knowledge base enables them to play a critical role in patient safety. Through their vigilance, nurses act to keep patients safe, identify areas of risk and recognize situations in need of improvement.

Incident reporting ideally communicates all information relevant to patient safety. Local incident reporting systems in hospitals typically use an incident form that comprises basic clinical details and a brief description of the incident; there may be a list of designated incidents that should always be reported. Such systems are ideally used as part of an overall safety and quality improvement strategy, but in practice they may be dominated by managing claims and complaints. Speciality reporting systems and large scale systems, such as that of the UK National Patient Safety Agency (www.npsa.nhs.uk/), allow wider dissemination of lessons learnt and emphasize the need for parallel analysis and development of solutions.

High profile service failures within the NHS in the United Kingdom (UK) have raised public concern about preventable harm in health care and increased the demand for transparency and accountability. It is a reasonable expectation that the large volume of information collected through incident reporting should allow valid judgments about the risks to patients in one hospital compared to another. Indeed, a recent major inquiry into the safety failings in one English hospital expressed some incredulity that this was not already a routine component of monitoring of NHS performance.

The reporting rate reflects not only the true number of safety incidents within an organization but also the reporting behaviour and culture within an institution. It is not clear whether examining NHS trust crude reporting rates distinguishes unsafe care or whether it merely reflects variation in reporting behaviour. Hutchinson and colleagues (2007) examined NRLS data two years after incident reporting commenced in 2005 and, at that time, found no correlation between high reporting rates and poor hospital outcome.

They concluded that the lack of such an association was almost certainly due to low reporting rates. Since this study was published reporting rates have increased to over one million patient safety incidents a year, with significant variation between hospitals persisting.

A database of patient safety incident reports the National Reporting and Learning System (NRLS) was created within the National Health Service (NHS) in England in 2003. It is now the largest repository of such incidents in the world. Similar systems to capture adverse events have now been established in many other countries

including the reporting system at GCH (Q pulse). The NRLS was originally designed to enable analysis of frequently occurring and serious events. From these reports, the NRLS developed and issued national patient safety warnings and disseminated safety solutions to prevent such events recurring. Regulators currently scrutinize the rates of reported safety incidents to assess the relative safety of hospitals. Human error experts estimate that everyone makes three or four mistakes a day. Yet, it is not acceptable for patients to be harmed by the healthcare system that is supposed to offer healing and comfort.

According to NHS (2003) the poor clinical outcomes resulting from hospital errors should be addressed to help avert mortalities and the financial burden. It further elaborates that reporting these errors is the first step to prevent them from occurring again. The solution lies in finding out the factors influencing the reporting of patient safety incidents.

1.2 Problem statement

Incident reporting systems are widely considered effective instruments for learning from incidents. However, research shows that many incidents are not reported by healthcare providers (Pfeiffers et al 2010). The reporting rate reflects not only the true number of safety incidents within an organization but also the reporting behaviour and culture within an institution. Despite this, under reporting of incidents in hospitals still persists. Lawton et al (2002) links barriers towards incident reporting to; fear of blame and legal consequences, an uncertainty of which incidents should be reported, consuming time and inadequate feedback, lack of confidentiality, poor understanding of what to report or how, and doubts about the value of reporting. The European Society for Quality in Health Care defines the culture of safety as an integrated pattern of individual and organizational behaviour, based upon shared beliefs and values that continuously seek to minimize patient harm, which may result from the processes of care delivery. The instrument Hospital Survey on Patient

Safety Culture (HSOPSC) has frequently been used to measure the safety culture in hospital settings

Patient safety is a central aspect of healthcare system performance and an area of growing interest world-wide. After a series by Holzmuller et al (2007) & Mahajan (2010) mainly in Europe and United States, it is now generally accepted that about 10% of patients who receive care in hospitals experience some adverse effect in their course of treatment. In 1% of the cases the consequences are grave or even fatal. In terms of suffering as well as cost, these numbers are unacceptable for a modern healthcare system that makes a claim to quality (National Institute for Health and Welfare report, 2009). The care quality commission core safety standard in England, recommends the following key actions to ensure consistency in reporting patient safety incidents; give feedback to staff, focus on learning, engage frontline staff, make it easy to report, and make reporting matter.

A culture of openness to adverse incidents and reporting is important, as is support for those involved without placing blame or risking sanctions. In working with increasing the reporting frequency, the management's task is to promote a work culture that accepts that errors are made, that welcomes reports, and that focuses on complex causal factors. More knowledge on what encourages and what discourages reporting is needed. Discussing the direction of the patient safety effort and establishing consensus as to what to report and what should be solved in other ways, are important. Those who report incidents should find that the report is useful and leads to changes and improvement for the patients. A systematic assessment of error and harm collected from a wider range of sources, and hopefully a move towards active surveillance of salient events is needed in health care. These study aims to find out the factors influencing reporting of patient incidences. This will help in improving patient safety and quality in the hospital.

1.3 Justification of the study

Incident reporting systems are widely considered effective instruments for learning from incidents. However, research shows that many incidents are not reported by healthcare providers (Pfeiffers et al 2010). The importance of cultural factors in improving safety and encouraging reporting has been identified in relation to health care in acute settings (Barach & Small, 2000). A systematic assessment of error and

harm collected from a wider range of sources, and hopefully a move towards active surveillance of salient events is needed in health care. At local level this means a shift in emphasis from analysis of cases to systematic measurement of known problems and most importantly to safety improvement programs.

Despite increased awareness of the risks to patients within the health care system, there has been little improvement in patient safety, with approximately 1 in 7 patients experiencing an adverse event during hospitalization (WHO 2009).

Reporting will always be important and it has been over emphasized as a way to enhance safety. Reporting systems can provide warnings, point to important problems, and provide some understanding of causes (WHO 2009). They serve an important function in raising awareness and generating a culture of safety. However, a functioning reporting system should no longer be equated to meaningful patient safety activity. Organization must move towards active measurement and improvement programs on a scale commensurate with the human and economic costs of unsafe, poor quality care. GCH has a very organized electronic reporting system (Q Pulse) in place. Looking at statistics from the system, out of a total of 6311 patient safety incidences reported on Q pulse in the last financial year, (1st August 2016-31st July 2017), only 222 were from the inpatient department, which represents 3.5%. According to the culture of safety survey conducted at Gertrude's Children's Hospital March 2017, the overall perception of patient safety among the staff was rated at 72% and the frequency of event reporting rated at 69%. Looking at these findings and putting in mind that patients stay longer in the inpatient and hence patient safety incidents are more likely to happen there, it is important to find out the behaviour of incident reporting amongst units in the in-patient department and further explore reasons behind the reporting patterns. On the other hand most studies found on the research topic were either done in the United States of America or Europe, very few related studies were done in Africa or Kenya. Most of the studies referenced here in the study were done more than 5 years ago, making this study worth conducting.

This study will highlight the extent to which several factors influence the reporting of patient safety incidences, and link this to the patient reporting patterns and rate. This will assist the hospital management in collaboration with the unit managers to be

aware of the extent of incident reporting, and develop strategies for promoting and improving the culture of safety.

1.4 Purpose and aim of the study;

The meaning of risk management is to predict adverse events and reduce their occurrence. Health care carries a risk of harm for patient safety, and with respect to today's stressful systems with a large number of patients, it would be inevitable. Patients have the right to receive health care in accordance to the best standards. The purpose of this study was to evaluate the culture of patient safety incident reporting in the inpatient units and explore in depth reasons behind the reporting behaviours among nurses in the in-patient department. Information gathered from the study will help in redesigning systems and in planning and developing strategies with the goal of improving and sustaining patient safety and quality of care in the Hospital.

1.5 Broad objective:

To establish the factors influencing reporting patient safety incidents in the inpatient department at Gertrude's Children hospital.

1.5.1 Specific objectives:

1. To establish rate and patterns of patient safety incident reporting in the in-patient units of the Gertrude's Children Hospital in Nairobi
2. To assess factors influencing patient safety incident reporting behaviours in the in-patient units of Gertrude's Children Hospital in Nairobi

1.5.2 Research questions

1. What is the patient safety incident reporting rate and pattern in the inpatient units at GCH
2. What are the factors influencing the patient safety incident reporting in the inpatient units at GCH?

1.6 Study benefits

The findings from this study will inform and give recommendations to the management and staff of the hospital on the culture of reporting patient safety incident within the inpatient department and recommend measures to put in place or sustain to ensure incidents are adequately reported. On the other hand the findings will be utilized by the key policy makers and the management team in GCH with the aim of improving management efficiency and patient safety.

1.7 Framework of study process

The rest of the study is organized as follows , (1) review of the incident reporting system (IRS), (2) identification of the total number of patient safety incidents reported in the IRS within the study period, (3) identification of patient safety incidents reported from the inpatient units within the study period, (4) literature review on the culture of reporting patient safety incidents (5) data collection from nurses to explain the incident reporting patterns, (6) Data analysis (7) recommendation based on findings

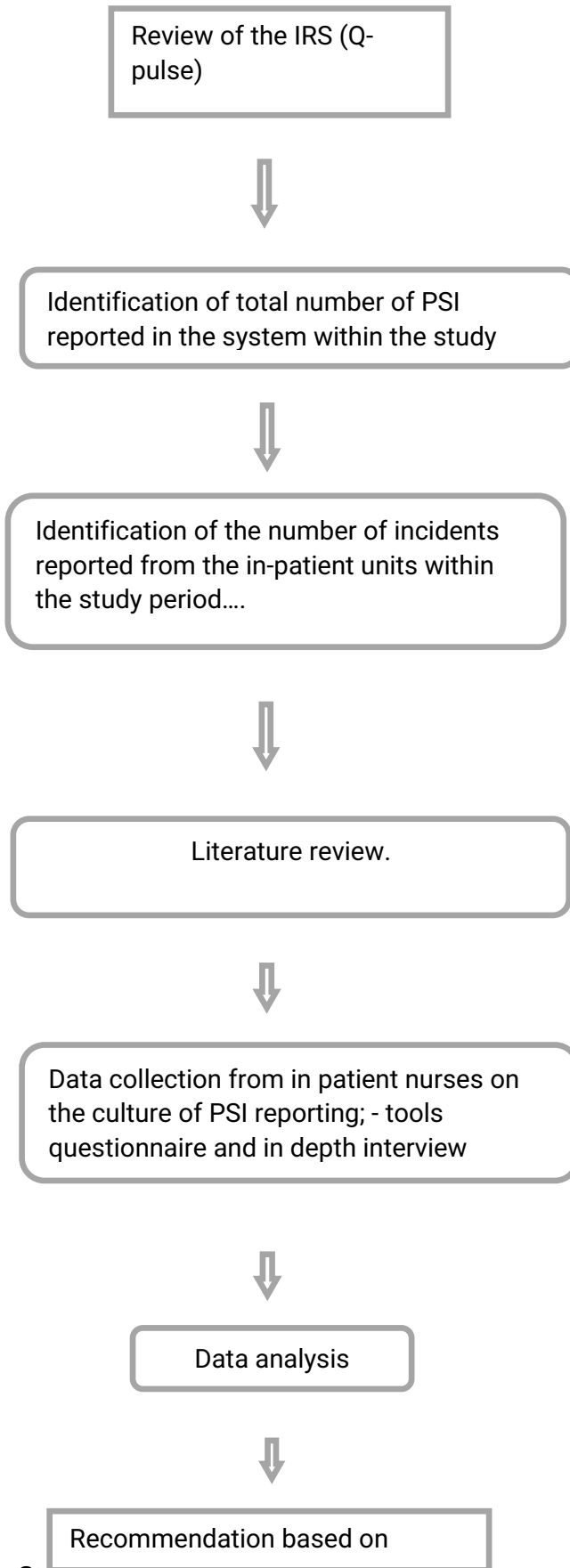


Figure 1: Structure of the study

CHAPTER TWO: LITERATURE REVIEW

Reporting errors is fundamental to error prevention. In healthcare and other high-risk industries, incident reporting systems (IRS) are considered effective instruments to learn from adverse events, errors and near misses. Among the potentially preventable incidents 43% involved nurses, 16% physicians, and 19% other types of providers (Nuckols et al 2007). According to their study on the rates and types of events to established incident reporting systems in two US hospitals, Nuckols and colleagues established that 9% of patients had at least one reported incidents, 17 incidents were reported per 1000 patient-days in the hospital. Nurses filed 89% of the reports, physicians 1.9% and others providers 8.9%. The most common types were medication incidents (29%), falls (14%) and operative incidents (15%).

Studies on the reporting behaviour of healthcare providers have shown that under-reporting is a major problem of incident reporting system (IRS). Voluntary reporting systems are estimated to capture about 10% of occurring incidents

There have been a number of successful efforts made to improve patient safety in the United States. Johns Hopkins hospital, an academic medical centre and non-profit integrated health care delivery system, set a goal in 2002 of making its care the safest in the world. The Comprehensive Unit-Based Safety Program (CUSP), which trains front line teams to identify and mitigate patient safety hazards, is a key strategy.

The CUSP model has been spread to hospitals nationwide and is associated with reductions in central line associated bloodstream infections in intensive care units. Through its safety efforts, Hopkins has achieved improvements in safety practices such as increased hand-washing, in patient outcomes such as fewer pressure ulcers among patients, and in the hospital staff's perceptions of the organizational safety culture. Safety principles have been spread outside the hospital setting to the system's home care group. Success factors include setting ambitious goals, empowering front line staff to make improvements, involving executives and the board in change, and rigorously measuring and holding units accountable for results (Nucklos et al, 2007).

The main reason to report incidents to improve patient safety is the belief that safety can be improved by learning from incidents and near misses, rather than pretending that they have not happened. Patient safety has been, and still is, a cause for concern in health-care systems all over the world, including the NHS in the United Kingdom. Every year, ~900 000 incidents and near misses are reported around NHS care, ~2000 of which result in death. Additional hospital stay costs are approximately £2 billion a year, and the negligence claims amount to an extra £400 million a year. Incident reporting systems have been a key tool to improve safety and enhance organizational learning from incidents in a range of high-risk organizations (commercial aviation, rail industry, and others). Although incident reporting has been instituted in health-care systems in many countries for some time now, similar positive experience is yet to be fully realized (Mahajan, 2010).

2.1 Incident reporting systems

Investigation of critical incidents was first used in the 1940s by Flanagan as a technique to improve safety and performance among military pilots. Cooper and colleagues, in 1978, used a 'modified critical incident technique' in which they interviewed anaesthetists and obtained descriptions of preventable incidents. Individual departments of anaesthesia now have systems in place to record and discuss adverse incidents and near misses with a view to improve patient safety by learning from these incidents. In the last two decades, authors have highlighted the need to gather information which can be used to improve hospital systems to minimize errors in health care, and many strategies and tools have also been developed to reduce errors. Calls have been made by quality and safety organizations, and the consumers of health-care systems, for incident reporting to better understand errors and their contributing factors. Internationally, W.H.O has work in progress to develop guidelines for implementing effective reporting systems.

In 2001, the National Patient Safety Agency (NPSA) set up a reporting and learning system (RLS) for the NHS. This system is generic for all the specialties, and to date, has accumulated over 4 million incidents. Catchpole and colleagues recently reviewed more than 12 000 anaesthesia-related incidents reported to RLS. The review provided extremely useful insight into the kinds of incidents that had been reported to RLS, and therefore, highlighted the areas of practice where further efforts are

required to reduce errors. However, as admitted by the authors, and pointed out in the accompanying editorial, the analyses were significantly hampered by the quality of the reports.

2.2 Barriers to Error Reporting

Lawton et al (2002) reveals that to better understand “the willingness of health care professionals (doctors, nurses, and midwives) to report colleagues to a superior member of staff following an adverse incident or near miss.” In addition they also explored “the difference in reporting of events involving three kinds of behaviour namely: compliance with a protocol, violation of a protocol, and improvisation where no protocol exists.” Finally they theorized that the culture of medicine, along with the increasing fear of litigation, would likely constrain health care providers from reporting.

Many errors go unreported by health care workers Wolf, (2008). The major concern they have is that self-reporting will result in repercussions. Providers’ emotional responses to errors inhibit reporting, yet some are relieved when they share the events of the error with patients. Healthcare professionals’ reports feeling worried, guilty, and depressed following serious errors, as well as being concerned for patient safety and fearful of disciplinary actions. They also are aware of their direct responsibility for errors. Many nurses accept responsibility and blame themselves for serious outcome errors. Similarly, physicians responded to memorable mistakes with self-doubt, self-blame, and shame. The need of clinicians for support may be fulfilled by discussing their mistake with another person

2.3 Predictors of reporting culture

According to a cross-sectional study conducted by Vifladt et al. (2016) on the culture of incident reporting and feedback in a hospital setting, the four strongest predictors of the incident reporting culture identified include: Communication openness, manager expectations and actions promoting safety, organisational learning and continuous improvement and teamwork across hospital units. The interaction between clinic and hospital, and all of the safety dimensions included were statistically significantly associated with the incident culture, while gender, age,

profession, length of service in the unit, place of education, clinic and hospital were not.

2.4 Ethical implication of reporting and disclosure

Healthcare providers have legal and ethical obligation to report risks, benefits, and alternative treatments through informed consent mandates. The ethical principles of beneficence (doing good) and no maleficence (preventing harm) are violated when errors are not reported or disclosed. These ethical principles shape caring nursing practice, and caring presupposes that nurses act in the best interests of patients. However health care providers may be typically so devastated and embarrassed by their mistakes that they may attempt to conceal them or defend themselves by shifting the blame to someone or something else. Some attribute failure of honestly acknowledging health care mistakes to providers' personal difficulty with admitting mistakes and incriminating other providers (Hughes & Wolf, 2008)

In chapter 35 of their Evidence-based handbook for nurses about error reporting and disclosure, Hughes & Wolf indicated the following as reasons to why clinicians do not report errors and near misses;

1) **Fear;** fear of being blamed for patient's outcome, fear that the other providers will consider provider who made the error incompetent, fear of reprimand from physician(s), fear that patients will develop negative attitudes, fear of legal liability, belief that disclosure of errors to patients results in lawsuits, fear of adverse consequences from reporting and fear of telling on someone else or reporting that is not anonymous.

2) **Understanding;** Confusion over definition of errors and near misses, providers' bias about which incidents should be reported, disagreement with the organizations' definition of error, Providers unaware that errors occurred, Some incidents especially near misses, thought too trivial/unimportant to report and no perceived benefit of reporting.

3) **Administrative/Management/Organizational;** Administrative response, lack of feedback on reported errors, persistence of the culture of blame/shame, blaming the individual, excessive emphasis on medication error rates as quality measure of care

and poor match of administrative response to errors with severity of errors.

4) **Burden of Effort;** Incident reports take too long to complete, verbal reports to physicians take too long or contacting the doctor takes too much time, Providers forget to make a report because they are too busy, extra work involved in reporting.

2.5 Willingness of reporting patient safety incidences

Figure 2 below elaborates the two main factors that have been thought to influence the reporting of incidences by hospital staff namely organizational and individual. Mahajan (2010) indicates that increased willingness to report health care errors have been associated with organizations that error reporting systems in place which include training of staff and availability of error reporting forms that are easy to interpret. Secondly there are individual factors like attitude that influence the willingness of staff to report errors. Some aspects of staff attitude that influence reporting of errors are fear of legal implication and perception by colleagues when they report errors that occurred.

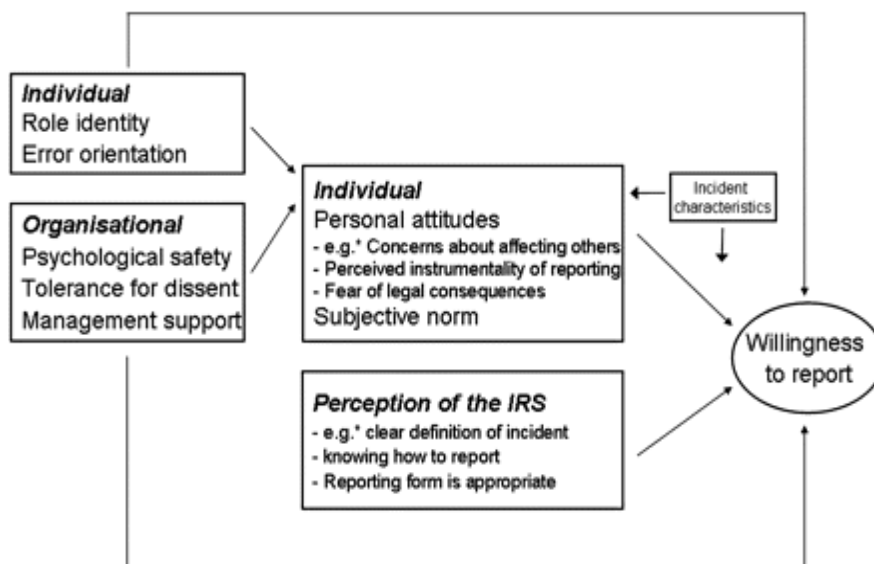


Figure 2: Factors influencing the willingness to report incidents.

2.6 Motivators to incident reporting:

In August 2008 Pfeiffer and colleagues reviewed 19 articles that empirically or theoretically investigated barriers and motivators to incident reporting in a hospital setting. The articles were extracted from MEDLINE and PSYCHINFO. Management support for patient safety and Psychological safety were identified as strong motivators to incident reporting among healthcare workers. This included the extent at which staff is at ease to bring up own ideas and issues about patient safety error. A non-punitive system also increases the physician willingness to report (Garbutt et al). Attitude towards errors has a big role to incident reporting and learning from errors is supported when staff has a positive attitude towards errors (Rybowiac et al).

2.7 Conceptual framework for international classification of patient safety.

Independent Variable

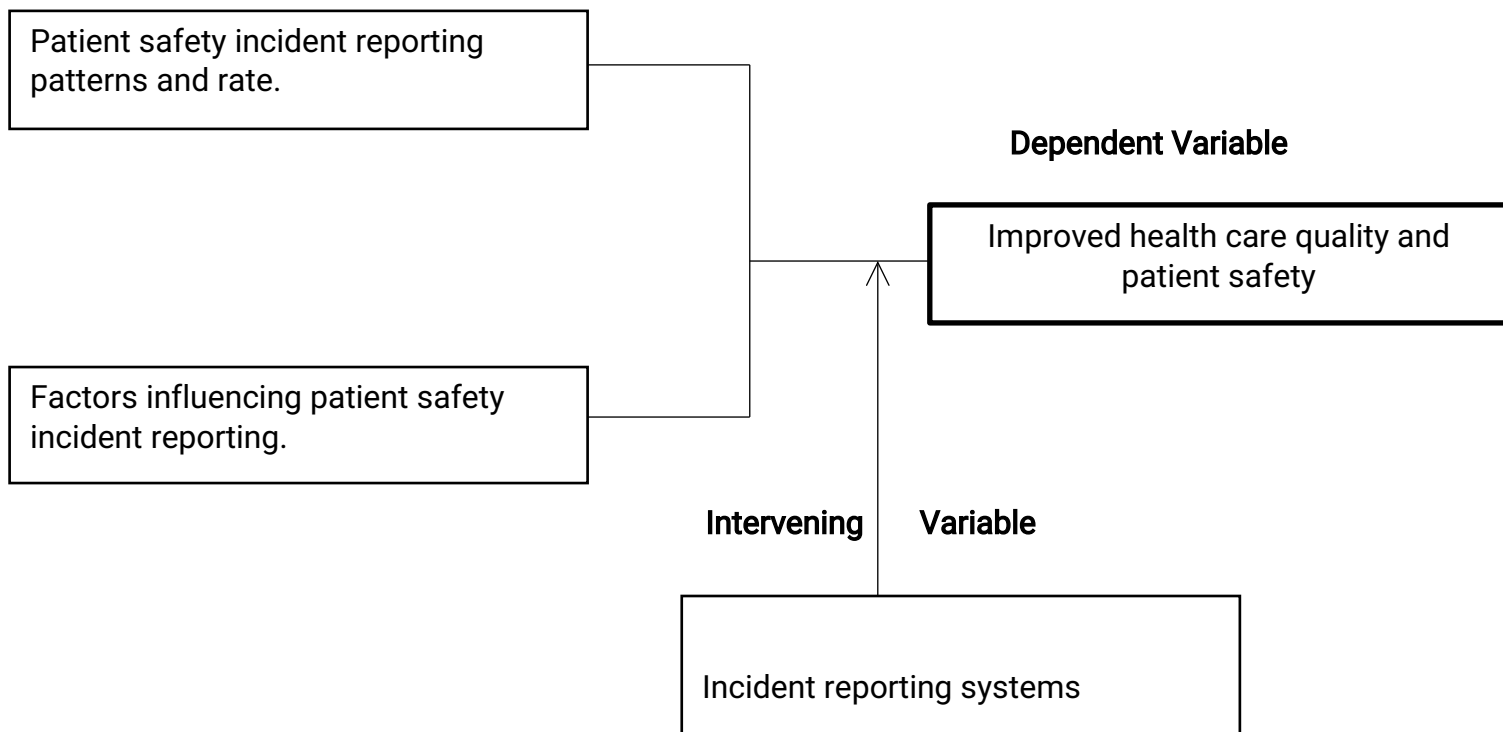


Figure 3: The conceptual framework indicates the independent, intervening and dependent variable. Improved health care quality is dependent on factors influencing patient safety incident reporting, patient incident reporting patterns and rate

CHAPTER THREE: METHOD

3.1. Study Design:

The study employed a descriptive mixed method approach with both quantitative and qualitative component. The reporting system (Q-pulse) was reviewed to find out the reporting rate of patient safety incidents in the in-patient units within the last financial year of the hospital (August 2016-July 2017). The study period was chosen to enable the researcher collect adequate data, this is because the compliance system had been updated to a better version, licences increased allowing more staff to access and report errors at one point in time. On establishing the rates of reporting, in-depth interviews were conducted with nurse team leaders to determine the reasons behind the reporting patterns and behaviours in the different units. Team leaders were chosen because they were in charge of clinical practice and patient safety in their units, hence considered as administrators. Questionnaires were also used to collect data. Both questionnaires and interview guides were chosen because the researcher wanted first hand from the team leaders the factors influencing reporting using interview since they were few (9). They also have vast knowledge on patient safety incident reporting in the hospital. Interview complemented the role of questionnaire in order to get more understanding from what missed. Triangulation was then done in the findings Systematic sampling was used to sample participants to fill the questionnaire and purposively sampling used for in-depth interview. Quantitative data was analysed using statistical package of social sciences (SPSS) version 21.0 and thematic analysis done for qualitative data.

3.2. Hospital Structure, Inclusion and Exclusion Criteria:

Gertrude's Children Hospital, consist of nine in patient wards, all units participated in the study. All reports of patient safety incidents from the inpatient units during the period 1st August 2016 to 31st July 2017 were obtained from the hospital's reporting system (Q pulse) to find out the rate and patterns of reporting. In patient was selected because patients take a longer time for observation and treatment compared to outpatient.

3.2.1 Inclusion Criteria:

- I. Nurses who consented to participate in this study.

- II. The nurse must have been working in the inpatient department of GCH.
- III. The nurse must have had a working experience of 6 Months and above at GCH.
- IV. Data in Q-pulse within the period of 1st August 2016 to 31st July 2017 from the inpatient department.

3.2.2 Exclusion Criteria:

- I. Nurses who did not consent to participate in the study.
- II. Nurses who worked in the outpatient department of GCH.
- III. Nurses who had worked in GCH for less than 6months.
- IV. Data in Q-pulse that was not within the period of 1st August 2016 to 31st July

3.5. Sampling technique and sample size determination

3.5.1 Sampling technique

Purposive sampling technique was used to select study participants. This is a type of nonprobability sampling that allows the researcher to use his/her own judgment to select study participants.

3.5.2 Sample size Determination

The target study population consisted of 44 study respondents.

The sample size was calculated using the Fischer *et al.'s* (1990) formula for population less than 10, 000. This formula is expressed as shown below:

$$n = \frac{z^2 pq}{d^2}$$

Where

n = Desired sample size

z = standard normal deviate at the required confidence interval of 95% set at 1.96

p = proportion of diabetics in the target population is unknown and is set at standard 50% (0.5)

q = 1-p

Hence q = (1-0.5)

d = standard error level set at 0.05

$$\begin{aligned} \text{Hence } n &= \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2} \\ &= \frac{0.9604}{0.0025} \\ &= 384.16 \end{aligned}$$

$$nf = \frac{n}{1 + (n/N)}$$

nf = desired sample size

N = was the estimate of population size for inpatient nurses with 6 months and above experience = **50**

$$nf = \frac{384.16}{1 + (n/N)}$$

Sample size for inpatient nurses

$$nf = \frac{384.16}{1 + (384.16/50)}$$

$$nf = \frac{384.16}{1 + (384.16/50)}$$

$$1 + 7.68$$

$$nf = \frac{384.16}{8.68}$$

$$8.68$$

$$nf = 44 \text{ nurses}$$

Sample Size of 44 nurses was obtained.

3.3 Data collection techniques

A Questionnaire with both closed-ended and open-ended questions was used to collect data from nurses. An interview guide was also used to collect data during the in-depth interviews with nurse team leaders and a checklist was used to collect data from the hospital's reporting system (Q pulse) to evaluate the rate and patterns of incident reporting in the inpatient units. The study participants were systematically sampled to fill the questionnaires and purposively sampled for in-depth interview

3.4. Data collection procedures

The study was initially approved by the ethical committee at the Gertrude's children's hospital (GCH). Prior to data collection, the research purpose was explained to the participants and informed consent obtained. The study questionnaire was filled in about 10-15 minutes and returned to the researcher for safe custody.

3.5 Pilot Study

In order to assess the suitability and reliability of the tools, the formulated questionnaire, and interview guide were pre-tested in one of the inpatient units (Jacaranda Ward). Jacaranda ward was randomly chosen from the inpatient units because it basically has similar characteristics as the units under study e.g. it uses the same reporting system in the hospital. The procedure used in pre-testing was the same as the one used in the actual study. Four nurses participated in filling the questionnaires and the unit's team leader was interviewed.

3.6 Validity

An instrument is valid if it measures what it is intended to measure and accurately achieves the purpose for what it was designed. Research instruments were validated through application of content validity determined by expert judgment. Further, a pilot testing was done to enhance the validity of the research instruments. Validity was established by ensuring that the questionnaire is reliable. The researcher used questions extracted from questionnaire that has been used for almost similar studies by Mahajan (2010) & Lawton et al (2002) with evidence of contrast validity.

3.7 Reliability

This refers to the degree of consistency demonstrated in a study. Reliability was determined by the split-half methodology during the pre-testing on the respondent in the purposively selected pilot unit. The reliability of the questionnaire was measured using the correlation coefficient (r) and further confirmed by applying Spearman-Brown correction formula.

3.8 Data Analysis and Management

The data collected from the reporting system (Q pulse) was edited and counterchecked to ensure it is error free. For the quantitative data, the researcher numbered the questionnaires appropriately. This was followed by the coding process to mark and categorize information as well as enhance anonymity of provided information. Then, data was entered into the computer program known as Statistics Package for Social Sciences (SPSS) to aid in analyzing the data using descriptive statistics such as graphs, percentages, charts, tables and frequencies. Thematic analysis was used to analyze qualitative data, data was coded, themes created then results triangulated and incorporated into the results.

3.9. Ethical consideration

The study was conducted following approval by Gertrude's children's Hospital, Ethical Research committee (GCH/ERB/VOLMMXVII/153). An informed consent was sought from the nurses who participated in the study, after clear explanation of the

purpose of the study. Confidentiality of the information was guaranteed. At no time was the safety of the study participants compromised during the study. All due respect was given to the respondents and they were at liberty to leave the study at any time they wished. The study report will be present to the Ethical research committee and stored in the Hospital's, and University Libraries. This study was undertaken in partial fulfilment of a Master of Business Administration in Healthcare management.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter presents the findings of the study which have been described in the following order: First; a depiction of the response rate, Second; a description of the inpatient nurses' demographic characteristics; thirdly the analysis of the inpatient reporting rate and pattern and finally an analysis of the reasons behind patient safety incident reporting behaviours in the inpatient units.

4.2 Response rate

A total of 44 questionnaires were administered and 43 returned back: giving a response rate of 97.7% for quantitative data and 100% for qualitative data (all unit team leaders were interviewed).

4.3 Demographic characteristics of respondents

The distribution of demographic characteristics among the nurses who participated in this study is shown in Table 4.1. The findings show that about a half of respondents 21(49%) were within the age group of 30-40 years and 18(42%) were between 20-30 years. The age group of 40-50 years and above 50 years were only 2 (4.7%) each. Majority of the nurses as reflected in tables 4.2 and table 4.3 had worked in the hospital and in their current units for between 1 and 5 yrs. From the interview it was found that team leaders worked 8-12 hours a day and they identified their main roles to be direct care to the patients and offering clinical support to the

nurses.

Table 4.1: Demographic characteristics of the respondents.

Age (yrs.)	Frequency	Percent
20 – 30yrs	18	41.9
30 – 40yrs	21	48.8
40 – 50yrs	2	4.7
Above 50yrs	2	4.7
Total	43	100.0

Table 4.2: Duration worked in the hospital

Duration (yrs.)	Frequency	Percent
< 1 year	7	16.3
1-5 years	21	48.8
6-10 years	7	16.3
more than 10 years	8	18.6
Total	43	100.0

Table 4.3: Duration worked in the current unit

Duration (yrs.)	Frequency	Percent
< 1 year	10	23.3
1-5 years	27	62.8
6-10 years	3	7.0
more than 10 years	3	7.0
Total	43	100.0

4.4 Description of the rate and pattern of patient safety incidence reporting in the inpatient units:

The first research objective in this study was: 'To describe the rate and pattern of patient safety incidence reporting in the inpatient units. Table 4.4 below presents the

checklist that was used to obtain qualitative data from Q-pulse (the hospital's reporting system) it represents the rate of reporting patient safety incidents amongst the nine inpatient units in the hospital. The results are presented in frequencies and percentages. The rate of reporting in the inpatient was found to be 3.5 % (222 out of 6311 total incidences reported in the study period). This was established from the reporting system in the hospital (Q-pulse). PCCU was found to be the highest reporting unit with 26.6% of incidences reported, Jacaranda ward was lowest with 1.8% of the incidences reported. Patient safety incidents were found to be reported mostly by Nurses (90.5%) while the rest were reported by doctors (9.5%).

Table 4.4 showing the total number of incidents reported on Q-pulse (between august 1st 2016-july 31st 2017)

	Q-Pulse		Per Unit								
	Hospital	Inpatient	PCCU	OT	Surgical ward	Felicity ward	Jacaranda ward	Edna ward	Susan ward	Jean ward	George drew ward
Total reported incidents	6311	222	59	6	43	7	4	7	43	30	23
Percentage		3.5%	26.6%	2.7%	19.4%	3.1%	1.8%	3.1%	19.4%	13.5%	10.4%
No. of staff reporting per ward		21	8	3	1	1	1	1	2	3	1
Designation	Nurse	19	6	3	1	1	1	1	2	3	1
	Doctor	2	2	-	-	-	-	-	-	-	-
	Others	-	-	-	-	-	-	-	-	-	-

4.4.1 Description of the frequency of reporting incidents in the inpatient department.

Figure 4.5 below shows that about half of the nurses (45%) indicated that they rarely reported no harmful incidents, 10% never reported, 26% reported most of the time and only 19% reported always. 40% rarely reported near misses, 5% never reported, 31% reported most of the time and 24% always reported as reflected in figure 4.6. In figure 4.7, 44% of the nurses reported incidents that had potential to harm the patient most of the time, 26% always reported, 25% rarely reported and 5% never reported.

Figure 4.1 frequency of reporting no harmful errors in the inpatient department

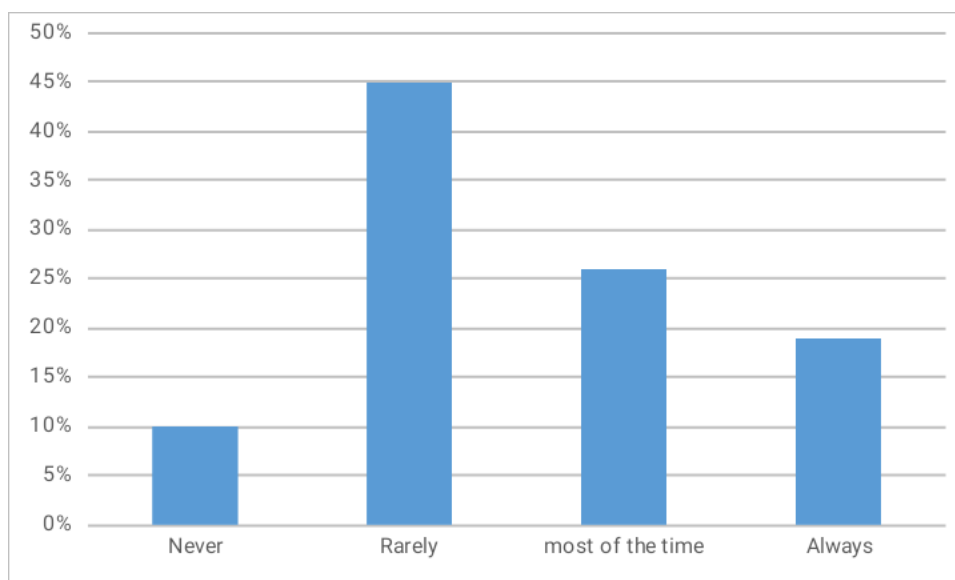


Figure 4.2 frequency of reporting Near misses in the inpatient department

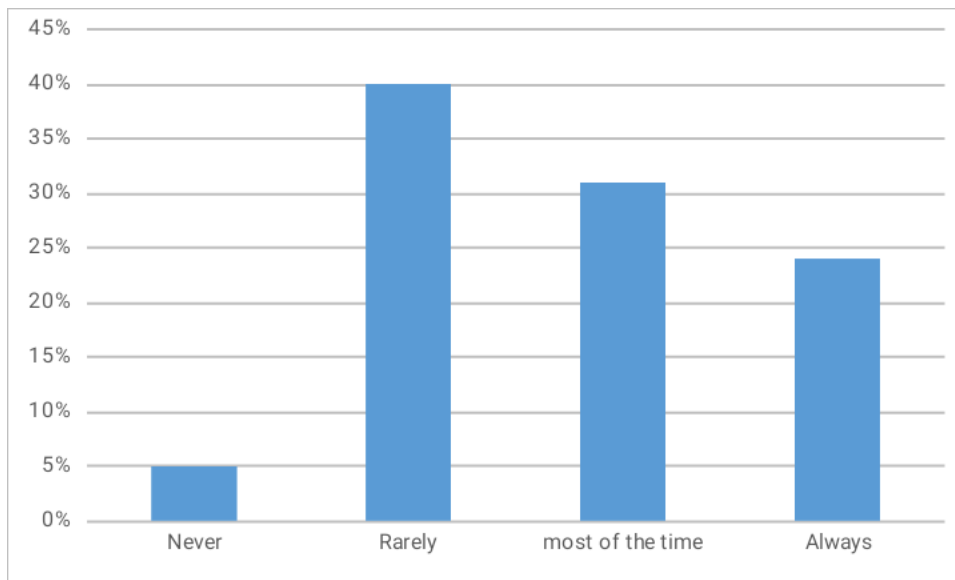
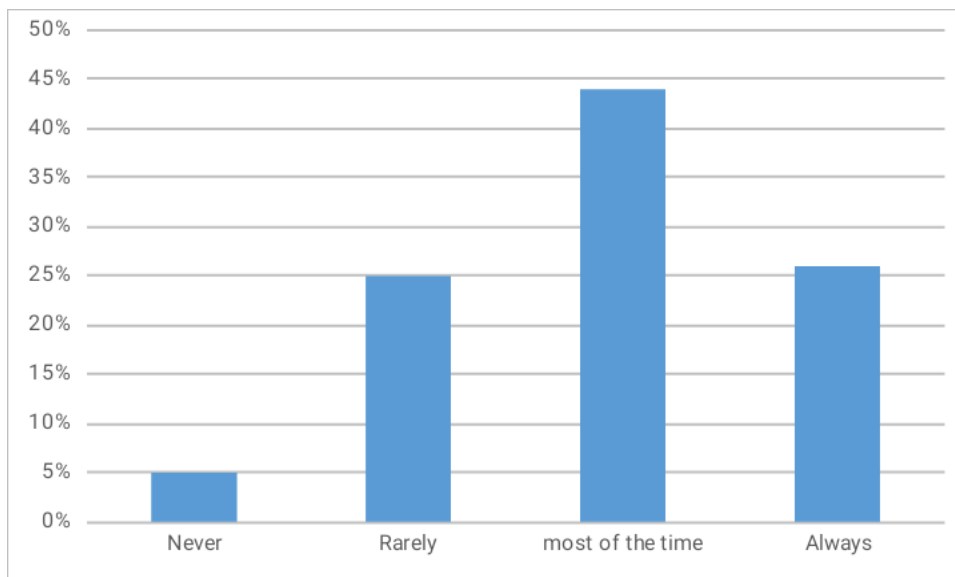
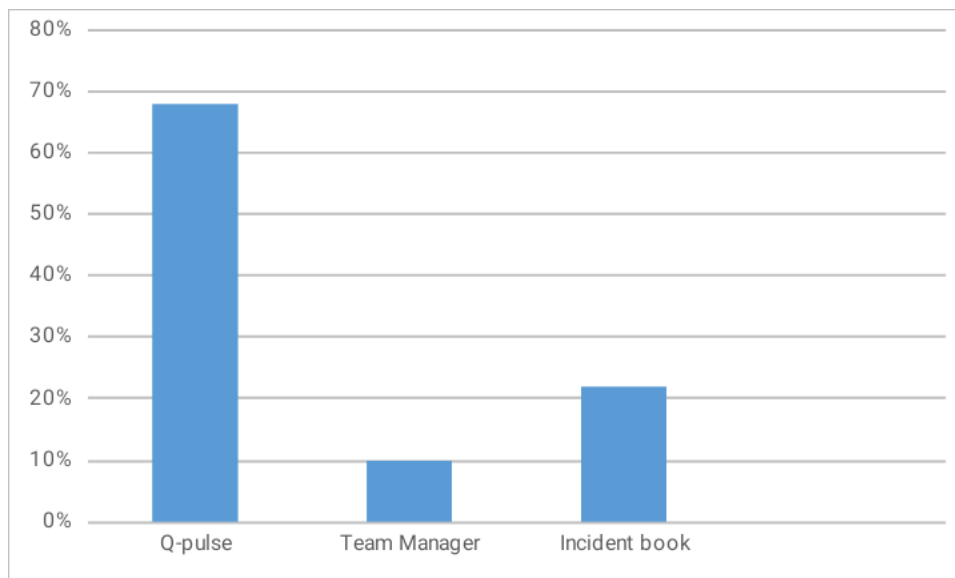


Figure 4.3 frequency of reporting harmful events in the inpatient department



4.4.2 Description of the pattern of patient safety incidence reporting in the inpatient units:



4.5 Description of the factors influencing patient safety incident reporting in the inpatient units

The second research objective in this study was: ‘To describe the factors influencing patient safety incident reporting behaviours in the inpatient units. The factors were reported in order of priority as knowledge, management support, barriers to incident reporting, feedback on changes put in place and lastly motivators to incident reporting.

4.5.1 Knowledge of patient safety incidents

Table 4.5 knowledge of patient safety incidents

Do you understand what patient safety incidents are?

	Frequency	Percent
Yes	32	74.4
No	5	11.6
Valid 3.00	3	7.0
4.00	3	7.0
Total	43	100.0

All team leaders interviewed understood what patient safety incidents were. one of the respondent said “A patient safety incident is something that would compromise the care to the patient, cause harm or put the patient at risk of harm while receiving care in the hospital”

Table 4.6 presence of patient safety incidents in the units

Do you experience patients’ safety incidences in your unit?

	Frequency	Percent
Valid Yes	31	72.1
No	9	20.9
4.00	3	7.0
Total	43	100.0

4.5.2 Knowledge on the hospital’s incident reporting system and how incidents were reported.

Figure 4.3 below demonstrates that 77% of the nurses were aware of the existence of the hospital’s reporting system while 23% did not have any idea. In figure 4.4, 68% of the nurses raised incidents on Q-pulse, 10% reported to the Team Manager and 22% logged incidents in an incident book. 100% of the team leaders interviewed acknowledged the presence of the hospital’s incident reporting system(Q-pulse), they recognized it as an online form of communication of incidents particularly to management for action planning of corrective measures and learning purpose to prevent reoccurrence. The following are examples of the responses from the team leaders when asked what they understood by reporting in Q-pulse;

“it is a form of online communication where anything that compromise patient care or an incident that involves the patient is logged into the system for a management team to see, review and formulate actions and corrective measures to prevent reoccurrence of the incident”(Respondent 4). Respondent 7 on the other hand said;

“Reporting on Q-pulse is a hospital policy whereby staff report on the system any incident that cause harm or risk of harm to the patient for management to address the incidents and give recommendation to staff to prevent reoccurrence of the incidents”

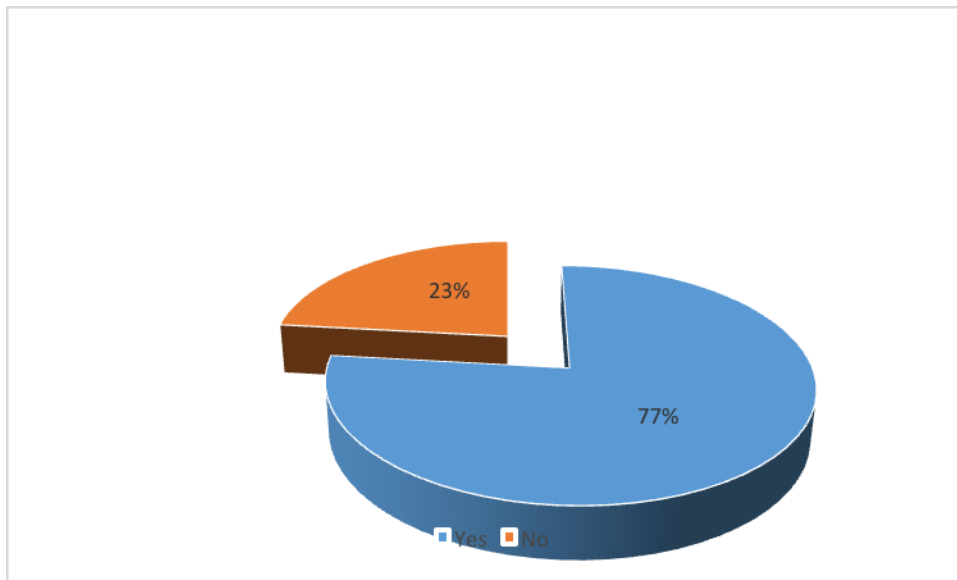


Fig 4.3 knowledge about hospital reporting system

Figure 4.1 below show that 74% of the nurses appreciated the fact that patients are at risk of hazards. 74% understood what patient safety incidents are and 72% acknowledged the presence of the incidents in their respective units. This is reflected in tables 4.5 and 4.6 respectively. Fig 4.2 indicates that despite understanding what patient’s safety incidents are and acknowledging the presence of the incidents in the units 44% of the nurses rarely reported the incidents and 5% never reported at all, only 23% reported most of the time and 28% always reported the incidents.

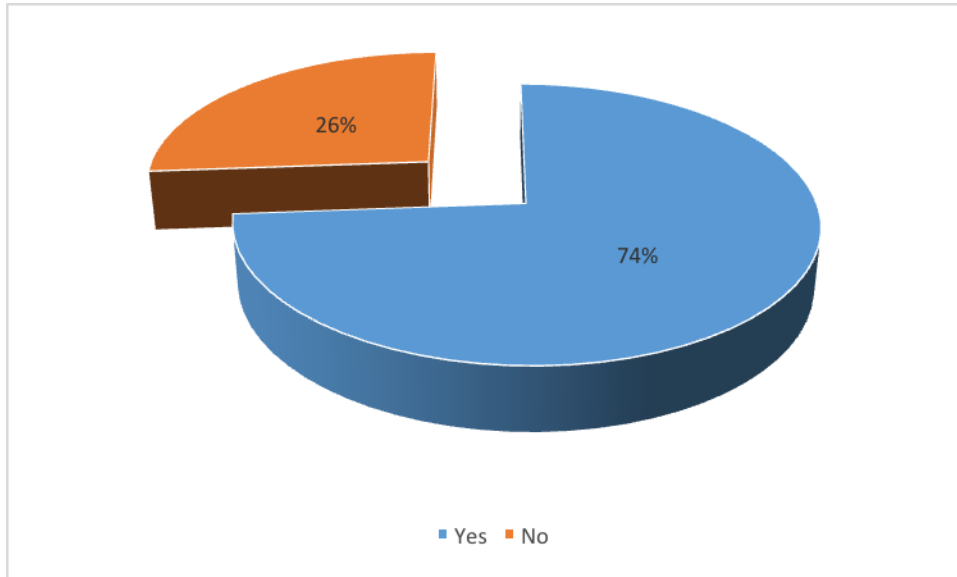


Fig 4.5 presence of risk of hazards to patients

4.2 Management support and feedback on patient safety incidents

Table 4.7 management support on patient safety

	Frequency	Percent
Strongly disagree	3	7.0
Disagree	2	4.7
Valid Agree	25	58.1
Strongly agree	13	30.2
Total	43	100.0

Table 4.7 above reflects that 58% of the nurses felt that hospital management provided a work climate that promotes patient safety, 32% strongly agreed while 2% disagreed and 7% strongly disagreed. Table 4.8 below shows that 56% agreed that unit managers provided a work climate that promotes incidence reporting, 26% strongly agreed while 9%disagreed and 9% strongly disagreed.

Table 4.8 unit manager support on incident reporting

	Frequency	Percent
Valid Strongly disagree	4	9.3

Disagree	4	9.3
Agree	24	55.8
Strongly agree	11	25.6
Total	43	100.0

Table 4.9 below represent response of nurses on whether they are given feedback on changes put in place based on events reported. 46% of the nurses agreed, 33% strongly agreed, 16% indicated that they were rarely given feedback while 5% said they never received any feedback

Table 4.9 feedback on changes put in place based on events reported

	Frequency	Percent
Strongly disagree	2	4.7
Disagree	7	16.3
Valid Agree	20	46.5
Strongly agree	14	32.6
Total	43	100.0

4.2.1 Barriers to incident reporting among nurses in the inpatient units

Figure 4.8 below shows the barriers to reporting incidences. The nurses responses were grouped into 3 categories victimization, punishment and others .Sixty three percent (63%) of the inpatient nurses felt that victimization hindered them from reporting patient safety incidences, 14% did not report incidents for fear of being punished, 5% did not report because they did not receive any feedback on previously reported incidents.18% had other undisclosed reasons that hindered them from reporting patient safety incidents. Likewise from the qualitative data collected from the in depth interview with the inpatient team leaders, the following were identified

as the main challenges that staff faced on reporting patient safety incident: issues with accessibility of reporting platform (few computers and the few that are available keep on hanging), lack of time to report, one of the respondents mentioned “*we are too busy with patient care, we do not have time to report on computers*”, fear of victimization, fear of unknown, lack of knowledge of what to report, fear of intimidating colleagues. “*I wouldn’t want to expose and intimidate my colleagues by reporting their mistakes, so I do not report but I correct them on the spot*” said respondent 2.

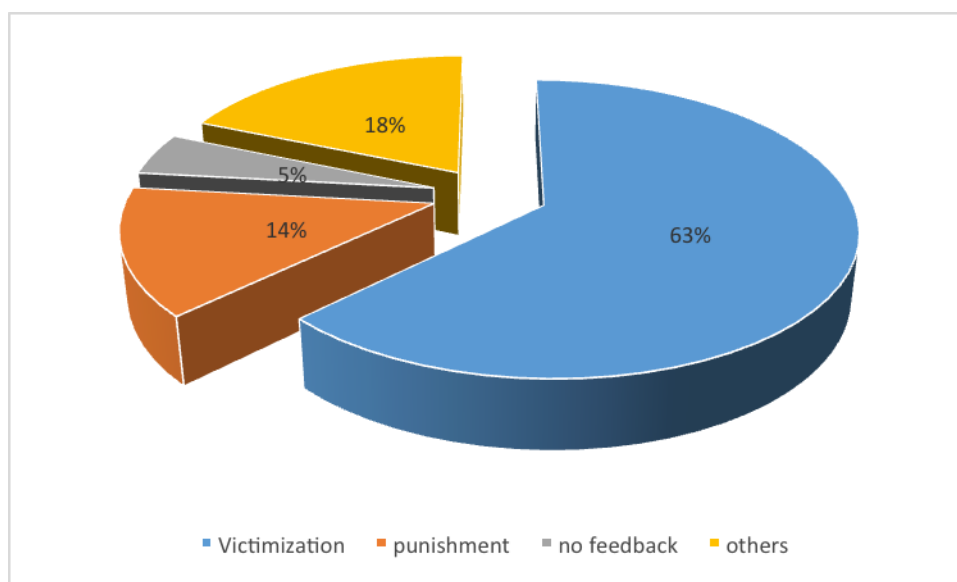


Figure 4.8 Barriers to incident reporting

4.2.2 Motivators to incident reporting among nurses in the inpatient units

Figure 4.9 reflects some of the factors that nurses felt would motivate them to report patient safety incidents. The responses were grouped into 4 categories no victimization, feedback, fair evaluation and confidentiality .Forty two percent (42%) said they would report if there was no victimization, 32% would report if given feedback on reported incidents, 14% felt with fair evaluation of the incidents they

would be motivated to report while 12% preferred to report if confidentiality was exercised. Qualitative data from the in depth interviews with the team leaders also revealed the following motivators to patient safety incident reporting: i) staff training on the reporting process, ii) absence of punishment or victimization to staff who report incidents, iii) presence of enough computers, iv) incentives e.g. awarding CPD points to staff who report incidents, v) feedback on actions put in place following a reported incidents, vi) maintenance of confidentiality, and vi) a shorter and simpler reporting process.

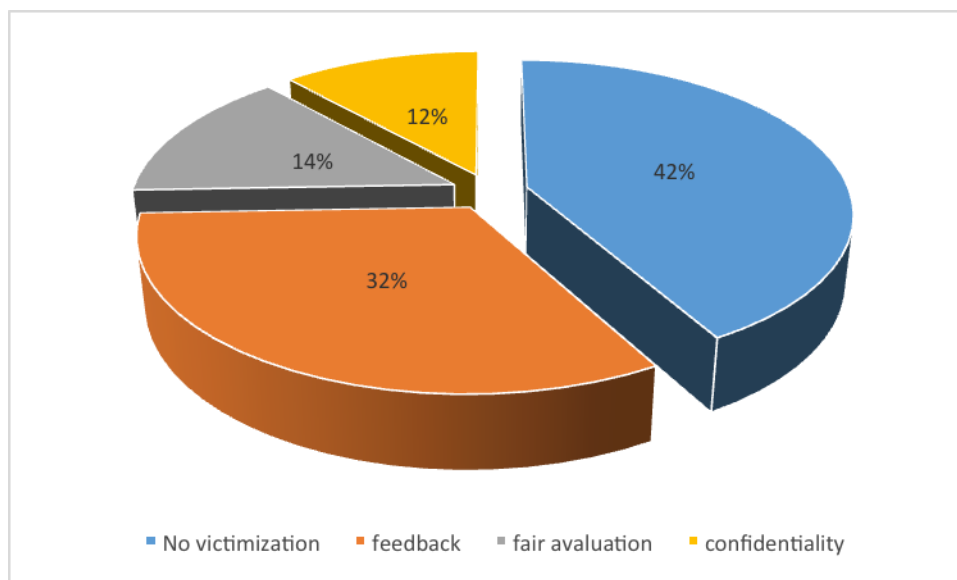


Figure 4.9 Motivators to incident reporting

4.2 .3 Nurses recommendations on the incidents reporting process

About half of the nurses(42%) as reflected in figure 4.10 below, recommended staff training on the process, 24% recommended efficient feedback on actions put in place following reported incidents, 21% recommended no victimization of the staff reporting incidents and 13% recommended to simplify the incident reporting system.

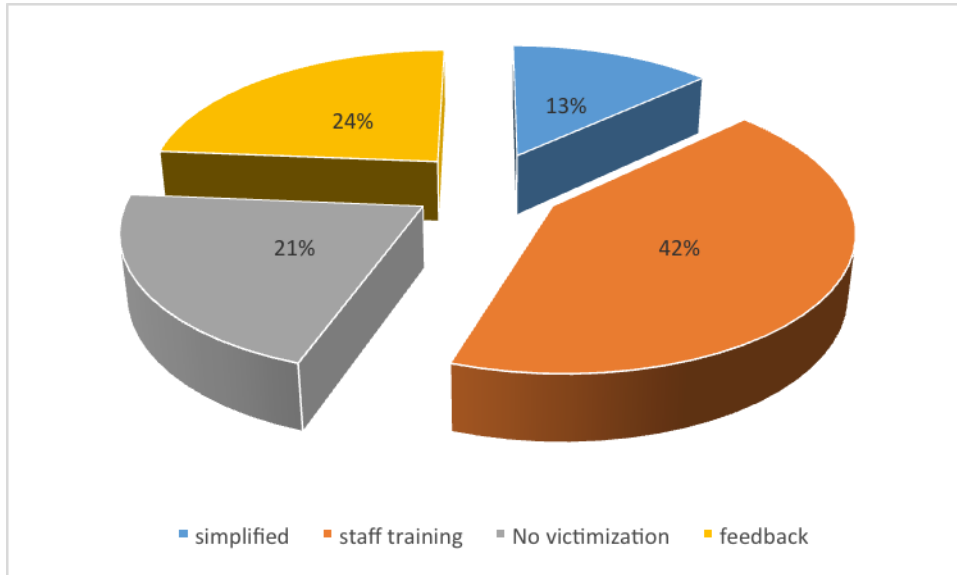


Figure 4.10 Recommendations on incident reporting process

Qualitative data from the in-depth interviews with the team leaders revealed similar recommendations as those of the nurses above, they includes: award anyone who reports incidents in Q-pulse e.g. give CPD points, educate and train staff on the reporting process, avail enough computers, always give feedback on actions or corrective measures put in place following a reported incident, simplify the process of reporting, avoid victimization of the staff reporting incidents, provide clear guidelines on incidents/issues/events to report on the system, provide a hard copy for reporting to enable transfer to the system even at a later stage, exercise confidentiality and always treat the process as a learning experience and not a blame game.

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the findings of the study and compares them with other published findings on the subject. It also discusses the recommendations based on research findings.

5.1.1 Incident reporting systems

Error reporting as a basic activity has an important role in discovering pitfalls of the health care system. In 2001, the National Patient Safety Agency (NPSA) set up a reporting and learning system (RLS) for the NHS. This system was generic for all the specialties, and to date, has accumulated over 4 million incidents. Gertrude's children hospital also has an incident reporting system called Q-pulse and all the nurses interviewed and 77% of those who filled the questionnaires were aware of the hospital's reporting system. Catchpole and colleagues recently reviewed more than 12,000 anesthesia-related incidents reported to the RLS. The review provided extremely useful insight into the kinds of incidents that had been reported to RLS, and therefore, highlighted the areas of practice where further efforts are required to reduce errors. Reporting systems can provide warnings, point to important problems, and provide some understanding of causes (WHO 2009). Quantitative analysis from the study revealed that 68% of the nurses logged incidences on Q-pulse and all nurses interviewed recognized it as an online form of communication of incidents particularly to management for action planning of corrective measures and learning purpose to prevent reoccurrence. Incident reporting ideally communicates all information relevant to patient safety. Local incident reporting systems in hospitals typically use an incident form that comprises basic clinical details and a brief description of the incident; there may be a list of designated incidents that should always be reported. Such systems are ideally used as part of an overall safety and quality improvement strategy, but in practice they may be dominated by managing claims and complaints. Speciality reporting systems and large scale systems, such as that of the UK National Patient Safety Agency (www.npsa.nhs.uk/), allow wider dissemination of lessons learnt and emphasize the need for parallel analysis and development of solutions.

5.2 The rate and pattern of patient safety incidence reporting

According to their study on the rates and types of events to established incident reporting systems in two US hospitals, Nuckols et al(2007) established that 9% of patients had at least one reported incidents, 17 incidents were reported per 1000 patient-days in the hospital. Nurses filed 89% of the reports, physicians 1.9% and others providers 8.9%. In this study only 19% of the nurses always reported incidents in the hospital reporting system, about half (45%) of the nurses rarely reported incidents. This is evident by the low rate of reporting incidents in the inpatient units (3.5%) as found out from the system over the study period. Similar to findings by Nuckols et al (2007) this study found nurses to report patient safety incidents more than any other healthcare worker. 90.5% of the incidents were reported by nurses while doctors reported 9.5%.

5.3 Barriers to incident reporting

Reporting errors is fundamental to error prevention however many errors go unreported by health workers (ZR Wolf, 2008) care. Studies on the reporting behaviour of healthcare providers have shown that under-reporting is a major problem of incident reporting system (IRS). Voluntary reporting systems are estimated to capture about 10% of occurring incidents. Numerous studies have discussed the various reasons for low reporting rates. Patient safety has been difficult to achieve due to long standing beliefs that when errors occur individuals must be blamed or punished (Kizito .L 2014). About 10% of the nurses in the study never reported incidents ,the major concern they had was that self-reporting would result in repercussions.In chapter 35 of their Evidence-based handbook for nurses about error reporting and disclosure, Hughes & Wolf indicated the following as reasons to why clinicians do not report errors and near misses; fear of being blamed for patient's outcome, lack of understanding of which incidents to report, lack of feedback on reported errors, burden of effort (incident reports too long to complete).similar findings were identified from the study, some of the challenges that staff faced on reporting patient safety incident includes: issues with

accessibility of reporting platform (few computers and the few that are available keep on hanging), lack of time to report, fear of victimization, fear of unknown, lack of knowledge of what to report, fear of intimidating colleagues. 16% of the nurses indicated that they were rarely given feedback on the incidents reported hence did not find it useful to report. In order to prevent reoccurrence of incidents it is important to always provide feedback to healthcare workers on actions put in place following reported incidents.

5.4 Motivators to incident reporting:

In August 2008 Pfeiffer and colleagues reviewed 19 articles that empirically or theoretically investigated barriers and motivators to incident reporting in a hospital setting. The articles were extracted from MEDLINE and PSYCHINFO. Management support for patient safety and Psychological safety were identified as strong motivators to incident reporting among healthcare workers. From this study 58% of the nurses felt that hospital management provided a work climate that promotes patient safety, this included the extent at which staff was at ease to bring up own ideas and issues about patient safety errors. To promote the reporting culture, its non-punitive base must become clear to doctors and staff, as this kind of reporting could lead to fewer medical errors and higher staff awareness about probable errors (Davoodi et al 2013). A non-punitive system also increases the physician willingness to report (Garbutt et al). Attitude towards errors has a big role to incident reporting and learning from errors is supported when staff has a positive attitude towards errors (Rybowiac et al). Staff training on the reporting process, absence of punishment or victimization to staff who report incidents, presence of enough computers, incentives e.g. awarding CPD points to staff who report incidents, providing feedback on actions put in place following reported incidents, maintenance of confidentiality, and simplifying the reporting process were some of the factors identified that could motivate healthcare workers to report patient safety incidents..

5.5 Study Limitation

The sample size was drawn from a single site (inpatient department) and may reflect reporting pattern that is unique to this department, and therefore making it difficult

to generalize the findings across the hospital. Focused group discussion (FDG) would have given a more qualitative insight but this was not possible to organize due to time constraint.

5.6 Conclusion;

There is a low rate of reporting patient safety incidents among the nurses in the inpatient units of the hospital. The reasons for low reporting include; fear of victimization of staff reporting incidents, few computers, lack of incentives; lack of appropriate feedback on actions put in place following reported incidents, lack of confidentiality and the complexity of the reporting process.

5.7 Recommendations;

In order to improve the rate of reporting among nurses in the inpatient units, the hospital management team should:

The study indicated that the rate of reporting of patient safety incidences is low. To help improve the reporting rate, the hospital needs to create a culture of safety. This will in turn influence staff to report and learn from their errors. Secondly the pattern of reporting varied from one unit to another. It is advisable that other unit managers visit the unit with the highest reporting rate to learn their strategies and use it to improve their units.

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Appendix I: Time plan

Timing Milestones

Activity	Sept, 2017	Oct, 2017	Nov, 2017	Dec, 2017	Jan, 2018	Feb, 2018	March, 2018	April 2018
Area of interest identified	x							
Topic refined to develop study proposal	x							
Write, submit and defend Proposal		x	x					
Collection of data and information				x	x			
Analysis and interpretation of collected data/information						x		
Final draft prepared– submission of study report							x	
Defending the Report								x

Appendix 2: INTRODUCTORY LETTER



Thursday, 14 June 2018

To whom it may concern

Dear Sir/Madam

INTRODUCTION – MUGENDI CHRISTINE MURUGA

This is to introduce Christine Mugendi, admission number MBA HCM/92809/16 who is an MBA HCM student at Strathmore Business School. As part of our SBS MBA HCM Master's Program, Christine is expected to do applied research and to undertake a project. This is in partial fulfillment of the requirements of the Master of Business Administration. She would like to request for appropriate data from your organization to help her finalize her research.

Christine is undertaking a research project on '**ASSESSMENT OF THE RATES AND PATTERNS OF INCIDENT REPORTING IN THE INPATIENT UNITS AT GETRUDE'S CHILDREN HOSPITAL (GCH).**' The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MBA seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct usefulness to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest, if not of practical value to your organization.

We very much appreciate your support and we shall be willing to provide any further information if required.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Gilbert Kokwaro', is written over a large, light blue oval shape.

Prof. Gilbert Kokwaro

**Director, Institute of Healthcare Management and
Academic Director, MBA in Healthcare Management**

Appendix 3: BUDGET

ITEM	QUANTITY	UNIT COST(Kshs)	TOTAL COST(Kshs)
Ethics committee fee	1	2,000	2,000
Printing of data collection tools	1	3,000	3,000
Printing of proposal	3	500	1,500
Binding of proposal	3	100	300
Data collection	1	5,000	5,000
Data analysis	1	10,000	10,000
Printing of study report	4	700	2,800
Binding of study report	4	100	400
Total			25,000

Appendix 4: PARTICIPANT INFORMATION AND CONSENT FROM:

SECTION 1: INFORMATION SHEET–HEALTH PERSONNEL

1.1: Researcher: Christine Muruga Mugendi

1.2: Research topic:

“An assessment of the patient safety incident reporting behaviour in the inpatient units at Gertrude’s children hospital (GCH)”

1.3: Institutional affiliation: Strathmore Business School (SBS)

SECTION 2: INFORMATION SHEET–THE STUDY

2.1: Why is this study being carried out?

This study will evaluate the rates and patterns of incident reporting and also explore the reasons behind these behaviours amongst nurses and give recommendations. The findings of the study will be shared with inpatient staff and the management of the organization to inform decision making on the importance of reporting all patient safety incidences, as well as help build up on information from previous similar studies. The beneficiaries of this information will be management and staff of this institution. This study will add onto available knowledge on the importance of incidence reporting as a patient safety measure.

2.2: Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to complete a questionnaire to get information on the culture of reporting patient safety incidents. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

2.3: Who is eligible to take part in this study?

All the nurses working in the study units are eligible to take part in the study

2.4: Who is not eligible to take part in this study?

All doctors and nurses working in the outpatient or in patients units that are not included in the study.

2.5: What will taking part in this study involve for me?

You will be approached by the researcher and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent form (this form) and then taken through a

questionnaire to complete.

2.6: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.7: Are there any benefits of taking part in this study?

The information will be used to improve the general quality and safety of the patient.

2.8: What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

2.9: Who will have access to my information during this research?

All research records will be stored in securely locked cabinets. That information may be transcribed into our database but this will be sufficiently encrypted and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.10: Who can I contact in case I have further questions?

You can contact me, Christine Mugendi, at Gertrude’s children’s Hospital, or by e-mail (cmugendi@gerties.org), or by phone (0722610401). You can also contact my supervisor, Dr. Francis Wafula, at the Strathmore Business School, Nairobi, or by e-mail (fwafula@strathmore.edu) or by phone (0722679467)

I, _____, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

- I AGREE to take part in this research
- I DO NOT AGREE to take part in this research

Storage of information on the completed questionnaire

- I AGREE to have my completed questionnaire stored for future data analysis
- I DO NOT AGREE to have my completed questionnaire stored for future data analysis

Participant’s Signature:

Date: ____/____/____
DD / MM / YEAR

Participant’s Name:

Time: ____ / ____

(Please print name)

HR / MN

I, _____ (Name of person taking consent) certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that she has understood the nature and the purpose of the study and consents to the participation in the study. She has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date: ____/____/____

DD / MM / YEAR

Investigator's Name:

Time: ____/____

(Please print name)

HR / MN

Appendix 5: DATA COLLECTING TOOLS

I. Checklist

1. Total number of patient safety incidents reported on Qpulse between August 2016 and July 2017
2. Total number of patient safety incidents reported from the inpatient units.
3. Number of patient safety incidents reported per individual unit(9 units)
4. Number of staff reporting incidents per unit
5. Designation of staff reporting incidents

	Q-Pulse		Per Unit								
	Hospital	Inpatient	PCCU	OT	Surgical ward	Felicity ward	Jacaranda ward	Edna ward	Susan ward	Jean ward	Georgedrew ward
Total reported incidents											
Percentage											
No. of staff reporting per ward											
Design	Nurse										

ation	Doctor										
	Others										

II. In-depth Interview Guide:

1. Describe your role in this hospital and the common shifts/work schedule you do at work

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2. What do you understand by patient safety incident?

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3. What do you understand by reporting in the Q-pulse? Probe why it is important.

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4. In your opinion, what would motivate staff to report all patient safety incidents in your unit?

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5. In your opinion, what are some of the challenges staff face on reporting on patient safety incidences

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6. What would be your recommendations on incident reporting process in your unit using Q-pulse?

.....
.....

16. Are you regularly informed of the errors that happen in the unit?

- a) Never
- b) Rarely
- c) most of the time
- d) always

17. Do staff in your unit speak freely about something they see or do that may negatively affect patient care?

- a) Never
- b) Rarely
- c) most of the time
- d) always

18. In your unit do staffs often discuss ways to prevent errors from happening?

- a) Never
- b) Rarely
- c) most of the time
- d) always

19. Are you given feedback about changes put into place based on events reported?

- a) Never
- b) Rarely
- c) most of the time
- d) always

20. Out of your experience and in your opinion:

a) What would motivate you to report all patient safety incidents in your unit?

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b) What would hinder you from reporting all patient safety incidents in your unit?

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c) Describe your experience on incident reporting in your unit.

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d) What are your recommendations on incident reporting process in your unit?

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Appendix 6: Approval letters



December 19, 2017

REF: GCH/ERB/VOLMMXVII/153

Christine M. Mugendi

Dear Christine

RE: REQUEST TO UNDERTAKE RESEARCH IN GERTRUDE'S CHILDREN'S HOSPITAL

We are in receipt of your proposal requesting to conduct a study: **“An Assessment of Patient Safety Incident Reporting Behavior at the Gertrude’s Children Hospital in Nairobi, Kenya”**

The Hospital’s Ethical Review Board has reviewed and **approved** your request to conduct the study.

However, the Board has made the following observation which you should nevertheless address even as you commence your study:

- i. You need to include the contact of the Ethical Review Committee
- ii. You need to clarify the process of randomization to identify nurses on the study

Please note that this approval is only to conduct the study and is not an approval for publication or presentation of findings. A separate approval will be required for this purpose.

The Hospital will require the write up of your study findings upon completion as this will form part of our database for future references. **Meeting this requirement will be a condition for granting approvals for publications or presentations of research findings in the future.**

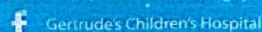
On behalf of the Hospital I wish you a fruitful research.

Regards

**Dr. Thomas Ngwiri
SECRETARY
GERTRUDE’S CHILDREN’S HOSPITAL
ETHICAL REVIEW BOARD**

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E-mail: info@gerties.org | www.gerties.org

Trustees: AR Davis, Chairman, JG Bell, Mrs. EA Russell, GA Maina, Dr. SJ Nesbitt, TM Davidson, K Shah, Dr. Florence Manguyu
Chief Executive: Dr. R. Nyarango



April 12, 2018

REF: GCH/ERB/VOLMMXVII/163

Christine M. Mugendi
REG NO; 092809

Dear Christine

RE: PRESENTATION OF FINAL REPORT

We are in receipt of your study title: **“An Assessment of Patient Safety Incident Reporting Behavior at the Gertrude’s Children Hospital in Nairobi, Kenya”** which was approved to be conducted on **December 19, 2017**, REF: **GCH/ERB/VOLMMXVII/153**

The committee acknowledges the receipt of this as the final report. Please note to update the committee in case of any changes that may arise to this version after your defense.

On behalf of the Hospital I wish to congratulate you for this achievement.

Regards



Dr. Thomas Ngwiri
SECRETARY
ETHICAL REVIEW BOARD

