Registered Nurses' clinical decision-making when managing constipation in cancer patients

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DEDICATION

I would like to dedicate this thesis to my beloved son, Lucky, who was taken early from me. "A thousand words won't bring you back, l know, for l have tried: neither a thousand tears, I know, for I have cried." Son, I know you will be proud of me for you were there at the beginning of all this, encouraging me to soldier on, proofreading my thesis chapters and listening to my mock presentations. You are loved beyond words and missed beyond measure.

I am indebted to the 11 RNs who shared their experiences of clinical decision-making. I am humbled by and indebted to you for your willingness and sacrifice to share your experiences. May this study encourage you all to embark on this journey of nursing research and have a say on how to improve our clinical practice to optimise patient outcomes.

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To my beloved family, George, Owen, and Prisca, words are not enough to express my unconditional love to you all. To my children, l hope I have inspired you: to be brave is to cry but still fight on.

STATEMENT OF AUTHENTICATION

The work presented in this thesis is original to the best of my knowledge and belief, except where acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

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Abstract

Background: Clinical decision-making (CDM) is a complex nursing process undertaken by Registered Nurses (RNs) in clinical practice and a crucial component to ensure high-quality patient care. CDM is essential in planning and delivering evidenced based care to patients with constipation. Constipation is a multifactorial and subjectively distressing symptom experienced by cancer patients at various stages of their disease and treatment journey.

Method: This descriptive, qualitative study explored what influenced RNs' CDM when managing constipation in cancer patients. Purposive sampling was used to recruit six community-based RNs and five RNs from an acute medical oncology ward. Semi-structured interviews (n=11) using open-ended questions informed by the literature were conducted. Thematic analysis was used to analyse the data.

Findings: Two major themes emerged: "*Factors influencing practice*" and "*Developing partnerships*". RNs' clinical decisions are influenced by their previous clinical and personal experiences; the reluctance to use constipation assessment tools in practice; their previous exposure to patients with cancer who have had constipation; partnerships formed, with patients and families or other RNs; and conferring with experts. Previous successes and failures to resolve constipation informs RNs' decision-making, rather than specific knowledge, education, or using assessment tools related to constipation.

Implications: The study findings span two distinct clinical settings, which provide insights and contribute to the body of knowledge about CDM. Education programs are needed to focus on educational frameworks, which foster the development of clinical knowledge that enhances CDM processes. Providing education and mentoring to nurses prior to their placement into cancer nursing specialised clinical settings may lessen the burden associated with a lack of CDM skills. An understanding of novice RNs' CDM during their first year of practice will enable nursing managers, educators, and other health professionals to give them support and promote evidence-based practice. Education regarding knowledge and use of standardised evidenced- based constipation assessment tools are needed to assist RNs in the identification, prioritisation, and management of concurrent constipation symptoms experienced by cancer patients.

CHAPTER 1: Introduction

1.1 Introduction

This descriptive, qualitative study focuses on the Clinical Decision-Making (CDM) of Registered Nurses (RNs), who care for patients diagnosed with cancer who are experiencing constipation. In this chapter, the rationale for undertaking this study is discussed, along with the background and purpose, and the theoretical framework that informed the study is introduced. The key terms used in this study are defined and an overview of the thesis organisation is presented.

1.2 Researcher's position

I am a Clinical Nurse Specialist (CNS) with more than 13 years of medical oncology experience and I recognised that the symptom management associated with constipation is an area of concern that affects the quality of life of patients. I developed an interest in the symptom management of cancer patients suffering from constipation. My observations of clinical practice and conversations with other RNs led me to question how clinical decisions were made by the RNs caring for cancer patients with constipation. I also noted the variations in clinical decision-making that existed among RNs and that their treatment choices focus on assumptions rather than evidence-based practice. Further, many RNs delegated the task of monitoring bowel movements to the least-experienced nurses, without appreciating the fact that there is more to constipation management than just asking a patient if they had opened their bowels. Poor management of constipation and a lack of consistency with constipation management and clinical decision-making led me to conclude that this was a clinical issue needing further exploration.

1.3 Background to the study

This study explored what influences the CDM of RNs when managing constipation in cancer patients. CDM is a complex activity undertaken by RNs when making clinical assessments, and planning and delivering care (Davis & Maisano, 2016; McCullough, McKinlay, Barthow, Moss, & Wise, 2010; Payne, 2015; Prichard, Norton, & Bharucha, 2016). RNs make clinical decisions in their everyday practice, which is crucial to providing high-quality care that influences patient outcomes (Payne, 2015). CDM is the most essential factor affecting the quality of care (Payne, 2015; Stinson, 2017), especially to cancer patients who usually experience multiple symptoms of constipation. Gillespie and Peterson (2009) and Benner (1984) emphasise that the ability to make a sound clinical decision depends on the level of experience and knowledge of an individual RN. The process of CDM usually becomes easier and more manageable as the RN becomes more experienced as a care provider (Benner, 1984; Gillespie & Peterson, 2009) and this influences patient outcomes.

Although accurate statistics relating to the incidence of constipation are unavailable (McMillan et al., 2013; Lentz & McMillan, 2010), it is estimated that 95% of cancer patients will experience constipation for a variety of reasons at some stage during their disease and treatment journey (Clark, Lam, Talley, Phillips, & Currow, 2017; Huang, 2016; Lentz & McMillan, 2010; Woolery et al., 2008). Lentz and McMillan (2010) report that constipation in cancer patients is the third-most frequently encountered symptom after pain and anorexia, while approximately 50% of all opioid-treated patients and more than 41% of cancer patients experience constipation (Fredericks, Hollis, & Stricker, 2010; Lentz & McMillan, 2010; Leppert, 2010). In 2012, New South Wales (NSW) had an estimated population of 7.3 million, with 42,079 new cases of cancer being diagnosed (Cancer Institute NSW, 2016). Furthermore, one in two people will be diagnosed with cancer by the age of 85, with more cancer survivors affecting healthcare system demands (Cancer Institute NSW, 2016). These statistics highlight the prevalence of cancer and the potential number of patients that could experience constipation. This supports the need for this research. Further, there has been no study of RNs' CDM using a descriptive, qualitative design that focuses on constipation in cancer patients.

RNs are in the best position to assess symptoms such as constipation in cancer patients, to exclude underlying and treatable conditions, and to implement evidence-based interventions (Woodward, 2012; Kyle, 2011). RNs are patient advocates for treatment plans in multidisciplinary teams and their initial assessment, therefore, influences patient outcomes (Kyle, 2011). A person-centred standardised assessment of constipation which includes bowel assessment, current medications, history of laxative use, fibre and fluid intake, physical activity, and psychosocial history is recommended (Huang, 2016; Mitchell, 2014b; Wickham, 2016). Consequently, the RN's interpretation of cancer patients' constipation symptoms, and their subsequent actions, reflect how they make clinical decisions associated with patient care. However, their assessment of constipation depends on the RN's experience, knowledge, and skills (Woodward, 2012). This study focuses on what influences RNs' CDM when managing constipation in patients with cancer.

The management of this distressing symptom varies widely (Gardiner & Hilton, 2014: Kyle, 2011; Clark, Urban, & Currow, 2010; Spinzi et al., 2009) and is dependent on variables such as the individual's symptom severity (Spinzi et al., 2009), the assessment strategies used (Wickham, 2016), and the expertise of the person providing the care

(Kyle, 2011). However, the lack of standardised constipation treatment options available (Gardiner & Hilton, 2014; Huang, 2016b) may influence RNs' CDM. Although constipation is a symptom associated with either treatment or the underlying cancer diagnosis itself, identifying and addressing the underlying cause can improve patient outcomes (Andrews & Morgan, 2012; Gardiner & Hilton, 2014). However, studies have shown that cancer patients tend to remain constipated despite increasing fluid and fibre intake, encouraging mobility, and providing dignity and privacy during defaecation (Andrews & Morgan, 2012; Emly & Marriott, 2017; Huang, 2016). The management of constipation, being an essential component of RNs' nursing practice (Bardsley, 2017; Wickham, 2016), requires knowledge of current evidence-based interventions to make sound clinical decisions for effective outcomes (Wickham, 2016).

Uncontrolled symptoms such as constipation in cancer patients affect patients' quality of life (Dhingra et al., 2013). Woolery et al., (2008) and Othman Younes and Tawalbeh (2017) identified constipation as one of the most common symptoms encountered by cancer patients, causing distress and negatively affecting a patient's quality of life. Another distressing trend suggests that constipation management remains the symptom of lowest priority (Kyle, 2011; Ndefo & Erowele, 2011; Stevens, Droney, & Riley, 2008). Furthermore, Woolery et al., (2008) identified that constipation in cancer patients remains overlooked and poorly managed, is associated with abdominal discomfort and distress, and interferes with cancer-related therapies (Hjalte, Berggren, Bergendahl, & Hjortsberg, 2010). The causes of constipation are often misunderstood (Bardsley, 2017; Day, Wills, & Coffey, 2014; Fredericks et al., 2010; Huang, 2016; Nancekivell-Smith, 2010; Shu-Yu et al., 2016). Serious ramifications associated with unresolved constipation can lead to cancer patients developing bowel perforation, secondary to faecal impaction (Lentz & McMillan, 2010).

Caring for cancer patients who are suffering with constipation requires healthcare professionals to have a high level of interpersonal skills as well as a holistic approach to care (Candrilli, Davis, & Iyer; 2010). Consequently, RNs' role in the assessment, prevention, and management of constipation is determined by their proximity and interaction with patients, families, and colleagues (Lentz & McMillan, 2010; McMillan, Tofthagen, Small, Karver, & Craig, 2013; Mitchell, 2014a). Issues such as poor communication skills and lack of knowledge among healthcare professionals contribute to poor symptom control in cancer patients (McMillan et al., 2013).

Understanding what influences the clinical decision-making of RNs managing constipation in cancer patients is significant and there are no international or local studies that have explored what influences RNs' CDM. Understanding what influences RNs' CDM is crucial to new knowledge as it impacts on clinical practice and, consequently, patient outcomes.

1.4 Study purpose

The purpose of this study was to explore how RNs make Clinical Decisions (CDs) when managing constipation in cancer patients.

1.5 Research design

A descriptive qualitative design framed this study. This design was the most appropriate as it provided the researcher with the opportunity to gain a deeper understanding of a previously unexplored aspect of what influences RNs' CDM when managing constipation in cancer patients. Descriptive qualitative research is useful for exploring little-understood phenomena, and when a new area of interest is being investigated (McCusker & Gunaydin, 2015). Boswell and Cannon (2014) support the use of a descriptive qualitative design when little is known about a topic. In order to enhance the understanding of human health, a qualitative research approach combines the science and art of nursing (LoBiondo-Wood & Haber, 2010). In the qualitative approach, the researcher strives to interpret meanings rather than explain them and attempts to understand rather than to solve a problem (Polit & Beck, 2014). Descriptive qualitative research is typically more flexible because it allows greater interaction between the researcher and the study participant (McCusker & Gunaydin, 2015), which suited the current study.

1.6 Theoretical framework

Benner's From Novice to Expert (1984) theoretical framework was important to help answer the research question and inform the study. This theoretical framework provided the researcher a structure upon which to determine how to perceive, make sense of, and interpret data regarding what influences RNs' clinical decision-making.

Benner's theory is one of the most recognised frameworks in nursing practice (Davis & Maisano, 2016; Payne, 2015; Quick, 2016; Smith, 2016). The framework focused on clinical decision-making processes as the RN progresses along their professional journey. Benner (1984) postulated that, for an individual to gain nursing skills, it takes time and usually a person goes through five stages of proficiency, based on the ability to assess the patients' needs and think critically in clinical situations. There are five stages in Benner's framework:

- Stage 1: Novice (6 months' clinical experience)
- Stage 2: Advanced beginner (6 months to 1 year's clinical experience)

- Stage 3: Competent (1 to 3 years' clinical experience)
- Stage 4: Proficient (4 to 5 years' clinical experience)
- Stage 5: Expert (more than 5 years' clinical experience)

Benner's theory (1984) provides a meaningful framework that identifies the skill development of RNs in clinical nursing practice. The five stages of Benner's From Novice to Expert (1984) framework of clinical decision-making, illustrated in this study, will be detailed in the Methodology chapter.

1.7 Significance of the study

In the absence of any international or Australian studies to identify what influences RNs' CDM when managing constipation in cancer patients, it was crucial to explore the experiences of RNs. This study will contribute to advancing the body of knowledge related to symptom management in cancer patients. The findings generated from this study have implications for RNs' clinical practices and education to positively effect patient outcomes.

1.8 Definition of terms

The following section presents definitions of the key terms used in this study:

Clinical decision-making involves a fundamental process of taking steps or actions towards solving problems relevant to clinical practice. RNs frequently make decisions while planning and delivering care, using knowledge and skills gained through education and experience (Gillespi & Peterson, 2009).

Constipation is a stressful symptom among patients, with multiple definitions in the literature. For the purposes of this study, constipation has been defined as an individual's changes in normal bowel habits, where difficulties in defaecation occur with hard stools

(Kyle, 2010; Lentz & McMillan, 2010). The number of days an individual does not open their bowels varies and is not a reliable indicator of constipation (Woolery, et al., 2008).

New graduate registered nurse is a newly qualified RN, who has graduated from an Australian tertiary institution within a 12-month period following completion of the prescribed educational preparation and has demonstrated competence for practice. (Nurses and Midwifery Board of Australia (NMBA), 2016),

Registered Nurse (RN) is a person who has completed prescribed educational preparation, has demonstrated competence for practice, and is registered to practice under the Australian Health Practitioner Regulation Agency (AHPRA, 2016). An RN's practice is person centred and evidence based with preventative, curative, formative, supportive, restoration and palliative elements (NMBA, 2016). An RN is expected to work in a therapeutic and professional relationship with health individuals, families and communities (NMBA, 2016).

Opioid-induced constipation is constipation encountered by patients who are taking opioids for cancer-related pain, acute traumatic or postoperative pain, severe and/or chronic (Emmanuel, Johnson, McSkimming, & Dickerson, 2017; Prichard & Bharucha, 2015). Constipation is caused by opioids which disrupt the normal forward propulsive contraction of the gut leading to increased gut transit time. The stool remains longer in the gut with more water being reabsorbed causing dry hard stool (Droney et al., 2008).

Quality of life is defined as those aspects that make life worth living, such as health and the physical, social, and psychological wellbeing of an individual (Nayak, George & Vidyasagar 2017). The quality of life is multidimensional and subjective (Ciećko, Bandurska, Zarzeczna-Baran, & Siemińska, 2017) only described and measured in individual terms and it defies quantification (Osoba, 2011; Parse, 2016). In cancer patients, there are several factors that can affect quality of life, including the amount of symptom distress caused by constipation (Dhingra et al., 2013).

1.9 Organisation of the thesis

The thesis is organised into six chapters:

Chapter 1 introduces the study and provides an overview of the thesis, including the study background, research question, significance of the study, and definitions of the key terms used.

Chapter 2 presents a review of the literature related to the research question and the study undertaken. The literature review includes the appraisal of clinical decision-making relating to managing constipation in cancer patients.

Chapter 3 presents the methodological approach for this study. This chapter discusses the research design, theoretical framework, recruitment, data collection, and data analysis. Finally, the chapter details the ethical considerations underpinning the conduct of the study.

Chapter 4 provides a comprehensive account on the study findings, generated from the analysis of the study data regarding what influences RNs' clinical decisions when managing constipation in cancer patients.

Chapter 5 presents a discussion on the major findings that emerged from this study, regarding what influences RNs' clinical decisions when managing constipation in cancer patients.

Chapter 6 presents the implications for education and practice, together with recommendations for further studies. Finally, the chapter presents the limitations of the study and overall thesis conclusions.

1.10 Summary

This chapter presented an overview of the study which includes the introduction of the study, researcher's position, study background and its purpose. Further, this chapter presents the research design, the theoretical framework and the significance of the study. Important terms used in this thesis are defined. Finally, organisation of the thesis is presented. The following chapter, **Chapter 2.** addresses the literature related to the research question and the study. The literature review also explores CDM theoretical frameworks reviewed to inform this study.

CHAPTER 2: Literature Review

2.1 Introduction

This chapter explores the literature to determine the current state of knowledge regarding what influences the clinical decision-making (CDM) of RNs when they manage cancer patients with constipation. RNs play a crucial role in managing symptoms of cancer patients, from the time of a cancer diagnosis to end-of-life. This review discusses the challenges associated with constipation management and identifies factors that contribute to clinical decision-making and how it impacts a cancer patient's quality of life on. It focuses on the CDM approaches used by RNs in clinical practice and the theoretical framework applied to this study. No local or international studies were located that address the influences on RNs when making clinical decisions to manage constipation in cancer patients, hence the importance of undertaking this study.

2.2 Search strategy

The aim of the search strategy was to find both published and unpublished studies in relation to what influences RNs' CDM when managing constipation in cancer patients. The electronic databases searched included the Cumulative Index to Nursing and Allied Health Literature (CINAHL), MEDLINE, Ovid, PubMed, Scopus, Cochrane Database of Systematic Reviews, and Google Scholar using Medical Subject Headings (MeSH headings). The following key words were used, either individually or in combination when conducting the searches: *constipation, clinical decision-making, cancer patient, registered nurse, nursing diagnosis*, and *quality of life*. Manual searches of key references cited in the located articles supplemented the electronic searches. The results retrieved from the databases were cross-referenced to exclude duplication and the abstracts were read to eliminate any irrelevant articles. Further clarity was sought from reading the full text where content of the abstracts was ambiguous or unclear. Additional searches were conducted in the CareSearch database and textbooks. None of the articles retrieved from the above sources were relevant. The years of publication applied to the literature search was from 2000 to 2017 inclusive, in the hope of widening the search sufficiently to capture any relevant articles.

2.3 Clinical decision-making

2.3.1 Defining clinical decision making

A crucial component of nursing practice is clinical decision-making (CDM), which usually involves a process of individual healthcare professionals making decisions about patient care (Ellis, 2017; Johnsen, Slettebø, & Fossum, 2016). These healthcare professionals make decisions in dynamic clinical contexts, using diverse skills and knowledge that are evidence based (Ellis, 2017) and play an important role in the quality of care given to patients (Stinson, 2017). The major objective of CDM in clinical practice is to provide the highest quality patient care (Davis & Maisano, 2016; Stinson, 2017; Voldbjerg, Grønkjær, Wiechula, & Sørensen, 2017). Consequently, inappropriate clinical decisions made by these RNs can lead to adverse events, which may have a negative impact on a patient's quality of life. Considering that clinical decisions can have such high consequences, it is imperative to identify and understand what CDM entails in nursing practice in relation to constipation management in cancer patients. Stinson (2017) agrees that understanding the what influences the CDM process has the potential to increase the quality of care given to patients.

The process of CDM interpretation has included terminologies such as diagnostic reasoning (or therapeutic or clinical judgement), ethical judgement, clinical reasoning, clinical problem-solving, and clinical decision-making (Smith, 2016; Johnsen et al., 2016; Davis & Maisano, 2016; Ellis, 2017; Cader, Campbell, & Watson, 2005). The process of diagnostic reasoning, or therapeutic or clinical judgement, refers to recognising that problems exist and selecting the most appropriate treatment approach (Ellis, 2017; Melin-Johansson, Palmqvist, & Rönnberg, 2017). At times, a clinical judgement may or may not be based on relevant clinical features, or on a systematic reasoning approach (Ellis, 2017; Jefford, Fahy, & Sundin, 2011). Clinical reasoning is a form of hypothetico-deductive approach, which tries to ensure that decisions are based on critical thinking rather than simple pattern recognition (Johnsen et al., 2016; Melin-Johansson et al., 2017). Standing (2008) states that clinical problem-solving and clinical decision-making are the expressions that encompass all aspects of the process of nursing which is fundamental to healthcare practice.

In this study, CDM is defined as the process of choosing alternatives in providing patient care, which may involve clinical reasoning, intuitive awareness, and environmental factors that influence the clinical situation (Quick, 2016), and what the RN assumes and actually implements (Lentz & McMillan, 2010; Mitchell, 2014). According to Stinson (2017), CDM involves incorporating information from various sources to make sound decisions regarding patient care plans. In CDM, the nurse is expected to incorporate the phases of the nursing process, which include assessing, diagnosing, planning, implementing, and evaluating (Davis & Maisano, 2016; Voldbjerg et al., 2017). Overall, the major objective of CDM in clinical practice is to provide the highest quality patient care (Davis & Maisano, 2016; Stinson, 2017; Voldbjerg et al., 2017). Gillespie and Peterson (2009) emphasise the importance of CDM, stating that this complicated process can be the difference between life and death for patients. Given the pivotal role of CDM in the practice of RNs, it is imperative to identify and understand factors that positively or negatively influence their decisions. Further, when considering the quality of care needed to alleviate constipation in cancer patients, there are situations when factors influencing CDM may contribute to errors or mistakes by RNs, with potentially adverse outcomes. CDM is a complex activity undertaken by RNs when they make clinical judgements, planning, delivering, and evaluating care that requires knowledge and skills gained through education and experience (Davis & Maisano, 2016; Payne, 2015; Stinson, 2017; Wainwright, Shepard, Harman, & Stephens, 2011; Wu, Yang, Liu, & Ye, 2016). CDM is a major component of the nursing role as it provides a sense on how nurses assign meaning to patients' problems and help identify solutions (Davis & Maisano, 2016; Ellis, 2017). Therefore, it was crucial to undertake this study to explore and gain an understanding of what influences RNs when making decisions to treat constipation in cancer patients.

The literature reviewed has highlighted that the process used by RNs when making clinical decisions or judgements has been referred to by many different expressions. These expressions include terms such as diagnostic reasoning or judgement, clinical reasoning, therapeutic or clinical judgement, clinical problem-solving, and clinical decision-making. These terms are usually used interchangeably when referring to the different features of decision-making that occur within the context of nursing practice. Clinical problem-solving and clinical decision-making are the most commonly used terms; hence, the use of the expression clinical decision-making (CDM) in this study. CDM encompasses critical thinking, which enables the RNs to deeply understand the problem or issue under consideration.

The Nurses and Midwifery Board of Australia NMBA (2016), provides the standard statements relating to the scope of nursing practice, which ensures the quality of care given to patients. According to these standards, all RNs are expected to assess, plan, implement, and evaluate the patients' needs within their care. Consequently, RNs are expected to take critical steps relevant for making clinical decisions in their practice to achieve effective patient-centred care. Therefore, CDM becomes the most essential component factor affecting the quality of care (Payne, 2015; Stinson, 2017) given to cancer patients who are experiencing multiple symptoms, including those of constipation (McMillan, 2013).

2.3.2 Clinical decision making and theoretical framework

The literature reviewed revealed several theoretical frameworks that offer an understanding of CDM in nursing practice, with most of the studies adopting either an analytical or intuitive approach. Four theoretical frameworks were identified as possibly suitable to guide this study: Cognitive Continuum Theory, Hypothetico-Deductive Reasoning, the Situated Clinical Decision-Making Framework, the Nursing Process model and From Novice to Expert theory. These theoretical frameworks will be reviewed hereunder, incorporating both the theoretical and clinical factors identified as influencing CDM.

2.3.3 Cognitive Continuum Theory

Cader, Campbell, and Watson (2005) analysed and evaluated the Cognitive Continuum Theory. This study focuses on judgement and decision-making to examine its relevance to nursing practice. The aim of the study was to show how Cognitive Continuum Theory can contribute towards understanding the CDM processes of nurses and their implementation of evidence-based practice in clinical practice. The theory has been applied to nurses' decision-making processes and is a useful mechanism for understanding how nurses make their clinical decisions (Melin-Johansson et al., 2017; Standing, 2008). Cader et al., (2005) and Parker-Tomlin, Boschen, Morrissey, and Glendon (2017) suggested Cognitive Continuum Theory to be incorporated in nurse education programs to increase the knowledge base of nurses and to ensure competency in their level of clinical decision-making. Standing (2008) revised Cognitive Continuum Theory and recommended its use as an educational tool to facilitate theory development and to enhance the understanding of clinical judgement and decision-making in nursing practice. Standing (2008) adds that the theory can be employed as a learning tool and practice guide to integrate a broad range of evidence-based and reflective practices, and to enhance understanding of the theory and practice of clinical judgement and decision-making, both in educational and practice settings. Conversely, as Tiffen (2014) states, the theory recognises that the decision-making process is fluid rather than linear and it can be applied to several different tasks that nurses may encounter. Thus, the theory is complex. It may not be useful for teaching nurses how to make clinical decisions because, if the theory is not applied properly, inaccurate clinical decisions might result (Tiffen, 2014). Although Cognitive Continuum Theory has the potential to provide an understanding of nurses' CDM in clinical practice, for this study, it does not offer clarity on how clinical decisions are made. Further research is still needed before extending the use of this theoretical framework to a wider range of healthcare team processes (Parker-Tomlin et al., 2017).

2.3.4 Hypothetico-Deductive Reasoning

Hypothetico-Deductive Reasoning is another approach to CDM, with steps involving cue recognition or cue acquisition, hypothesis generation, cue interpretation, and hypothesis evaluation (Evans, 2005; Jefford et al., 2011). Clinical reasoning is a principal example of hypothetico-deductive reasoning that involves these steps (Jefford et al., 2011). The steps usually provide a systematic approach to making decisions, regarding diagnosis and treatment choices. Cue recognition or cue acquisition occurs during the initial encounter, when the nurse is collecting clinical information and is considering the hypothesis. Shortly after the initial encounter, the nurse develops a hypothesis from the generated information, using their knowledge to understand the meaning of the cue clusters (Jefford et al., 2011). The hypothesis generation and cue interpretation steps of hypothetico-deductive reasoning are crucial when dealing with complex situations (Jefford et al., 2011), such as a cluster of constipation symptoms encountered by cancer patients.

Although the hypothetico-deductive reasoning model is employed widely in clinical decision-making within nursing clinical practice (Jefford et al., 2011), it has its own drawbacks; according to Gladstone (2012), only experienced nurses can use it effectively. Jefford et al., (2011) suggests that novice nurses, with little or no practical experience to draw upon when hypothesising, would have trouble using the theory. Therefore, the effectiveness of this approach is dependent on the experience and ability of the nurse to interpret a patient's signs and symptoms. To be used effectively, hypothetico-deductive reasoning requires knowledge and experience (Jefford et al., 2011). The more knowledge and experience attained, the more complex the hypotheses are likely to be (Standing, 2008). If hypothesis generation is compromised in any way an inaccurate conclusion may be reached. Importantly, the hypothetico-deductive reasoning model depends on the accuracy of the hypothesis generated; if its application is inaccurate, it can lead to a misdiagnosis (Gladstone, 2012). Interestingly, there is no discussion in the literature about the amount of experience and the type of knowledge that facilitates hypothetico-deductive reasoning. Consequently, nurses can develop personal and unique knowledge based on experience which, in turn, influences their clinical decision-making (Jefford et al., 2011).

Although the hypothetico-deductive reasoning model has been widely used in clinical practice, it is not applicable to this current study since it is only effective when used by experienced nurses. Novice nurses with no previous practical experience, will have nothing to draw upon when making decisions. The model is dependent on the individual's experience and their ability to recognise or interpret a patient's constipation symptoms (Gladstone, 2012; Jefford et al., 2011). For example, if the RN makes decisions based on an irrelevant symptom, an inaccurate conclusion may be reached, impacting on patient outcomes. In hypothetico-deductive reasoning, clinical experience and knowledge level is more important (Melin-Johansson et al., 2017). Overall, the theory fails to provide or identify what influences the CDM approaches of RNs with no experience.

2.3.5 The Situated Clinical Decision-Making Framework

The Situated Clinical Decision-Making Framework is an approach designed for educators to help novice nurses to develop clinical decision-making skills (Gillespie & Peterson, 2009; Gillespie, 2010). This framework is designed for nurses with limited professional knowledge and experience, and it frequently focuses on single tasks or problems. Novice nurses gain experience in the clinical setting as they move from relying on theoretical principles to applying their experience and viewing clinical situations as a whole (Benner, 1984; Gillespie & Peterson, 2009; Stinson, 2017).

The Situated Clinical Decision-Making Framework aims to help novice nurses make effective clinical decisions during clinical practice (Gillespie, 2010). Novice nurses' CDM tends to be linear, due to their limited knowledge and clinical experience, and they usually focus on single tasks or problems (Benner, 1984). Consequently, novice nurses, with limited clinical experience in their field of practice, tend to perceive CDM as adhering to organisation protocols or guidelines and responding to patients' complaints (Benner, 1984). They focus their CDM on doing, rather than on thinking and reflecting (Benner, 1984: Gillespie, 2010). Usually, when the novice nurse is confronted with complex or unfamiliar clinical situations, they respond by drawing on their theoretical knowledge and psychomotor skills, rather than making decisions which address the complexity of the situation at hand (Benner, 1984: Gillespie, 2010). Furthermore, novice nurses tend to rely excessively on the advice of more experienced nurses, and avoid situations that require them to make decisions, because they lack clinical experience (Benner, 1984).

The Situated Clinical Decision-Making Framework may help novice nurses reflect on their clinical decisions made in clinical practice and help develop expert nurses' skills. Predominantly, the framework fosters the development of novice nurses' knowledge, skills, and confidence, and can be used to guide CDM processes and outcomes influenced by the context of clinical practice. This framework has been adopted when educating undergraduates and RNs in classroom situations or clinical learning environments, and in distance education (Gillespie, 2010). Furthermore, the framework guides nurses on their existing CDM processes by assisting them to anticipate similarities and differences in various contexts of their practice and by offering CDM directions. However, even though the framework seems useful, there is a need to empirically test and explore its efficacy in clinical outcomes (Gillespie, 2010). Therefore, in this study, the Situated Clinical Decision-Making Framework is considered to be less useful, since the theory only provides a tool for clinical educators to analyse nursing students' and novice nurses' CDM patterns and to help them select appropriate strategies to support its development.

Most of the CDM theories identified were not applicable to this study because of their attributes and uses in different CDM approaches. However, Benner's theoretical framework, From Novice to Expert (1984), which is detailed in the Methodology chapter, was the most fitting to inform this exploratory qualitative study. Benner's theory is one of the most recognised frameworks within nursing practice (Davis & Maisano, 2016; Payne, 2015; Quick, 2016; Smith, 2016). Benner (1984) postulated that the time it takes for an individual to gain nursing skills typically proceeds through five stages of proficiency, based on the ability to assess patients' needs and to critically think in clinical situations.

A qualitative study conducted by Sarsfield (2014) on the different problem solving approaches of novices and experts using Benner's theory (1984) showed that expert nurses solved problems by incorporating their experience of similar situations. In the same study, with a sample that consisted of six RN novices and six RN experts, the novice nurses reflected linear thinking by addressing issues at a superficial level compared to experts, whose approach was specific to the problem at hand and linked to the community's needs. In support, the expert nurses, when faced with complex situations, can make clinical decisions based on information obtained through their experience and skill acquisition to resolve the problem (Benner, 1984). Gillespie and Peterson (2009) and Quick (2016) also state that the ability to make a sound clinical decision depends on an individual nurse's level of experience and knowledge. CDM becomes easier as the RN becomes more experienced as a care provider (Gillespie & Peterson, 2009; Johnsen et al., 2016). The expert nurse develops an intuitive grasp of clinical situations based on deep understanding, and no longer relies on rules or guidelines (Benner, 1984; Gillespie & Peterson, 2009).

In this study, Benner's theory offers a framework that focuses on understanding the phases in a nurse's development of CDM and how different levels of experience influence clinical practice. The levels of novice, advanced beginner, competent, proficient, and expert, as stated in Benner's theory, are applicable to this study when considering the professional experience levels of the study participants.

2.3.6 The nursing process

Clinical decision-making is a crucial aspect of the nursing role, as it helps to describe how nurses formulate patient problems and identify nursing activities that will minimise problems (Walton, 2016). To gain more understanding on how to make decisions, the next section discusses the nursing process selected to inform this study, and which is also central to many definitions that describe the general activities of nursing practice. The more experienced the nurse, the greater their understanding of the nursing process. Consequently, the amount of experience an individual nurse has will influence their clinical decision-making, which is likely to affect the quality of care given to patients (Melin-Johansson et al., 2017). The nursing process, based on a theory developed in the 1950s, has five critical phases that RNs incorporate into their clinical practice when making clinical decisions (Chabeli, 2007). The nursing process is considered as a systematic manner of determining a patient's health status by identifying the problems, then initiating and implementing care plans to solve the identified problems and, finally, evaluating the effectiveness of the care plan (Johny, Moly, Sreedevi, & Nair, 2017).

The nursing process phases interlink and overlap, providing an essential framework for nurses' problem-solving to deliver effective patient focused care plans (Chabeli, 2007). The assessment phase, based on standards of practice, is the most critical element of the nursing process that influences clinical decision-making in nursing practice (Chabeli, 2007; Huang, 2016). The RN's assessment involves asking pertinent questions, systematic and continuous collection of data, and analysing that data (Chabeli, 2007). In the context of this study, questions would be asked regarding constipation to formulate a nursing diagnosis and to inform the CDM process: to initiate, implement, and evaluate holistic nursing care plans.

The nursing assessment leads to a nursing diagnosis phase, where the RN makes an educated decision about a patient's potential or actual problem (Melin-Johansson et al., 2017). For example, the RN formulates a nursing diagnosis based on the patient's constipation symptoms. The RN then draws conclusions, regarding the patient's health and related circumstances, to formulate appropriate nursing interventions to alleviate constipation (Bardsley, 2017). Therefore, the diagnosis phase is an important step to determine the course of constipation treatment.

Following the initial assessment and nursing diagnosis, the RN plans and decides on the strategies for providing care, setting goals that are potentially achievable. In this phase, the RN is required to be able to use CDM skills when assessing the effectiveness and appropriateness of the planned interventions (Gbobbo, 2008). The care plan should have a supporting evidence base (Huang, 2016) and be accessible to other members of the multidisciplinary team for continuity of care.

The implementation phase follows the planned care phase, where a nurse employs the interventions determined in the care plan (Chabeli, 2007; Walton, 2016). Implementation involves monitoring a patient for signs of improvement, performing necessary treatment tasks, and educating the patient about further management (Walton, 2016). The timeframe for implementation varies, depending on individual patient outcomes.

Implementation is followed by evaluation, which is the final phase of the nursing process

(Gbobbo, 2008). The interventions that were implemented are evaluated for their effectiveness in achieving the expected patient outcomes, and this determines the necessity of revisiting any of the earlier stages (Walton, 2016; Gbobbo, 2008). All phases are constantly evaluated and redefined throughout the nursing process. The evaluative phase thus turns back into the assessment stage, restarting the continuous cycle of the nursing process (Gbobbo, 2008).

The utilisation of the nursing process and availability of clear guidelines in clinical practice can improve the quality of nursing care and promote better patient outcomes (Johny et al., 2017). However, even though the nursing process is a crucial factor that influences CDM, it does not elaborate on how clinical decisions are made. In agreement, Gillespie and Peterson (2009) and Ellis (2017) highlight that the ability to make sound clinical decisions depends on the level of experience and knowledge of an individual nurse.

RNs provide services to the varying needs of cancer patients who are at different points of time in the cancer continuum. RNs have varying levels of competence, from novice to expert, which are characterised by increasing degrees of autonomy in CDM and intervention (Benner, 1984). RNs frequently encounter patients affected with cancer and there is an expectation that they make informed clinical decisions to optimise patient outcomes (Wu, 2016). It is apparent that clinical experience is crucial for CDM and the nature of experience shapes how CDM skills are developed. Understanding the what influences RNs' clinical decision-making may increase the quality of care given to cancer patients with constipation, hence the importance of conducting this study in an area about which little is currently known.

2.4 Definition and aetiology of constipation

Constipation is a highly subjective and distressing symptom, commonly experienced by cancer patients (Prichard & Bharucha, 2015; Prichard, Norton, & Bharucha, 2016). There is no clear, universally accepted definition on what constitutes constipation (Fredericks, Hollis, & Stricker, 2010; Woolery et al., 2008). Nancekivell-Smith (2010) states that the causes of constipation are often misunderstood. Constipation can be influenced by multiple factors such as physical, psychological, emotional, and environmental causes (Mitchell, 2014; Nancekivell-Smith, 2010; Kyle, 2011). In a cancer patient, constipation may be a complication of systemic disease, a symptom of an organic condition, or adverse effects from cancer treatment (LoCasale, 2015). For example, cancer patients may develop constipation following changes in their metabolic state due to electrolyte abnormalities caused by vomiting or poor oral intake, leading to dehydration. Constipation is characterised by irregular bowel habits. It is a distressing symptom and, to some extent, subjectively defined by the person (Wickham, 2016; LoCasale, 2015). Patients and health professionals seem to differ when defining constipation, and this is recognised as one of the challenges impacting on achieving effective constipation treatment plans in cancer patients (Kyle, 2011; Lentz & McMillan, 2010; Dal Molin, 2012). Patients associate constipation with a change in bowel habits, whereas health professionals tend to focus on the stool frequency and appearance (Brown, Henderson, & McDonagh, 2009; Kyle, 2011). Kaur and Poulter (2008) believe that an individual's cultural background and social beliefs might also influence an individual's interpretation of constipation.

The classification of constipation aetiology includes primary and secondary (Bardsley, 2017; Day, 2014). Primary constipation constitutes an inadequate oral intake including fibre and fluids, reduction in physical activity, and a lack of privacy during defaecation (Andrews, 2012; Stevens, Droney, & Riley, 2008). Secondary constipation results from disease progression, side effects of treatment, or pre-existing conditions (Gardiner & Hilton, 2014; Stevens et al, 2008; (McMillan, Tofthagen, Small, Karver, & Craig, 2013). All of these influencing factors are common in cancer patients.

Traditionally, the symptoms of constipation include excessive straining, a feeling of incomplete evacuation, gas distension, failed or prolonged attempts to defecate, straining, hard stools, stool inconsistency, and the number of stools passed per week (Gardiner & Hilton, 2014; Goodman, Low, & Wilkinson, 2005; Stevens, Droney, & Riley, 2008). Consequently, the prevention and management of constipation should be tailored to the individual and driven by the patient's experience (Kaur, 2008; Clark, 2014) with RNs adjusting their assessment and management plans accordingly (Kyle, 2011).

Constipation in cancer patients is a multi-factorial and subjective distressing symptom (Brown, Henderson, & McDonagh, 2009; Fredericks et al., 2010; Wickham, 2016) which challenges RNs' CDM. Patients with a cancer diagnosis commonly experience "symptom clusters" that include constipation (Huang, 2016; Woolery, 2008). Some other factors contributing to constipation in cancer patients include anti-emetics, chemotherapy agents, surgery, radiotherapy, hypercalcaemia, anti-depressants, diuretics, dehydration, nutritional deficits, spinal cord compression, concurrent disease, immobility, and low oral intake (Huang, 2016; Nancekivell-Smith, 2010). The disruption of the normal peristalsis leads to delayed or incomplete evacuation, abdominal distension, and bloating (Stevens et al., 2008). Most patients with cancer experience acute-to-chronic pain as the disease progresses (Lohr, 2008) and opioids are the drugs commonly used to treat moderate to severe pain in this patient group (Leppert, 2010; Lipman, Karver, & Austin, 2011). Huang (2016) states that approximately 41% of cancer patients, and more than 50% treated with opioids, experience constipation. Cancer-related treatments, specifically opioids, are the major causes of constipation in cancer patients as they reduce propulsive peristaltic action due to pyloric sphincter constriction (Kyle, 2009; Robinson et al., 2000; Wickham, 2016). Unfortunately, these unwanted symptoms interfere with planned pain management. Understanding the causes of constipation in cancer patients may help RNs in defining, assessing, and mapping the management of this distressing symptom.

2.4.1 Constipation complications in cancer patients

Patients with constipation may develop complications such as faecal impaction, bowel obstruction, bowel perforation, faecal incontinence, and anal pruritus from prolonged straining, abdominal pain or abdominal distension (Oestreicher, 2008; Ndefo, 2011; Lentz, 2010; McMillan, 2013). These complications can have a detrimental impact on a patient's quality of life (Shu-Yu et al., 2016; Wickham, 2016) and may present a challenge to RNs when making their clinical decisions. Complications such as bowel obstruction, bowel perforation, and acute spinal cord compression may warrant urgent attention (Huang, 2016). Bowel obstruction usually involves the small or large intestines, with the patient becoming acutely sick with symptoms such as nausea, vomiting, abdominal pain and cramping, abdominal distention, bloating, and inability to pass flatus. If the bowel obstruction remains untreated, it can cause tissue death and peritonitis (Othman Younes & Tawalbeh, 2017). Consequently, in a patient with bowel obstruction, aggressive treatment is crucial and may include hydration, nasogastric tube placement, suctioning, bowel decompression, anti-emetics, analgesics, or surgical interventions (Emly & Marriott, 2017).

Bowel perforation is another complication, which may cause ischaemia and necrosis into the bowel wall due to faecal mass (Camilleri, 2011; Huang, 2016). The use of enemas to treat constipation is contraindicated because they can perforate the bowel (Shu-Yu et al., 2016). Patients with bowel perforation experience severe abdominal pain and the condition usually deteriorates rapidly with signs of septic shock (Huang, 2016). Consequently, a patient with bowel perforation needs emergency surgery, usually followed by fluid resuscitation, long-term antibiotics, and prolonged hospital stay (Day, Wills, & Coffey, 2014; Erichsén, Milberg, Jaarsma, & Friedrichsen, 2015; Shu-Yu et al., 2016).

Acute spinal cord compression is a condition that can complicate constipation in cancer patients (Nancekivell-Smith, 2010). Usually, patients complain of weakness in the lower extremities, difficulty walking, back pain, bladder dysfunction, and constipation (Huang, 2016; Nancekivell-Smith, 2010). Spinal cord compression is an oncologic emergency in cancer patients, who present with constipation and other neurologic symptoms (Nancekivell-Smith, 2010).

Faecal impaction is a common constipation complication described as a large, hard dry stool that develops in the rectum (Othman Younes & Tawalbeh, 2017). Patients usually present with an absence of bowel movement and diarrhoea resulting from overflow incontinence.

If inappropriately addressed, constipation complications may impact cancer patients' quality of life. These complications may lead to embarrassment, increase cost to the patient and the health care system due to invasive procedures or hospitalisation. It is, therefore, important for RNs to be aware of these complications when making clinical decisions to promote better patient outcomes.

2.4.2 Cancer and constipation incidence

Although accurate statistics relating to the incidence of constipation are unavailable (McMillan et al, 2013; Lentz & McMillan, 2010; Woolery et al., 2008), it is estimated that 95% of cancer patients will experience constipation for a variety of reasons at some stage of their disease and treatment journey (Huang, 2016b; Lentz & McMillan, 2010; Woolery et al., 2008). Lentz and McMillan (2010) and Shu-Yu et al., (2016) report that constipation in cancer patients is the third-most frequently encountered symptom, after pain and anorexia.

Approximately 50% of all opioid-treated patients, and more than 41% of cancer patients, experience constipation (Fredericks et al., 2010; Lentz & McMillan, 2010; Leppert, 2010). From a population of 7.3 million in NSW, 42,079 new cases of cancer were diagnosed in 2012 (Cancer Institute NSW, 2016). Furthermore, one in two people will have been diagnosed with cancer by the age of 85, with more cancer patients and survivors affecting healthcare system demands (Cancer Institute NSW, 2016).

The literature reviewed revealed that cancer patients are exposed to many factors that contribute to constipation and RNs are in a good position to conduct a comprehensive and holistic assessment that is relevant to cancer nursing practice. It is, therefore, essential for RNs to understand the impact of cancer and its treatment when making clinical decisions to implement evidence-based supportive care to achieve optimal patient outcomes.

2.4.3 Constipation burden on a patient's quality of life

The negative impact of constipation in cancer patients should not be underestimated

(Prichard et al., 2016; Wickham, 2016). Uncontrolled constipation symptoms in cancer patients affect their quality of life (Dhingra et al., 2013). Lentz and McMillan (2010) identified that those patients experiencing constipation not only suffered physically, but also psychologically. Patients reported that they experienced irrational thoughts (Dhingra et al., 2013) and tended to lose meaning in life as the constipation symptoms progress (Friedrichsen & Erichsén, 2004). Irrational thoughts included the supposition that constipation indicated deteriorating health, belief that nutrition could improve constipation, and catastrophic beliefs (Dhingra et al., 2013). Patients rate the psychological distress associated with constipation as being worse than that associated with pain (Nancekivell-Smith, 2010). According to Kyle (2009), constipation in cancer patients can be exacerbated by emotional factors or complications from underlying pathophysiology. The substantial psychological and social consequences linked to constipation have the potential to reduce an individual's quality of life (LoCasale, Datto, Margolis, Tack, & Coyne, 2015).

Cancer patients with constipation experience anxiety and distress caused by passing hard faeces infrequently (Camilleri, 2011; Lentz, 2010; Wickham, 2016). Distress and anxiety in this patient group can also be associated with abdominal and rectal pain, abdominal distension, nausea and vomiting, anorexia, urinary retention, and confusion related to constipation (Camilleri, 2011; Lentz, 2010; Wickham, 2016). Patients feel helpless and frustrated while dealing with this symptom, and often experience negative attitudes from healthcare providers (Dhingra et al., 2013; Friedrichsen & Erichsen, 2004). A third of patients taking medications for cancer-related treatments, such as opioids for pain, miss or discontinue their therapy to alleviate adverse side effects including constipation (Berde & Nurko, 2008; Diego, Atayee, Helmons, Hsiao, & Von Gunten, 2011). This can lead to uncontrolled management of pain symptoms while trying to avoid constipation, which significantly affects a patient's quality of life (Prichard, 2016). This, in turn, could influence nursing practice due to the physical effects of the illness, associated treatment effects, and related psychological consequences.

All the factors discussed above can significantly increase the physical and psychological distress of patients, impacting on their quality of life. These factors may also have a wider impact, such as necessitating hospitalisation, lengthening period of stay, and increasing associated healthcare costs. Significantly, constipation intensity and its associated burden in cancer patients needs a holistic approach to achieve optimal symptom management. RNs' understanding of the varied burdens that result from constipation in this patient group may impact on how they make their clinical decisions to manage this distressing symptom. Therefore, RNs need to adopt a holistic comprehensive assessment approach to help understand the constipation symptoms and identify appropriate interventions that promote better patient outcomes.

2.5 Assessment of constipation in cancer patients

Assessment is important to improve the management of constipation in cancer patients (Bardsley, 2017; Lentz, 2010). The initial and most important evaluation of a cancer patient with constipation should involve a thorough history and physical examination (Gonzalez & Halm, 2016; Huang, 2016). The history should focus on defining the nature and duration of the constipation, identifying the causes of constipation, determining the onset of constipation, and exacerbating factors (Gonzalez, 2016). A holistic, person-centred assessment of constipation is recommended, which includes: bowel assessment, current medications, history of laxative use, fibre and fluid intake, physical activity, and psychosocial history (Day et al., 2014; Clark & Currow, 2014).

The assessment of constipation in cancer patients should focus on excluding underlying and treatable conditions and implementing evidence-based interventions (Clark & Currow, 2014; Kyle, 2011). Consequently, subsequent action is determined by the RN's interpretation of a cancer patient's symptoms and it is important to understand how RNs make clinical decisions in patient care. RNs are a key resource as the patient advocate for treatment plans in a multidisciplinary team and their initial assessment influences patient outcomes (Kyle, 2011). Nonetheless, successful assessments of constipation can depend on the RN's experience, knowledge, and skills in making clinical decisions, which influence the quality of patient care provided to this patient group.

Successful constipation assessment may also depend on the availability of assessment tools (Day et al., 2014). According to Woolery et al., (2008) and Day, Wills, and Coffey (2014), the Rome III criteria tool is a commonly used assessment tool that predicts the risk of constipation. This tool outlines that two or more of the following symptoms must be present, for at least three of the previous six months, to establish a diagnosis. These symptoms include:

- Straining in at least 25% of defaecations
- Lumpy or hard stools in at least 25% of defaecations
- Sensation of anorectal obstruction or blockage in at least 25% of defaecations
- Sensation of incomplete evacuation in at least 25% of defaecations
- Manual evacuation of stool facilitated
- Fewer than 3 defaecations per week

However, Andrews and Morgan (2013) identify the Rome III criteria to be useful for functional constipation only and not beneficial for its long-term management. In addition, Gonzalez (2016) emphasised the point that the three-month period used in the Rome III criteria to assess constipation is not applicable to the cancer patient population, who may acutely develop constipation. Furthermore, relying on stool form or consistency when assessing constipation in cancer patients can be misleading and inadequate (Cheng, Kwok, Bian, & Tse, 2013; Woodward, 2012). In support, Bardsley (2017) states that diagnosing constipation using bowel movements per day can be misleading, as many people have fewer or more movements without having symptoms such as straining, bloating, pain, or discomfort. However, further assessment is needed if a patient has not opened bowels for three days and has pain, hard stools, or difficulty on defaecation (Bardsley, 2017; Wickham, 2016). Importantly, consideration should be given in clinical assessment to including descriptions of constipation, such as incomplete emptying, inadequate pushing force, and difficult defaecation (Erichsén, Milberg, Jaarsma, & Friedrichsen, 2016).

Furthermore, the literature shows that the Rome IV criteria constipation assessment tool, a revised version of the Rome III criteria (Emly & Marriott, 2017; Mearin et al., 2016), together with Bistrol stool form type may be accepted (Day, 2014), but these are rarely used in clinical practice because not all patients who need treatment fit the criteria (Andrews & Morgan 2013). The Rome IV criteria is more comprehensive than the previous Rome III criteria, which was only used to diagnose functional bowel disorders (FBDs) (Emly & Marriott, 2017; Mearin et al., 2016). The Rome III criteria was more relevant in diagnosing functional constipation, irritable bowel syndrome, functional abdominal bloating or distention, functional diarrhoea, and unspecified bowel disorders. The Rome IV criteria now has included opioid-induced constipation as the sixth category, which is distinct from FBDs because of its specific aetiology and similar symptoms to functional constipation (Emly & Marriott, 2017; Mearin et al., 2016). However, the Rome IV criteria does not include other causes of constipation in cancer patients and, if used as a tool, may lead to misdiagnosis or mismanagement.

Studies highlight that, regardless of constipation prevalence in cancer patients, there remains limited evidence available to assist nursing professionals in carrying out an appropriate clinical assessment to inform constipation treatment choices (Dhingra et al., 2013; Mitchell, 2014; Nancekivell-Smith, 2010). Furthermore, some studies emphasise that constipation assessment is not given the same priority in clinical practice as pain and other symptoms encountered by cancer patients (Stevens, 2008; Dal Molin, 2012). Consequently, the failure of properly assessing or recognising constipation as a significant and distressing symptom experienced by cancer patients may lead to its poor management, hence negatively affecting a patient's quality of life (Mitchell, 2014; Richmond & Wright, 2005).

Therefore, for the effective management of constipation and the avoidance of unwanted complications, RNs need to use constipation assessment tools and bowel monitoring techniques informed by evidence for optimal patient outcomes (Nancekivell-Smith, 2010; Woolery, 2008; Huang, 2016). It is important for RNs, when making clinical decisions, to understand the elements of constipation assessment in cancer patients when they have been prescribed strong opioids.

2.6 RNs' roles and responsibilities: constipation management

The role of RNs in the assessment, prevention, and management of constipation is determined by their proximity to and interaction with patients, families, and colleagues (Lentz & McMillan, 2010; McMillan et al., 2013; Mitchell, 2014). As such, RNs are professionally accountable for comprehensive assessments, developing patient care plans, implementing care plans, and evaluating patient outcomes (NMBA, 2016). The RNs' role is to incorporate evidence-based interventions (NMBA, 2016) in managing constipation or minimising the chance of it becoming a medical problem for patients diagnosed with cancer (McMillan et al., 2013).

RNs are required to support patients' health and wellbeing and make informed decisions for patients requiring health care (NMBA 2016). As such, NMBA (2016), outlines the requirements for RNs to improve their nursing skills, knowledge, judgements, and competency to promote and achieve safe nursing practice. Furthermore, maintaining knowledge and skills (NMBA, 2016) enables the RNs to understand how constipation affects the quality of life of patients and to make effective evidence-based clinical decisions regarding their care.

The clinical decision-making of RNs is an essential component of alleviating distressing symptoms, such as constipation, experienced by cancer patients (Dal Molin, 2012; Andrews, 2012). It is evident that constipation remains inadequately assessed and ineffectively managed, despite it being observed as a major source of distress that impacts on cancer patients' quality of life (Holroyd, 2015; Woolery, 2008; Kyle; 2011). RNs are in an ideal position to address this distressing symptom, by initiating an assessment of bowel habits when they meet patients in all clinical settings, both acute and community (Holroyd, 2015; Wickham, 2016). Therefore, RNs' CDM becomes of paramount importance to promote better patient outcomes. RNs need awareness of the importance of addressing constipation in cancer patients. Consequently, the failure of nurses to address constipation in cancer patients significantly affects an individual's quality of life (Woolery et al., 2008; Wickham, 2016).

CDM, in the context of constipation in cancer patients, is typically complex as the condition has more than one aetiology (McMillan et al., 2013). Consequently, caring for this group of patients requires RNs to have a high level of knowledge and skill related to patient care (Candrilli, Davis, & Iyer; 2010). Poor communication skills and a lack of knowledge among healthcare professionals may contribute to poor symptom control in cancer patients (Mitchell, 2014; Nancekivell-Smith, 2010). For example, patients with constipation may have some difficulty in expressing their symptoms and may not volunteer them (Prichard, 2016); hence RNs' communication during CDM becomes crucial. Discussing constipation may cause some embarrassment between the patient and health professional during bowel assessments, leading to symptom misinterpretation.

McCullough, McKinlay, Barthow, Moss, and Wise (2010), in their study of 13 RNs in a New Zealand cancer centre, identified that factors influencing RNs' ability to provide effective care included their level of knowledge and experience. Thomas (2008) emphasised that nurses' lack of expertise in understanding the causes of constipation leads to patients receiving more than one form of laxative, often belonging to the same drug group and action. Zanik and Gray (2015) lack of knowledge by nurse in regarding constipation management impacts on patient outcomes. Fredericks et al., (2010) suggest that RNs prioritise addressing constipation and the description of symptoms from the patient's not the health professional's perspective. Although RNs have a significant role in recognising and managing constipation, they lack nursing education to guide them and only respond when a problem is evident (Zanik & Gray, 2015). Nursing education and general understanding of what influences RNs' CDM to assess and manage constipation in this patient group is of paramount importance.

2.7 Constipation management options

Historically, management, recognition and prevention of constipation considered a nursing duty (Zanik & Gray, 2015). As noted earlier, in cancer patients, constipation is not uniformly defined, assessed, or recognised, and is inappropriately managed in most instances (Wickham, 2017). These deficits are more evident in studies showing that current management of constipation in cancer patients varies widely, due to its multifaceted aetiology (Clark, Urban, & Currow, 2010; Holroyd, 2015; Huang, 2016; Spinzi et al., 2009). The primary goal of constipation management is to promote regular bowel movements for the patient through modifying diet and lifestyle to improve quality of life (Gardiner & Hilton, 2014: Kyle, 2011; Clark, Urban, & Currow, 2010; Spinzi et al., 2009). However, constipation mannagement is dependent on the individual's symptom severity (Spinzi et al., 2009) and the assessment and expertise of the person providing the care (Kyle, 2011). Although constipation is a symptom associated with either the treatment of or cancer itself, addressing the underlying cause can improve patient outcomes (Andrews & Morgan, 2012; Gardiner & Hilton, 2014). However, successful constipation management may be influenced by the availability of treatment options (Huang, 2016; Gardiner & Hilton, 2014). Consequently, understanding the treatment options for constipation is an essential component of RNs' nursing practice; they require knowledge of current evidence-based interventions to make sound clinical decisions.

Cancer patients tend to remain constipated despite taking prophylactic laxatives, commenced routinely with treatment-related therapies known to cause constipation (Diego et al., 2011; Stevens et al., 2008). Variation in the choices of constipation treatments may cause RNs to adhere to interventions such as increasing fluid and fibre intake, encouraging mobility, and providing dignity and privacy during defaecation

(Heath, 2009; Woodward, 2012; Andrews, 2012).

2.7.1 Non-pharmacological interventions

Non-pharmacological interventions for constipation aim to achieve bowel motions without causing damage to the smooth muscles of the intestines (McMillan, et al., 2013). First-line interventions in nursing practice include increasing fibre and fluid intake, exercise, privacy during defaecation, and abdominal massage (Cheng, 2013; McClurg, 2011; Bardsley, 2017). However, depending on the disease progression, cancer patients may find it challenging to increase fluid intake or physical activity, due to poor oral intake or fatigue, nausea and vomiting (Othman Younes & Tawalbeh, 2017).

Acupuncture is one of the oldest medical actions in the world, which was established in China around 2000 years ago (Lin et al., 2009). Lin et al., (2009) conducted a randomised controlled trial to evaluate the use of acupuncture to treat functional constipation. Acupuncture's mechanism of action is based on an energy surge in the body response and the regulation of different body functions (Lin et al., 2009) . Lin et al. (2009) highlighted that the body is connected by 365 points located on 14 main channels (or meridians). In the study, needles were inserted in selected points and the treatment session began, leaving needles in for 10 to 15 minutes with the patient lying down. The results provided significant positive results in treating functional constipation. However, regardless of positive results from the clinical trials by Lin et al., (2009), there is not enough evidence supporting the use of acupuncture as a therapy for constipation management in cancer patients. Acupuncture is only satisfactory in short-term constipation treatment and nurses usually they do not perform this procedure (Marples, 2011).

Biofeedback therapy training is another non-pharmacological approach, aimed at improving bowel function by using a combination of exercise and behavioural techniques

(Norton et al., 2017). There are various biofeedback programs designed to manage constipation such as pressure feedback, which involves perineometry, sensory biofeedback, which involves rectal balloons, and real-time ultrasound (Chiarelli, 2008). Biofeedback is used to correct inappropriate contractions of the pelvic floor muscles and the external anal sphincter during defaecation (Chiarelli, 2008). Patients can be taught to sustain, strengthen, or eliminate a body action (Bannister, 2009). Some studies have shown biofeedback to be beneficial in treating constipation (Norton et al., 2017); however, there is limited evidence from randomised controlled trials and more work needs to be undertaken on this aspect of constipation management. Further, there is lack of evidence regarding the benefits of using one method of biofeedback over another (Norton et al., 2017). Currently, there is insufficient evidence regarding the efficacy and safety of biofeedback for the management of patients suffering from chronic constipation (Norton et al., 2017; Woodward, Norton, & Chiarelli, 2014).

Cheng, et al., (2013) argue that the use of non-pharmacological interventions alone is insufficient when managing constipation in cancer patients. In support, Lämås, Lindholm, Stenlund, Engström, and Jacobsson (2009) state that, although interventions such as abdominal massage seemed to be cost effective with fewer side effects, their implementation did not show an immediate effect and were only effective as a long-term treatment.

2.7.2 Pharmacological interventions

The approach to pharmacological treatment should follow modification of lifestyle factors and patient education, however, if this is insufficient, various pharmacotherapies can be used to relieve constipation symptoms (Gardiner & Hilton, 2014). Among pharmacological interventions, there are different modalities that alleviate stressful constipation symptoms experienced by cancer patients. Laxatives are the mainstay of constipation treatment and are considered a long-term therapy option in patients who are non-responsive to dietary or lifestyle modification (Bardsley, 2017; Emly & Marriott, 2017; Woodward, 2012). There are several subgroups of laxatives, including osmotic, bulk-forming, stimulant, and lubricating (Clark et al., 2010; Nancekivell-Smith, 2010; Ndefo & Erowele, 2011), which may create concurrent issues related to their usage. Bulk laxatives and stool softeners are usually the first-line therapy (Zanik & Gray, 2015). Bulk laxatives are preferable for those patients who occasionally complain of loose stools in between episodes of constipation (Bardsley, 2017). In cancer patients with constipation, these laxatives are designed to stimulate peristalsis and soften stools to facilitate easy defaecation (Swegle & Logemann, 2006). However, stool softeners are preferred over bulk laxatives for those patients complaining of hard stools or straining at stool (Woodward, 2012; Kyle, 2011).

Osmotic laxatives are water-binding non-absorbable compounds that produce loose or liquid stools (Othman Younes & Tawalbeh, 2017). These include drugs such as magnesium salts, lactose, and Movichol, which work by stimulating the secretion of water into the intestines to equalise osmotic pressure (Erichsén, Milberg, Jaarsma, & Friedrichsen, 2016; Marples, 2011; Wickham, 2016). However, osmotic laxatives can cause bloating and flatulence if not combined with stool-softening agents (Lohr, 2008). Most rectal laxatives cause local irritation, abdominal cramping and pain, diarrhoea, and fluid loss (Andrews, 2012), and they may be contraindicated in cancer patients receiving chemotherapy treatments (LoCasale et al., 2015).

Bulk-forming laxatives, such as psyllium, bran, ispaghula and methylcellulose, work by increasing water retention in the stool, softening a hard stool and leading to easy defaecation (Bardsley, 2017; Lohr, 2008; Othman Younes & Tawalbeh, 2017). There is a corresponding need for increased fluid intake (Lohr, 2008; Swegle & Logemann, 2006; Wickham, 2016). Fluid intake poses a challenge to cancer patients due to their decreased oral intake, which is related to issues such as pain and chemotherapy-induced nausea and vomiting (CINV) (LoCasale, 2015; Huang, 2016). However, bulk-forming agents have been identified as causing or increasing abdominal cramping, flatulence, bloating, abdominal pain, and impaction (Bardsley, 2017; Lohr, 2008). The use of bulk-forming laxatives does not benefit cancer patients with constipation, unless there is a deficiency of fibre intake (Bardsley, 2017; Lohr, 2008; Othman Younes & Tawalbeh, 2017). Furthermore, bulk-forming laxatives take several days to be effective, which make them unsuitable for short-term use in patients with existing impaction, but suitable for long-term use in patients with uncomplicated constipation (Gardiner & Hilton, 2014; Nancekivell-Smith, 2010).

Stimulants are laxatives that stimulate peristaltic action to facilitate the transition of the stool through the bowel. They are generally used with a combination of softeners, especially when treating opioid-induced constipation (Wickham, 2017). Examples of stimulant laxatives are Senna, senokot, glycerol suppositories and bisacodyl (Gardiner & Hilton, 2014). However, excessive use of these stimulant laxatives can cause allergic reactions, abdominal cramping, and electrolyte imbalances (Apau, 2010; Woolery et al., 2008). Further, stimulant laxatives should be used with caution in bowel obstruction, severe dehydration and acute surgical conditions (Gardner & Hilton, 2014).

A Cochrane review (2015) of clinical trials explored the use of laxatives for constipation management and recommended an evidence-based guideline. The first-line treatment is a combination of a stool softener and a stimulant. The second-line treatment is a rectal suppository, enema, and opioid antagonist. However, Miles, Fellowes, Goodman, and Wilkinson (2006) argue that there is no evidence to support the efficacy of laxative use in combination or in isolation. Laxatives lack the affinity for opioid receptors, therefore, they do not target opioid-induced constipation in cancer patients (Diego et al., 2011; Ross & Alexander, 2001). Excessive use of laxatives such as stimulants can cause diarrhoea, leading to electrolyte imbalance, damage to the myenteric plexus, and intolerance leading to an increasing dose regimen (Liu, 2011; Gardiner & Hilton, 2014).

Recently, drugs such as methylnaltrexone and alvimopan provide a new approach that is believed to be effective for treating opioid-induced constipation (Diego et al., 2011). Methylnaltrexone is a peripheral opioid antagonist, which is used in patients with opioid-induced constipation where the response to other laxatives has been unsuccessful (Nalamachu, 2015). About 50% of patients who receive a subcutaneous dose of methylnaltrexone experience a bowel movement within 4 hours (Nalamachu, 2015; Diego et al., 2011). However, randomised clinical trials have shown that adverse effects of methylnaltrexone are abdominal cramping and flatulence; it may also lead to bowel perforation in patients with advanced cancer and opioid induced constipation (Nalamachu, 2015). Furthermore, reasons such as their higher cost limit their use in clinical practice (Diego et al., 2011).

A cross-sectional survey conducted by Emmanuel, Johnson, McSkimming, and Dickerson (2017) in the United Kingdom, to assess the effectiveness of laxatives in patients with opioid-induced constipation, concluded that they were ineffective and associated with side effects and negative impacts. In the same study, the results showed that 75% of 184 patients, who were using osmotics and stimulants, reported side effects of laxative use such as bloating, gas, and increased urge to defaecate.

A systematic review conducted by Lipman (2011) added that current constipation treatments are based on insufficient randomised clinical trials and an inconsistent use of laxatives. Furthermore, Diego et al. (2011) and Ross and Alexander (2001) suggest that the widely used guidelines to commence laxatives concurrently with prescribed cancer-related treatments are not routinely followed in daily practice. However, there are no specific guidelines for nurses to help with constipation assessment. As a consequence, RNs face challenges in making effective treatment choices in their CDM, at times leading to approaches based on previous successes and failures in the clinical environment (Cheng et al., 2013; McClurg & Lowe-Strong, 2011).

Brown, Henderson and McDonagh (2009) indicate that patients do not follow the recommended guidelines for taking laxatives, although the intervention of clinicians increased their compliance. RNs educate and encourage patients to monitor their bowel movements and comply with treatment. Brown et al., (2009) state that the aim of constipation management is to reduce symptoms based on the patients' experience. Consequently, it is paramount to understand the role of RNs and how they make clinical decisions in developing effective constipation treatment choices, which are current and evidenced based, to optimise patient outcomes.

The literature shows that, although there are many different medications available, there appears to be no consensus on the best approach for managing constipation in cancer patients. Managing constipation in cancer patients is complex and challenging due to there being more than one aetiology (Emly & Marriott, 2017). Significantly, the prevention and management of constipation in cancer patients should be an essential component of the practice role of RNs and interventions should be evidence based. Therefore, it is essential to develop evidence-based treatment guidelines, together with better education for RNs and patients, which may likely shift the current constipation treatments to new and better options. RNs play an important part in assessing the intensity of constipation and educating patients on adhering to treatment plans, to improve their quality of life. Consequently, it is crucial for this study to explore and understand what influences RNs' decision-making regarding their treatment choices to manage cancer patients with constipation.

2.8 Gaps in the literature

This review has identified a gap in the current knowledge, concerning what influences the CDM of RNs when managing constipation in cancer patients. Despite the complexity of constipation in cancer patients, and its potential to impact on their quality of life, there have been no studies conducted on what influences RNs' clinical decisions when managing this patient group. The significance of this finding reinforces the importance of undertaking this study since RNs play an essential role in advocating for cancer patients throughout their cancer journey, identifying symptoms, implementing care plans, and evaluating treatment. There is a need to identify more effective strategies for preventing and treating constipation in this patient group. The CDM support and guidance for RNs in this area of practice is unavailable, leading to clinical decisions being based on assumption and experience, rather than evidence, to inform practice.

This positions the research question: "How do RNs make CDs when managing constipation in cancer patients?" within the context of existing knowledge, bringing forth the gaps in the literature that this study aims to address. It is imperative to conduct this study to guide evidence-based nursing practice in promoting constipation management for this group of patients. The RNs' CDM may have an influence on constipation treatment outcomes; therefore, this study may also have an impact on the quality of life of cancer patients. More work on the issues addressed by this study is needed, as it is likely that the underlying problems experienced by cancer patients are more complex than just functional constipation, but they may also be contributed to by the clinical decisions made by RNs.

2.9 Summary

This chapter has discussed how RNs make CDs when managing constipation in cancer patients. As part of this discussion, studies that have examined clinical decision-making theoretical frameworks were presented. This was followed by a discussion on previously conducted studies, which investigated the definition of constipation, incidence of constipation, and constipation burden of cancer patients. Studies discussing constipation assessment and management were then presented. The final section of this literature reviews highlighted gaps in the research on this issue, particularly the paucity of national and international studies. This demonstrated the need of undertaking this study to understand how RNs make CDs when managing constipation in cancer patients.

Chapter 3 will discuss the descriptive qualitative methodological approach used in this study. The methods of data collection and data analysis, including processes to ensure study rigour, will be presented. The chapter will also describe the ethical considerations relevant to this study.

CHAPTER 3: Methodology

3.1 Introduction

The purpose of this chapter is to describe the descriptive qualitative approach of this study and the research methods applied. This chapter discusses the research question and design, theoretical framework, participant recruitment process, and data collection and analysis. Finally, it details the ethical considerations and the study rigour that underpin the conduct of the study.

3.2 Research question

The research question posed by this study was "How do Registered Nurses' (RNs) make clinical decisions (CDs) when managing constipation in cancer patients?"

3.3 Research design

Qualitative research is described as a systematic subjective approach used to explore life experiences and situations, and to give them meaning (Houser, 2012; Newell & Bernard, 2011; Schneider, Whitehead, Lo-Biondo-Wood, & Haber, 2013). It is a form of social inquiry that focuses on the experiences of people as well as identifying individual uniqueness (Amankwaa, 2016; Newell & Bernard, 2011; Thomas & Magilvy, 2011). Consequently, qualitative data collection occurs in the real world, and this enriches the researcher's understanding of the individual participants involved within the context of the study (LoBiondo-Wood & Haber, 2010; Yates & Leggett, 2016). The overall design of descriptive research should be flexible enough to provide the opportunity to discover various aspects of the problem (Boswell & Cannon, 2014; McCusker & Gunaydin, 2015; Schneider et al., 2013).

A qualitative, descriptive research design was chosen for this study, which aimed to establish insight and understanding of how RNs make CDs. This design was deemed appropriate for this study, with its aim of describing the phenomenon of interest about which minimal research has been conducted (Houser, 2012; McCusker & Gunaydin, 2015). Importantly, in descriptive research, everything about the phenomenon being studied is important (Houser, 2012; Schmidt & Brown, 2012; Schneider et al., 2013). Research using a qualitative approach has become increasingly accepted as a method of developing knowledge to enhance evidence-based nursing practice (Polit & Beck, 2014). The descriptive approach chosen for this study provided a rigorous and systematic way of exploring RNs' CDM in context.

In qualitative research, there are several different approaches (Holloway & Galvin, 2016), and many share the same aim of trying to understand, describe, or interpret social phenomena as perceived by individuals (Boswell & Cannon, 2014; Schneider et al., 2013). Most qualitative researchers use a descriptive approach to explore the behaviour and experiences of individuals (Lambert & Lambert, 2012; Polit & Beck, 2014). Like any other design for qualitative research, the goal is to obtain rich information from participants to enable a detailed description of the phenomena of interest (Boswell & Cannon, 2014; Polit & Beck, 2014).

When using a qualitative approach, the researcher strives to interpret meanings rather than explain them, and attempts to understand rather than solve a problem (Boswell & Cannon, 2014: Polit & Beck, 2014. Descriptive qualitative research is typically more flexible, as it allows greater interaction between the researcher and the study participant (McCusker & Gunaydin, 2015). This qualitative descriptive study provided the researcher with opportunities to reveal meanings and describes the RNs' experiences of

CDM when managing constipation in cancer patients. Paroo (2014) emphasises the importance of research that facilitates an understanding of participants' experiences, as it contributes to the knowledge required for optimal clinical practice.

3.4 Theoretical framework

3.4.1 Clinical decision-making

CDM is a complex activity undertaken by RNs when making clinical judgements, and planning and delivering care. It requires knowledge and skills, which are gained through education and experience (Coffi, 2011; Payne, 2015; Davis & Maisano, 2016). Benner (1984) describes CDM as a fundamental process that requires nurses to be knowledgeable when taking steps to solve problems that are relevant to clinical practice. Furthermore, CDM is considered to be the most essential factor affecting the quality of care (Payne, 2015; Stinson, 2017) given to cancer patients who are experiencing multiple symptoms, including constipation (McMillan, Tofthagen, Small, Karver, & Craig, 2013).

Benner's theoretical framework, "From Novice to Expert" (1984), informed this descriptive qualitative study. Benner's theory is one of the most recognised frameworks within nursing practice (Davis & Maisano, 2016; Payne, 2015; Quick, 2016; Smith, 2016). Benner's theoretical framework highlights the steps that RNs take as they become expert clinicians. Benner (1984) postulated that it takes time for an individual to gain nursing skills and develop the ability to assess patients' needs. Benner's (1984) phenomenological study involved interviewing and observing nurses of varying years of experience to identify, define and describe CDM behaviour development through five stages: novice, advanced beginner, competent, proficient and expert. Benner's study was important in understanding how levels of experience influence clinical practice. Benner applied this theory to nursing using the interviews and participant observations and arrived at a description of the development of the nurses from novice to expert. For example, the expertise judgment is derived from an understanding of the whole situation (Benner, 1984). Furthermore, Benner revealed that the expert nurse developed the skills of understanding patient needs through education and multiple experience. To understand the influence of this theoretical framework on this study, the five stages in Benner's 'From Novice to Expert' framework of CDM are detailed.

3.4.2 Stage 1: Novice (up to 6 months' clinical practice experience [CPE])

In the novice stage, RNs are not analytical and do not have domain-specific experiences to guide their decision-making (Benner, 1984; Davis & Maisano, 2016). Novice RNs usually follow organisation guidelines and require verbal and physical cues to assist with their decision-making (Walton, 2016). They are often rule governed and inflexible (Davis & Maisano, 2016). When making clinical decisions, novice nurses are prone to making errors, because of their limited clinical knowledge and experience. They also tend to seek information from experts to solve the problems (Payne, 2015; Standing, 2008).

3.4.3 Stage 2: Advanced beginner (6 months to 1 year's CPE)

Similarly to a novice, the advanced beginner RN focuses on one task at a time and views nursing care as a list of tasks to be completed (Benner, 1984). Although the advanced beginner RN copes with some clinical situations, they still require mentoring in the clinical setting (Payne, 2015; Standing, 2008). They began to base their CDM on experience. Walton (2016) identifies that, in some clinical situations, it is important for advanced beginners to recognise when to seek the advice of experts to improve the outcomes of clinical decisions.

3.4.4 Stage 3: Competent (1–3 years' CPE)

A competent RN is aware of which aspects of a clinical situation are more important

(Smith, 2016). Usually at two years into practice nurses demonstrate increased clinical understanding and are at the competent level of performance (Benner, Tanner, & Chesla, 2009). At this stage, through experience the RN develops competence in dealing with familiar situations and can anticipate certain progressions in the patient's illness (Benner et al., 2009). Although a competent RN still relies on conscious and deliberate planning, they can apply analytic skills to their clinical practice (Davis & Maisano, 2016; Payne, 2015; Smith, 2016). While lacking the flexibility and speed of proficient RNs, competent RNs do possess mastery of skills (Walton, 2016).

3.4.5 Stage 4: Proficient (4–5 years' CPE)

At this stage of proficiency, the RN has much more clinical experience and perceives situations as 'wholes' rather than a list of tasks to be performed (Payne, 2015). The proficient RN uses principles to guide practice and can promptly and accurately make decisions, owing to a holistic understanding of various clinical situations (Smith, 2016; Walton, 2016). The proficient RN has learned from experience what to expect in each clinical situation as it arises and implements plans to meet a patient's needs (Walton, 2016). The proficient RN recognises when the expected picture does not materialise. The underpinning of the holistic understanding of a clinical situation becomes less laboured, improving the proficiency of the RN's decision-making capabilities (Davis & Maisano, 2016; Smith, 2016; Walton, 2016).

3.4.6 Stage 5: Expert (more than 5 years' CPE)

Expert RNs function on an often more fluid and flexible level with a deeper understanding of the total clinical situation (Benner, 1984; Davis & Maisano, 2016; Quick, 2016). When faced with complex situations, the expert RN usually employs a different approach to solve the problem (Walton, 2016; Stinson, 2017). The expert RN uses intuition to make better decisions and can quickly process information regarding both a patient and the clinical situation.

Benner's framework provided the researcher with a structure upon which to determine how to perceive, make sense of, and interpret data regarding what influences RNs' CDM. RNs make crucial clinical decisions in their everyday practice to provide high-quality care that promotes patient outcomes.

3.5 Ethical considerations

This study was conducted in accordance with the ethical principles outlined by the National Health and Medical Research Council (NHMRC, 2007). In Australia, the National Health and Medical Research Council [NHMRC] is the statutory body responsible for issuing guidelines on and advising the community on ethical issues relating to health. Ethical considerations are an important part of a research study which assists with addressing potential ethical issues prior to the commencement of data collection and safeguards the participants (Doody & Noonan, 2016; Polit & Beck, 2014). Two Local Health District Human Research Ethics Committees and the Western Sydney University Human Ethics granted approval prior to the commencement of recruitment and data collection (see Appendix 1). Further discussion of ethics will be discussed.

3.5.1 Informed consent

Polit and Beck (2014) and Doody and Noonan, 2016) emphasise obtaining informed consent to be an important procedure for safeguarding participants involved in a study. As such, the researcher is required to explain comprehensively the objectives, requirements and implications of the study so that potential participants can make fully informed decisions about their participation (McCusker & Gunaydin, 2015; Thomas &

Magilvy, 2011). Furthermore, Schneider et al., (2013) emphasise that giving clear, unambiguous information allows participants to make informed decisions regarding the study. The researcher provided all participants with a Participant Consent Form that detailed assurances of confidentiality and anonymity explained the research purpose, and the study risk and benefits. Further, the consent form outlined what participants would be asked to do, and the amount of time this will take. Regarding the participants' willingness to take part in this study, they had no incentives, participating was voluntary, they had the option to withdraw at any time, and the interview was digitally recorded. The informed consent lies within the principle of respect for autonomy which demands that participation should be voluntary and that participants should be made aware of any potential benefits or risk involved (Holloway & Galvin, 2016).

All potential participants had the opportunity to read the Participation Information Sheet (see Appendix 2) and the researcher answered any questions associated with the study. Then each participant was asked if they wished to participate. All participants who were present at the ward meeting agreed to participate in the study, indicating that they understood the nature and aims of the study. All participants signed a consent form (see Appendix 3) prior to commencing the interview.

3.5.2 Confidentiality and anonymity

The National Statement on Ethical Conduct in Human Research (2007) states that confidentiality is a domain whereby individuals are free from the scrutiny of others to maintain the privacy of participants involved in the study. Confidentiality assures that the identity of study participants will not be linked to the information they provided (Polit & Beck, 2014; Schneider et al., 2013). In this study, the protection of study participants' confidentiality was maintained during data collection and analysis, and by allocating a pseudonym to each participant.

Confidentiality was assured by de-identifying the transcripts and substituting participants' names with pseudonyms and keeping all identifying information in a locked filing cabinet. The professional transcriber had access to already de-identified data and signed the Transcriber Confidentiality form (see Appendix 4). Schneider et al., (2013) and Polit and Beck (2014) suggest that, in qualitative research, maintaining participants' anonymity is critically important due to the detailed descriptions needed to illuminate and report the study findings, and the amount of time spent with the participant during the study; hence, the need for extra precautions aimed at safeguarding the participant's identity becomes paramount.

The researcher informed participants that the only person who could link participants with the interviews and digital recordings was the researcher. Any direct quotes from participants incorporated into the study findings were de-identified. The identifiable information was coded and stored on a separate password-protected USB. Participants were made aware that dissemination of the results from this study would be through journal publications, conference presentations, and a thesis. In accordance with the National Statement on Ethical Conduct in Human Research (2007), all confidential participant information in this study was only used in ways as outlined to the participants.

3.5.3 Risk–benefit ratio

In this qualitative descriptive research, it was important to adhere to the principles of beneficence and non-maleficence, which involved calculating the risk–benefit ratio of the research. According to Polit and Beck (2014), beneficence is defined as doing no harm and maximising benefits. In qualitative research, although it is often challenging to predict the balance of risks to benefits (Brown, Henderson, & McDonagh; Thomas & Magilvy, 2011; Streubert & Carpenter, 2011), the researcher had an obligation in this study to anticipate the possible outcomes of an interview and to weigh the benefits and potential harms to the study participants. At the recruitment stage all participants were made aware that there was negligible risk related to the study. There were no reports from participants, or distress during the data collection of the study. A researcher must be mindful of the impact of the research on the participant and the need to take appropriate steps to minimise associated risks (Doody & Noonan, 2016; Houghton, Casey, Shaw, & Murphy, 2010). In this study, the researcher's intentions were that the benefit of the interview did not outweigh the potential harm to the participant and the researcher was prepared to cease the interview at this point if participants became distressed.

The vulnerability of the participants in relation to coercion to participate and identification by their peers and nurse unit managers (NUMs) required consideration given the specific clinical settings of study. Consequently, in this study beneficence was achieved through the application of voluntary informed consent and confidentiality. Subsequently, interviews were carried out as discretely as possible to reduce the possibility of others being aware of who was being interviewed. Interviews were carried out in a private location chosen by the participant. Additionally, pseudonyms were also used on all data recording and storage documents to maintain confidentiality. All participants were fully informed both verbally and in writing that findings from this study will be disseminated in a number of ways (see participant information sheet, Appendix 2). Dissemination of findings will also enhance benefits of the study findings to the participants. There were no direct benefits to the participants in this study, however, the research conducted creates new knowledge about how RNs make CDs when managing constipation in cancer patients. This study was conducted in anticipation of promoting the care given to patients with constipation and cancer. Therefore, understanding how RNs make their CDs has the potential for improving the health for this patient group.

3.5.4 Data storage

The researcher kept the study information sources in a separate location from the collected audiotapes and transcription to prevent accidental identification. All computerised data generated was password protected, known only to the researcher. The removal of any names and geographical locations prior to storage ensured the de-identification of all study data. In accordance with the National Statement on Ethical Conduct in Human Research (2007), all paper documentation generated from the study will remain locked in a secure filing cabinet for five years in the research office where the researcher was based. After that period, all data generated from this study will be shredded and destroyed.

3.6 Study settings

The setting for this study was in Sydney, NSW, across two Local Health Districts (LHDs). The two sites included an acute medical oncology inpatient ward and an outpatient-based community health centre. The two sites provided access to RNs who had the experience of the phenomenon of interest, that is, caring for cancer patients with constipation. The two sites provided the researcher with the opportunity to collect data from two very different clinical settings, allowing the researcher the opportunity to explore the richness of the data across two clinical scenarios and discover if there were similarities or differences. In qualitative research, the researchers must justify their reasons if they intend to carry out the research in more than one setting (Hall & Roussel, 2014). The following two subsections describe each of the two chosen sites in more detail.

3.6.1 Site One: Acute medical oncology ward

The first site was a 20-bed acute medical oncology inpatient ward. This site was located in a public, tertiary referral hospital in the Local Health District in Sydney, NSW. The LHD covers an approximate area of 774 square kilometres with an estimated resident population of 832,766 people. The staffing included 15 full-time equivalent (FTE) RNs with different levels of clinical experience, who are responsible for the care of admitted patients diagnosed with cancer with either cancer- or treatment-related issues. The study participants' demographics are detailed in the Findings chapter.

3.6.2 Site Two: Community Health Centre

The second site was a community health centre (CHC) located in one of LHD in Sydney. This CHC covered services for both urban and semi-rural areas, covering almost 9,179 square kilometres with an estimated resident population of almost 350,000 people. The staff include approximately 30 full time employees (FTE) RNs from different clinical backgrounds and experience levels, who were responsible for providing a range of nursing services to people with chronic and complex health conditions, including people diagnosed with cancer or having treatment for cancer. The CHC provided a range of services from health promotion, prevention and early disease detection, assessment, treatment, and a range of continuing care models, cancer, wound management, diabetes education, and support. According to the CHC in 2015 the CHC RNs worked in partnership with general practitioners (GPs) and local hospitals to provide care to cancer patients in their homes.

3.7 Participants

3.7.1 Purposive sampling

Purposive sampling is a technique in which the researcher deliberately identifies study participants (Boswell & Cannon, 2014; Polit & Beck, 2014; Schneider et al., 2013). This form of sampling involves identifying and selecting individuals who are experienced with a phenomenon of interest (Polit & Beck, 2014; Schneider et al., 2013). In this study, participants were selected because of their status of being RNs and meeting the study inclusion criteria. In this study, only RNs were recruited. As such, the purposive sampling provided the researcher with specific study participants who possessed information that could contribute to answering the research question. Houser (2012) and Polit and Beck (2014) agree that, in qualitative research, researchers purposely choose participants based on the belief that they have knowledge about the issue under investigation. Participants are active contributors to the research process and are viewed as possessing the knowledge or experience required to answer the research question (Schneider et al., 2013).

3.7.2 Inclusion criteria

Participants were RNs, currently working in an acute medical oncology ward or community health setting in either of the two LHDs in NSW, who were providing direct care to patients with cancer and were willing to participate in a semi-structured interview. All RNs were able to speak English. The Nursing and Midwifery English language skills registration standard applies to all applicants for initial registration as RNs in Australia and applicants should meet the standard, regardless of their language background. The study participants were permanently employed in either a full-time or part-time RN position. For the study purpose, the participants' stages of professional nursing experience were defined following Benner's From Novice to Expert (1984) theoretical framework, as previously discussed (see 3.4).

3.7.3 Exclusion criteria

Participants excluded from the study included RNs classified as casual, from casual pool or agency RNs, as the study sought participants who provided direct care to cancer patients with constipation. Enrolled nurses (ENs) and assistants in nursing (AiNs) were also excluded, as this study focused on RNs only.

3.7.4 Participants' sample size

A purposive sample of eleven participants, six from the CHC and five from the acute medical oncology ward agreed to participate in an interview. This number of participants was congruent with qualitative research principles; sample sizes tend to be small due to the quantity of data that must be analysed (Schneider et al., 2013; Martin & Fleming, 2010; Green et al., 2007). Additionally, data saturation is reached at times with relatively small samples, depending on how participants reflect on their experiences (Polit & Beck, 2014; Schneider et al., 2013; Martin & Fleming, 2010). Martin and Fleming (2010) indicate that the point of closure usually occurs when new data becomes repetitive and redundant. Although the sample size for this study was relatively small, the large amount of data generated from the interviews was rich, which confirmed the appropriateness of the sample size. In support, Martin and Fleming (2010) and Mateo and Foreman (2014) suggest that the quality of data collected is more valuable compared to the size of the sample, as it involves the in-depth inquiry of the phenomenon under study.

3.7.5 Recruitment process

Participant recruitment commenced following ethics approval from the two Human Research Ethics Committees and the Western Sydney University (WSU) Human Ethics Committee. Initially, the researcher contacted the two Nurse Unit Managers (NUMs) of the two sites by telephone, along with an introductory email (see Appendix 5) explaining the scope of the research study. Polit and Beck (2014) and McCusker and Gunaydin (2015) emphasise the importance of seeking the support of gatekeepers, who are people able to grant or withhold access to the participants.

The NUMs agreed to help by promoting the study and distributing the participants' information sheets to all potential participants who met the inclusion criteria. The NUMs also agreed to display study recruitment posters (see Appendix 6) to advertise the study in the staff room and on the notice board at the nurses' station used by potential participants. The researcher was aware that NUMs and Clinical Nurse Consultants (CNCs) through their status might have influence on participants to take part, therefore, the researcher ascertained that participation was entirely voluntary. However, this recruitment approach was unsuccessful with participants only showing interest to the NUMs but failing to contact the researcher.

The researcher consulted the supervisors regarding the recruitment difficulties. The discussion with the supervisors resulted in a different recruitment approach of holding an in-service and attending ward meetings at both study sites to provide information about the study and to introduce the researcher. This process recruited eleven participants in total, six from the CHC and five from the acute medical oncology inpatient ward. All the participants who were present at the meeting agreed to participate. The number of potential participants was adequate for resuming data collection, therefore, the researcher did not seek more participants at that stage. Eight participants signed the consent during this first encounter following the in-service. Three participants signed the consent forms on the negotiated day of the interviews which suited the participant. Follow-up contact by telephone to interested participants provided further clarification regarding the study and an opportunity to negotiate appropriate times and venues for interviews to occur in a timely manner, convenient to participants

3.8 Data collection

Data were collected for this study between 2013 and 2014. Demographic data were obtained from the study participants (see Appendix 7 for demographic questions). Data collection was undertaken via interviews using semi-structured open-ended questions (see appendix 8 for interview guide). This form of interview was deemed to be the most suitable data collection technique that provided flexibility and an opportunity to interact with RNs, allowing spontaneous response. Newell and Bernard (2011) identified interviews as the most frequently used tools for data collection in qualitative research. McCusker and Gunaydin (2015) and Yates and Leggett (2016) describe an open-ended interview as an excellent source of data in qualitative research, allowing for entrance into another person's world, while giving them freedom to control the interview and describe their experience. Furthermore, Schmidt and Brown (2012) suggest open-ended questions provide the researcher an opportunity to probe and seek clarification regarding the participants' responses.

3.8.1 Pilot Interview

Pilot studies are not always conducted in qualitative research (Yates & Leggett 2016), however the researcher practised interview techniques with work colleagues in an acute medical oncology ward to acquire data collection skills and confidence as a researcher. The study was piloted with RNs (n=3) at the researcher's place of work to address issues related to the interview questions, the interview process, the researcher's skills of interviewing, as well as time management. The recruitment process mimicked the question sequence intended for the study. The NUM granted the request to introduce the study to the RNs during the ward meeting. The monthly ward meeting consisted of three

RNs, two ENs with one EN from casual pool. All three RNs agreed to participate and signed the consent after reading the Participation Information Sheet. The two ENs were excluded since the study aimed to only focus on RNs. The participants chose interviews to occur at the work place for their convenience, even though there was the option for interviews to occur at another location.

Following the interviews, the researcher invited participants to make verbal comments on all aspects of the pilot study. The researcher discussed the comments regarding research questions with the supervisors and this led to refining the interview questions. The adjustments to meet the purpose of the intended study included: changing the sequence of the questions; minor changes to the wording of the interview questions and deleting questions that were too complicated to answer. The interview preparation, venue, and time allocated for each pilot interview was applicable to the main study therefore no changes were required. Newell and Bernard (2011) suggest a pilot study can determine if there are any flaws or limitations within the study design and allows the researcher to make amendments prior to the implementation of the study.

The pilot interviews gave the researcher an opportunity to become familiar with the process of data collection intended for the main study. The researcher reflected on the recruitment of participants, practised the interview technique and became familiar with the equipment. The pilot interviews also provided the opportunity to engage in transcription. Although data transcription seemed to provide the opportunity to become familiar with study data, it proved to be a challenging process and the researcher engaged a professional transcriber for the main study. In conclusion, piloting the study was crucial as it gave the researcher insight into the challenges of data collection, and increased confidence and preparedness to conduct the study.

3.8.2 Interview guide

Although qualitative research is viewed as a conversation, there is the need for some structure, which may be in the form of leading questions (Polit & Beck, 2014; Yates & Leggett, 2016). In qualitative research questions are frequently in an interview guide format with a focus on the research areas to be covered and the line of inquiry to be followed (Polit & Beck, 2014; Schneider et al., 2013). In this study, an interview guide employing the use of open-ended semi-structured questions developed from the literature, the feedback from pilot study and guidance from the supervisors was used (see Appendix 8). The interview for each participant did not precisely follow the sequencing of questions as illustrated in the interview guide. This was determined by how individual participant responded to the questions.

The use of the Interview guide ensured the researcher collected similar data from all participants regardless of clinical settings. This allowed the researcher to utilise the time for each interview to ensure similar data collection. During the semi-structured interview, participants were encouraged to speak freely using their own words, and the researcher only used techniques such as funnelling, probing, or paraphrasing to elicit in-depth details as emphasised by Polit and Beck (2014). During the interview, probing questions assisted the researcher to obtain detailed information from the participants, for example, "Could you explain further …?" "Could you give me an example …?" "Could you elaborate on that idea?" "Do you want to add anything else …?" A request to repeat the question by some participants regardless of their clinical experience or area of practice was indicative of misunderstanding and the researcher occasionally rephrased the questions to facilitate their understanding. Taking notes during interviews was minimal to avoid distraction and allow the questioning process to flow.

3.8.3 The interview process

The interviews in qualitative studies are initiated by the researcher to elicit information from the participants regarding the phenomena under review (Holloway & Galvin, 2016). The researcher in this study undertook careful preparation for interviews. This section details the interview process in this study which involved the selection of a setting where there would be minimal disturbances, noise disruptions or visual distractions to the participants during the interview. An explanation regarding the study, reading the Participation Information and gaining consent was undertaken in a quiet room away from distractions. Semi-structured interviews were conducted with each participant in a private setting and at a mutually convenient time and location. Ten interviews took place at the participant's workplace, usually after completing their shift to minimise any impact during work hours. As stated by the participants, this was a convenient time and place for of the interviews. Of the 11 participants, only one from the acute medical oncology ward chose to have the interview at her residence.

The researcher implemented active steps such as posting "do not disturb" signs, disabling telephones and pager devices, as a means of ensuring minimum interruptions. Similarly, for the interview that occurred at the participant's residential address, the participant offered a quiet room away from other family members to avoid any disturbances. All equipment required during the interview, such as the recording equipment were pre-tested, and the interview equipment were readily accessible to avoid unnecessary delays for the interview.

The researcher offered participants a break or to terminate the interview at any stage of the interview if required; however, there were no requests to terminate the interview. All interviews commenced following the process of obtaining written consent and permission to audio record the interviews which was included on the Participation Information. The interviews for each participant ranged from 30 to 45 minutes.

3.9 Data analysis

Thematic data analysis was selected as the appropriate method to analyse the qualitative data collected in this study. Polit and Beck (2014) and Vaismoradi, Turunen and Bondas (2013) indicated thematic data analysis is a widely used approach because of its flexibility to answer different types of research questions. Thematic analysis is reliable qualitative descriptive method that identifies, analyses and develops themes (Braun & Clarke, 2006; Vaismoradi et al., 2013).

The data analysis commenced simultaneously with data collection. In descriptive qualitative approaches it is recommended to gather and analyse data concurrently, to enhance the depth and quality of the analysis (McCusker & Gunaydin, 2015; Vaismoradi et al., 2013). Thematic data analysis is usually done in a recursive process and is not linear and the researcher moves back and forth as necessary throughout the phases (Hall & Roussel, 2014). In addition, the researcher had regular meetings with the supervisors to discuss the data analysis process. The next section describes the process of the thematic analysis for this study based on the work of Braun and Clarke (2006).

3.9.1 Transcription

All interviews were digitally audio recorded and transcribed verbatim. According to Schneider et al., (2013), the recording of data and verbatim transcription increases the accuracy of data collection. Professional transcription of five of the eleven recorded interviews occurred within 48 hours of the interview being completed. The researcher cross-checked the recordings and the transcriptions to ensure transcription accuracy.

Although the returned transcriptions reflected the data, some adjustment was required as the transcriber was not familiar with medical terminology. Consequently, the researcher transcribed the remaining six interviews to ensure the accuracy of transcription. The time spent in transcription was useful in informing early stages of analysis and developing a thorough understanding of the data. Holloway and Galvin (2016) suggest the researcher transcribe their own audio recordings in order to immerse themselves in the data and become aware of importance issues in the data. All transcripts had details of time and location, and pseudonyms and numbers for participants were used to prevent identification during the process of analysis.

3.9.2 Phase1: Familiarising oneself with the data

The process of data transcription is an excellent way for the researcher to start familiarising themselves with the data (Aveling, Gillespie, & Cornish, 2015; McCusker & Gunaydin, 2015). It is crucial for the researcher to immerse themselves in the data to become familiar with the depth and breadth of the data content (Braun & Clarke, 2006; Yates & Leggett, 2016). In this study, the immersion in the study data involved repeatedly reading and re- reading the data, searching for meanings and patterns. Each participant's account of their experiences was read several times and transcripts were checked back against the original audio recordings to acquire a sense of the whole.

During this first phase, the researcher started taking notes and marking ideas for coding to be revisited in subsequent phases. The researcher was then ready to begin the more formal coding process in the next phase. However, the researcher continued developing and refining coding throughout the entire analysis.

3.9.3 Phase 2: Generating initial codes

This phase of coding began when the researcher had read and familiarised herself with the data. Coding was manually undertaken on a hard copy of the transcripts, highlighting and naming sections of text. The researcher coded all 11 interviews using the open coding guidelines described by Braun and Clarke (2006). The researcher began this second phase by generating an initial list of ideas. This involved the production of initial codes from the data. Codes identified a feature of the data that appears interesting to the analysis and refer to elements of the raw data that can be assessed in a meaningful way regarding the phenomenon of interest (Polit & Beck, 2014; Streubert & Carpenter, 2011). During coding the researcher generated succinct codes that identified important features of the data that might be relevant to answering the research question. The coding involved copying extracts of data from individual transcripts and collating each code together. The researcher coded for as many potential categories as possible making sure that all actual data extracts from individual transcripts were coded and collated together. The statements were grouped together, for example, when RNs talked about their clinical experience or personal experiences as influential to their CDM, these were grouped together into categories. This sequence of coding was applied to all 11 interviews, with the researcher frequently revisiting the data.

3.9.4 Phase 3: Searching for themes

Phase 3 began after the initial phase 2 when all data was coded and collated. The researcher began searching for themes. Searching for themes involved examining the codes and collating data to identify significant broader patterns of meaning (Streubert & Carpenter, 2011). All data were now initially coded and collated, and the researcher had a long list of the different codes identified across the data set. The researcher then collated data relevant to each theme, to work with the data and review the viability of each theme.

The researcher then checked each theme against the dataset to determine its relevancy, or whether it addressed the research question. The researcher did not abandon anything at this stage, rather continued to check themes against datasets. Streubert and Carpenter (2011) and Braun and Clarke (2006) emphasise the importance of looking at all extracts in detail to determine whether the themes hold as they are, or whether some needed to be combined, refined and separated, or just discarded. The researcher's focus in this phase was collating codes into potential themes and gathering all relevant data to each potential theme.

3.9.5 Phase 4: Reviewing themes

This phase involved checking the themes in relation to the coded extracts and the entire data set. Reviewing themes involves deciding on an informative name for each theme (Streubert & Carpenter, 2011). The researcher did this phase in two stages. In stage one the researcher revisited the extracted codes of each theme checking whether these codes formed a consistent pattern. During the second stage, the researcher used the same process as in phase one, but now considered the fittingness of themes to the entire data set. The researcher further coded additional data within the themes which were missed in the earlier coding phase. Usually the re-coding from the data set is an ongoing process which require reviewing and refining of coding until satisfactory themes are developed (Braun & Clarke, 2006). Ongoing throughout the data analysis, the researcher and the supervisors compared the theme clusters, checking the accuracy of the overall thematic map. At this stage the researcher had reached a convincing thematic map and was confident to proceed to the next phase.

3.9.6 Phase 5: Defining and naming themes

This phase involved refining each theme, defining the overall narrative revealed by the analysis and generating definitions and names for each identified theme. The phase began when the researcher had a satisfactory thematic map. At this point, the researcher defined and further refined the themes, and determined what aspect of the data each theme captured. The researcher revisited collated data extracts for each theme categorising them into a coherent and internally consistent account, with accompanying narrative. Subthemes are essentially themes within a theme, giving structure to a complex theme, and can demonstrate the hierarchy of meaning within the data (Aveling et al., 2015; Boswell & Cannon, 2014). The researcher and supervisors continued reviewing, exploring and refining themes as needed.

The researcher finalised clear theme names that gave the reader a sense and meaning of the theme. The researcher then proceeded to the next phase of producing a report.

3.9.7 Phase 6: Producing the report

At the beginning of phase 6, the researcher had a set of comprehensive and congruent themes. The task of undertaking thematic analysis involves telling the complicated participants' stories to convince the reader of the merit and validity of the analysis (Aveling et al., 2015; Boswell & Cannon, 2014; Streubert & Carpenter, 2011). Aveling et al., (2015) emphasise the importance of the analysis to provide a coherent, concise, logical, un-repetitive, and interesting account of the data story presented within and across themes.

The researcher provided sufficient evidence of the themes within the data by extracting exemplars that supported the theme. The researcher chose the exemplars that captured the essence the story within the data to answer the research question.

Thematic analysis provided a flexible data analysis method in this descriptive qualitative research. Thematic analysis allowed the researcher an opportunity to extract meanings and concepts from the data including development and recording of themes. Overall, it was because of the advantages of thematic analysis that the researcher chose to employ this method and generate insights from the data. The data were transcribed with appropriate detail, checking transcripts against audio tapes for accuracy. The coding process was thorough, inclusive and comprehensive and generated appropriate themes. Extracts for all themes were collated. Themes were thoroughly checked against the original data set giving the researcher the confidence to declare them to be coherent, consistent and distinctive. The two themes and four subthemes which were identified are detailed in the findings chapter.

3.10 Study trustworthiness

Trustworthiness in this qualitative descriptive study was achieved using the criteria of credibility, dependability, confirmability and transferability as recommended by Polit and Beck (2014) and Yates and Leggett (2016). The researcher needs to have confidence and trust in the research findings (McCusker & Gunaydin, 2015; Polit & Beck, 2014; Schneider et al., 2013). In this study trustworthiness was demonstrated by consulting with supervisors regarding the data collection process and the data analysis process. In addition, the researcher had face to face interaction with participants which also ensured rigour and trustworthiness throughout the study, that is, during the interviews and analysing data. Credibility, dependability, transferability, and confirmability are central to trustworthiness in qualitative research because these criteria determine the level of trustworthiness of the research undertaken.

3.10.1 Credibility

Credibility refers to an element that allows other researchers to recognise the experiences contained within the study through the interpretation of the experiences of study participants (Doody & Noonan, 2016; Boswell & Cannon, 2014; Polit & Beck, 2014; Schneider et al., 2013). In this study, the researcher established credibility by reviewing the individual transcripts while looking for similarities within the study so other readers could recognise the experiences contained within the themes.

Furthermore, to achieve credibility in a qualitative study, Polit and Beck (2014) and Thomas and Magilvy (2011) suggested peer debriefing. In this study, the researcher, together with the supervisors, reviewed the transcripts, formulated meanings, subthemes, and themes to ascertain if the interpretation process was accurate and clear, and to establish if these represented participants' experiences of clinical decision-making. This transcription examination and validation by the researcher and supervisors contributed to the study's credibility. Peer debriefing with the researcher's supervisors provided the researcher an opportunity to explore aspects of the inquiry with experts in the methods of qualitative inquiry. During peer debriefing the researcher could engage with thought provoking questions posed by supervisors. These ongoing discussions with supervisors assist in refining thoughts about the research process and data analysis (Thomas & Magilvy, 2011).

The researcher also recognised the need to be open to the thoughts and opinions of others by setting aside personal experiences to understand those of the participants in the study. The researcher was familiar with caring for cancer patients with constipation; however, could identify pre-existing clinical or personal experiences, assumptions and biases from the onset of the study. This helped the researcher in understanding and analysing of the participants' experiences, knowledge, and issues revealed in this study.

3.10.2 Confirmability

Confirmability refers to freedom from bias and to the way in which the data were interpreted. Confirmability is concerned with establishing the accuracy, relevance or meaning of the data (Polit & Beck, 2014: Thomas & Magilvy, 2011: Holloway & Galvin, 2016). In this study the researcher used direct quotes from the transcripts to illustrate the themes and subthemes. The researcher carefully checked quotes from the transcripts to ensure valid interpretation of the RNs' meanings. Direct quotes from interviews that reflect the RNs' experience on how they make CDs are presented in the Findings chapter 4. This process minimised the possibility of any bias caused by personal experience and understanding of the subject under investigation. Reviewing the analysed data with the researcher supervisors also assisted in overcoming the effects of researcher's bias. The researcher maintained a detailed record of the research process throughout the study to establish dependability and confirmability of the study. In addition, the researcher followed the interview rather than leading it, only directed by probing the participants for clarifications. Dhingra et al., (2013) emphasise that qualitative research must maintain a sense of awareness and openness to the study and unfolding study results. The researcher requires a self-critical attitude about how one's own presumptions affect the research (Holloway & Galvin, 2016).

3.10.3 Transferability

Transferability refers to the ability to apply the findings of the study to other similar situations (Thomas & Magilvy, 2011). Transferability of this study was achieved through the detailed description of the approaches taken to conduct this study. The researcher provided a detailed report describing the study setting, participants, sample size, and data collection of the study to allow the reader to make their own conclusions about the transferability of the study findings. The study recruitment inclusion criteria were the same in both study settings. Thus, an RN caring for cancer patients with constipation who reads a qualitative research study might find it does not exactly describe the experience of CDM for each RN in the study but, rather, gives a range of experience on which to build an understanding (Holloway & Galvin, 2016). This understanding informs the applicability of this qualitative research into practice. RNs might then use the same approach for CDM to manage their patient group. Furthermore, transferability in this study was enhanced by using purposive sampling, by providing descriptive and robust data with a wide range of information obtained from detailed and accurate descriptions of RNs' experiences, and by continuously returning to the literature. Importantly, Holloway and Galvin (2016) recommended that in order to achieve transferability, the researcher must provide a vivid description of the context in which the study was conducted

3.10.4 Dependability

Dependability refers to evaluating data quality and stability over time and over conditions (Braun & Clarke, 2006; Polit & Beck, 2014). In this study, the researcher aimed to carry the reader along in understanding how the themes were themes developed. The description of study purpose, how and why participants were selected, how the data was collected, how long data collection lasted, how data was transcribed for analysis, and the interpretation of the research findings affirmed the study's dependability. Audiotaping interviews during data collection preserved the participants' narratives of their experiences when making clinical decisions as accurately as possible, and this guaranteed accuracy that supports study rigour. Holloway and Galvin (2016) emphasise that findings of a study should be consistent and accurate to enable the reader to evaluate the adequacy of the analysis through following the process of the researcher.

3.11 Summary

This chapter has explained the research methodology process used in the study to describe what influences the clinical decision-making of RNs when managing constipation in cancer patients. This chapter outlined the research design and theoretical framework chosen to answer the research question and to inform this study. Ethical considerations discussed include informed consent, confidentiality and anonymity, risk–benefit ratio, and data storage. The study settings, study participants and recruitment process, data collection, data management, and data analysis process are clearly described. Finally, to ensure the trustworthiness, the research design and specific methods of data collection and analysis were demonstrated in detail. The following chapter will provide a comprehensive account on the findings, generated from the analysis of the study data.

CHAPTER 4: Findings

4.1 Introduction

This chapter presents the findings from the thematic analysis undertaken on the data from interviews with six registered nurses (RNs) from a community health facility and five registered nurses from an acute medical oncology ward. The purpose was to reveal how RNs make clinical decisions when managing constipation in cancer patients. In this chapter, the two themes and four subthemes which were identified will be examined in detail.

At the beginning of each interview, the participant's demographic data were collected. The years of RNs' clinical experience, age, gender, and education were reviewed to describe the study participants. Individual study participants who shared their experience are introduced in the following session:

Betty was an RN with 6 years of experience in community nursing. She chose to work in this area because she wanted autonomy and liked palliative care which offered a good mix of nursing. Betty stated that working in the community suited her better with family, children and life style. Betty had no post graduate degree.

Pretty had 35 years of experience as a registered nurse with 20 years in community nursing. She chose to work in this area because it suited her social life situation. Pretty did a post graduate course in oncology and gerontology.

Susan was an RN with 22 years of experience of which 18 were in community nursing. She became interested with community nursing during her student clinical placement.

Susan has qualification in wound management.

Mary had ten years of experience as an RN, of which 8 were as a community nurse. She was attracted to community nursing when she was still a junior nurse. Mary did not have any post graduate qualification.

Portia was an RN with eight years of experience. She has been a community nurse for nearly two years. She decided to become a community nurse from her life experience. Portia has done a palliative care and community nursing course.

Angie was newly qualified RN with limited experience in community nursing. She chose to work in this area because she liked the hours. Angie has not done any post graduate courses.

Suzie was an RN with 26 years of experience in a medical oncology and palliative care specialty. She chose to work in this area because it was not as busy as the surgical wards. She has a Certificate in Cancer Nursing.

Margaret was an RN with 6 years of experience in a medical oncology and palliative care specialty. She chose to work in this area because of differences in nursing care. She had no postgraduate qualifications.

Alex had 3 years of experience in a medical oncology ward and 5 years as a Registered Nurse. She chose to work in this area because she did new graduate rotation program in the same ward and liked it. Alex had a Graduate Certificate in Cancer Nursing

Nancy was an RN with 26 years of experience and has been working in a medical oncology and palliative care specialty for 5 years. She chose to work in this area because she was interested in palliative care. She had no postgraduate qualifications.

Christina had 26 years of experience in a medical oncology ward as a Registered Nurse.

She chose to work in this area because it was the only ward with vacancies by then and she liked it. Christina had no postgraduate qualifications

The words and alphanumeric code at the end of each quote indicate, consecutively, the pseudonym assigned to the participant, the area of practice, and the level of clinical experience. For example, in text, (Betty CO1,) refers to a participant from the community clinical setting, and (Alex, MON8,) refers to a competent participant from acute medical oncology nursing. All interviewed RNs, both in the community and acute medical oncology clinical settings were females and had experience of caring for constipated cancer patients. This experience was clearly demonstrated in the response to the opening interview question: "*As an RN working in the community/acute medical oncology clinical setting, do you mind telling me about a patient who had cancer and constipation you have recently nursed?*"

The total number of participants in this study were eleven, six from the community health setting and five from the acute medical oncology ward. All participants were female. Participants' ages ranged from 25 to over 50 years old. Most participants (n=6) were over 50 years of age. The mean number of years working as an RN for all participants was 18. (range 1-45) working in the specialty area. Five participants had post graduate certificates in cancer nursing, one with gerontology qualifications. Three participants did palliative care and wound management courses offered within the organisation as part of their professional development. Four participants had no post graduate qualifications. Pseudonyms are used to protect participants' identities.

The participants' demographic data are illustrated in Table 1 (a) and (b) below.

Table 1 (a): Community health setting (CO) and Acute medical oncology ward (MON) participants' demographic data

Pseudonym (Novice to expert, per Benner)	**Gender**	**Age range**	**English as first language spoken at home**	**Overall years of nursing experience**	**Nursing experience**	**Reason for working as a community/oncology nurse**	**Post graduate qualifications/ professional development courses**
CO1 Betty (Expert)	Female	34–44	Yes	10	6	Autonomy	Graduate Certificate oncology nursing
CO2 Pretty (Expert)	Female	>50	Yes	35	20	Different workplace	Graduate Certificate oncology and gerontology
CO3 Susan (Expert)	Female	>50	Yes	22	18	Student work experience	Early childhood, Wound management, Graduate Certificate oncology nursing
CO4 Mary (Expert)	Female	45–49	Yes	10	8	Less busy	No
CO5 Portia (Competent)	Female	>50	Yes	8	18 months	Life experience	Wound management, Palliative care nursing
CO6 Angie (Novice)	Female	45–49	Yes	1	1	Flexibility	Wound management, Palliative care nursing, Continence nursing
MON7 Suzie (expert)	Female	>50	Yes	45	26	Less busy	Graduate Certificate in Cancer Nursing
MON8 Margaret (Expert	Female	25-29	No	8	6	Different nursing care	No
MON9 Alex Competent	Female	30-34	Yes	5	3	New graduate experience	Graduate Certificate in Cancer Nursing
MON10 Nancy (Proficient	Female	>50	No	26	6	Interested in palliative care	No
MON11 Christine (Expert	Female	>50	Yes	36	26	Job opportunity	No

4.2 Themes and subthemes

Theme 1 was *Factors influencing practice* and its associated subthemes were *Drawing on experiences* and *Lack of assessment tools.* Theme 2 was *Developing partnerships* and subthemes were conferring with other professionals and partnerships with patients and families. Each theme and the subthemes that emerged from this study are illustrated by exemplars drawn from the participants' narratives. The exemplars were carefully chosen to provide examples of the themes and subthemes, and to best convey the meaning of the participants' experiences. Through these themes, the factors that influence how RN make clinical decisions when managing constipation in cancer patients are explored.

Table 2: Subthemes associated with the major themes

Themes	Subthemes
Factors influencing practice	1. Drawing on experiences 2. Lack of assessment tools
Developing partnerships	1. Conferring with other professionals 2. Partnering with patient and family

4.3 Theme1: Factors influencing practice

The theme *Factors influencing practice* describes several dynamics that might influence how RNs make clinical decisions when managing constipation in cancer patients. Most of the study RNs described that their ability to make clinical decisions was mainly influenced by drawing on experiences, such as their clinical and personal experiences. The lack of constipation assessment tools also influenced their decision making. These clinical and personal experiences were the mainstay of CDM, which assisted the RNs to understand constipation management in cancer patients. The following subtheme explains and describe how clinical experiences influence how RNs make clinical decisions to manage constipation in cancer patients.

4.3.1 Subtheme 1: Drawing on experience

Drawing on experience included level of experience, clinical experience and personal experiences. In this study, the level of experience was described as the amount of time spent in area of clinical practice. The experience gained during this period allowed RNs to continuously expand their clinical decision skills needed for to providing quality of care to cancer patients with constipation. The level of clinical experience plays an important role in influencing RNs' CDM in nursing practice. The study findings focused on the distinguishable characteristics of nurses' level of clinical experience. It was apparent in this study that how RNs make clinical decisions seemed to vary, depending on their level of clinical experience. This was evident when these RNs described how they gradually gained clinical experience, as they stayed longer in their area of practice.

The RNs found that as their level of clinical experiences increased, the quality of how they make clinical decisions improved. Most of the RNs from both study settings acknowledged the period from being a novice to becoming an expert nurse and how this shaped how they make clinical decisions. Working in the same speciality for a long time might have helped those RNs to gain confidence and experience to make clinical decisions regarding constipation treatment. The impact of an RN's level of clinical experience became more evident when some RNs explained how they started to use these experiences to make clinical decisions rather than organisation guidelines. This suggests that the RN's level of clinical experience may have reached that of an expert, where clinical decisions are made independently, and they consult other health professionals only when seeking advice.

Expert RNs with more than five years' clinical experience perceived their professional transitional journey to be important in their CDM when managing constipation in cancer patients. This shows that the level of clinical experience plays an important part in understanding clinical situations:

> *I probably know more now. If I go back five years, I was starting out in community so, through all my education and in-services and, just, experience, I probably I know more. I probably do things a little bit differently, I suppose.* (Betty CO1)

Mary identified herself as an expert who's CDM were now based on a deep understanding of the whole situation, because of her education and level of clinical experience.

> *Before I came to the community, I didn't have the knowledge that I do now. Of course, things get easier as time goes … a lot of that is all knowledge that comes from your starting.* (Mary CO4)

Betty also emphasised the point how she developed the skills to enable her to make sound clinical decisions:

> *We must be up-to-date with research. We must - we read, we get in-services, so it's hands-on experience, it's knowledge that you've acquired along the way.* (Betty

> CO1)

Pretty also added:

> *I think it just comes with time and keeping abreast of the latest research and stuff like that, yeah and things change. Just - and educating yourself too and just try seeking out the most updated best practice.* (Pretty CO2)

Furthermore, the level of clinical experience gained in an area of practice together with education allowed RNs to have a holistic understanding of clinical situations, enhancing their CDM and ultimately improving cancer patient outcomes. The longer they stayed in clinical practice, the better they became in CDM.

Comments from some RNs support the finding that lack of clinical experience is a barrier to effective CDM:

> *If you're talking about, say, "X", who's the new grad, so, she'll have a different concept of things than what I do because she's just starting. You know, she's come out into the community and this is like her first year.* (Mary CO4)

> *So, we had lot younger ones and we have a lot of deficiencies now with those people. So, bowel care is not as consistent as it used to be. I think it's just a matter of some younger people just take a long time to get that experience.* (Christine

> MON11)

> *First Years are not real confident … Maybe, they are thinking managing constipation is not important to a patient.* (Nancy MON10)

RNs with fewer years of clinical experience, such as new graduates, were considered to be lacking in their CDM skills and these RNs thought it might take a while for them to gain experience because of their limited clinical background.

In contrast, expert RNs saw themselves as confident with CDM because of their long-term clinical experience. In addition, as stated earlier, the RNs' level of clinical experience, the time spent in clinical practice and the experience gained was perceived to have influenced their CDM.

Nancy elaborated on how clinical experience influence clinical practice:

> *the ones who have been nursing for a long time, they know what they are doing.* (Nancy MNO10)

RNs with more clinical experience seemed to have a holistic understanding of the patient's problems. For example, Margaret said:

> *I think there are too many factors, patients these days they don't just come in with one problem. They come in with 5 or 6 different problems in one.* (Margaret MON8)

Furthermore, Suzie, an expert RN from the acute medical ward, related that the first 12 months of clinical practice was a crucial period for gaining clinical experience and the skills needed for effective CDM.

> *By the time they've done their twelve months, they're quite skilled in a lot of things ... they're mentored right through the whole twelve months and they have lots of training as well.* (Suzie MNO7)

This suggests that the RNs in this study found that mentoring and clinical education during the first 12 months of clinical practice was a valuable source of knowledge to inform CDM. At this point, the RNs have gained enough experience to assist them with CDM. The level of clinical experience influenced how most RNs made their clinical decisions to manage constipation in cancer patients. The RNs became more confident with how they make their CDs as their level of clinical experience increased. Clinical practice includes exposure to a variety of patients with similar constipation problems, together with clinical education or doing additional courses. Consequently, clinical experience was observed by most RNs, regardless of their clinical setting, to be important to CDM and the understanding of clinical situations to promote patient outcomes.

Angie, a novice RN from the community clinical setting, relates how she developed her clinical experience:

> *I think I've developed it by listening to what others must say, by doing the courses. If I have any problems, asking questions, because I didn't know anything about bowels before I started here* (Angie C06, novice)

As specified earlier, clinical experience was considered to be influential to CDM by most RNs, regardless of them working in different clinical settings. This implies that RNs' CDM is drawn from these familiar clinical experiences and they are likely to incorporate these into developing their CDM.

Exposure to routine clinical situations may give the RN the ability to fully engage in the process of CDM:

> *from experience, just from being aware, because that's something I do routinely every morning when I am looking at charts, you know.* (Suzie MON7)

The clinical experience gained may provide the RN with a firm basis on which to understand patients' needs and to help them make some appropriate clinical decisions.

Alex, a competent RN, gained her clinical experience from watching other health professionals dealing with situations, and this may have impacted on her CDM:

> *I will just watch them deal with the situation and try to learn from that.* (Alex MON 9, competent)

Margaret also shared her experience of how taking care of patients with similar bowel problems gave her confidence when making clinical decisions:

> *I think I have gained more confidence working here, and I have been dealing with patients with similar problems, because it's quite common with patients coming in with pain crisis and bowel problems.* (Margaret MON8, expert)

It was evident that, although patients presented with similar constipation problems, RNs understood there are multiple causes of constipation in cancer patients. These multiple causes of constipation were imposing challenges on RNs and influenced their CDM. Therefore, RNs who have been exposed to various clinical situations may be able to critically evaluate individual patients' needs when making clinical decisions:

> *Everybody's got to be treated as an individual because nobody's the same. You know, everybody – it's a different cycle when it comes to their bowels and what means something to one person, like I said, that doesn't mean the same thing to the next person.* (Suzie MON7)

This suggests that RNs made decisions regarding treatment plans based on their understanding of clinical situations. This clinical experience may be applied to provide specific individualised patient care:

> *So, we're aware of what medication can do – codeine and all that – how much it can inhibit the bowels and that sort of thing.* (Portia CO5)

> *You should take it case-by-case and you just pick these things up on the way. So, it's all just like a thin jigsaw puzzle, that you get information from everywhere.* (Suzie MON7)

RNs used their experience to enhance their understanding about clinical situations and patients' needs when making clinical decisions.

Angie sums it up by describing how every experience she had has influenced her CDM:

> *I think every experience influences the next; you can think of the experience that you've had … I suppose, [in] each situation you have to think about it and weigh up the pros and cons.* (Angie CO4)

This indicates that clinical experience and education gained during clinical practice provided the RN with an opportunity to understand patients' needs when making clinical decisions to manage cancer patients with constipation.

Drawing on personal experience was another factor that was believed by some RNs to be influential on their CDM. These personal experiences included RNs' lived experiences, and exposure to friends or families with similar problems to the patients they cared for. These experiences may have had a resemblance to a current clinical situation and this informed the RNs' CDM process. Three RNs from the acute medical ward and one RN from the community clinical setting described their personal experiences and how these influenced their CDM to manage constipation.

Portia described how lived experience informed her CDM:

> *and lived experiences where you've looked after people. I looked after my sick husband … you can work out what does work. So, it's just experience …* (Portia,

> CO5)

RNs related their personal experience of dealing with a family member who had cancer and constipation and how this experience influenced their CDM to manage this patient group:

> *personal experience, dealing with family and going through similar things. Watching him, or someone, go through that changed how I manage patients.* (Margaret MON8)

> *I realised this when I nursed my brother for about six months, who had cancer. I used to use the suppositories as I needed to.* (Suzie MON 7)

It was evident that, at three years of clinical experience, RN Alex found her own personal experience was important for her CDM:

> *And my mother is a nurse so, if ever, as a kid I had trouble going to the toilet or anything, she will know because I had Codeine. And a few friends are in the health profession. So, it probably travelled from there.* (Alex MON9)

This suggests that, at times, RNs draw on personal experiences when making clinical decisions.

It was evident that RNs' personal experiences played an important role for CDM. Personal experience may increase an RN's confidence, which helps with understanding patient clinical situations. For example, an RN who looks after family members with similar constipation symptoms may look for similarities to assist them in making clinical decisions.

The RNs in this study appeared to be more comfortable with their CDM as they gained more clinical experience. This comfort may be observed as being the result of their ability to cope with the needs of cancer patients with constipation. In this study, novice and expert RNs alike draw on clinical experiences when making their clinical decisions. The nature of an RN's experience whether is clinical or personal experience influences how their CDM skills are developed.

4.3.2 Subtheme 2: Lack of assessment tools

RNs from both study settings stated that a comprehensive constipation assessment tool was an important component to inform their clinical decisions. However, some RNs seemed to rely instead on their own clinical experiences, due to lack of knowledge of or lack of constipation assessment tools. This identifies the need for reliable constipation assessment tools to inform RNs' CDM when managing constipation in cancer patients.

Some RNs thought that policies within organisations could provide an understanding of clinical settings protocols. This suggests that appropriate organisation constipation guidelines are a necessity and may assist RNs in making clinical decisions. Some RNs recounted that a lack of appropriate constipation assessment tools impacted on CDM and patient outcomes. RNs found that the available assessment tools were subjective and hard to correlate, and even patients had trouble using the tools, making them difficult to inform clinical decisions:

> *So, it doesn't make any sense to me … and the clients have a bit of a trouble with the numbers. You know, they find it hard to correlate a number out of 10 to what the problem is for them.* (Mary CO4)

According to the expert RNs, novice RNs may not have a full understanding of a clinical situation and a lack of constipation assessment tools may have an impact on how they make their decisions. Consequently, the clinical decisions made might not reflect the most appropriate approach to patient care, due to a lack of constipation assessment tools. This implies that guidelines are important to CDM:

> *Well, a guide wouldn't astray, especially for – well, for any of us, really, but particularly for those nurses starting out. It would be helpful to have some sort*

> *of a guide to follow, like a tick-box-type-thing and, you know, if bowels aren't open [for] so many days, do this. I mean, we know this stuff from experience, but it probably isn't [obvious].* (Betty CO1, expert)

Although novice RNs lacked experience, and adhered to taught rules or plans to help them perform assigned tasks, Pretty also considered an assessment tool important to guide CDM:

> *Also, to have a guide for everybody would be useful ... but particularly for the nurses that are starting out, that really haven't got that knowledge to draw from.* (Pretty CO4)

Angie, a novice nurse, related how a lack of assessment tools influences her clinical decisions:

> *There's no specific tool, which would be very handy ... but then you have to think what you know about bowels to determine how their bowels work* (Angie CO6, novice)

Although competent RNs use their own clinical experience to make clinical decisions, they still perceive a constipation assessment tool as important for patients, in assisting RNs with CDM:

> *If they can't describe it, I show them and say, "Well, when we looked at it, did it look like any one of these?" I can [then] assess whether it's a good stool. Well, it's just a little card with different types of stools.* (Portia CO5)

Portia then went on to say that she uses her own experience, rather than the assessment tool, to make clinical decisions. This suggests that RNs considered their own experience to be reliable:

> *It's just a little card with different type of stools … Well, for me, it's just experience. I just increase the aperients as I see fit, through experience.* (Portia CO5)

> *l think the bowel chart is set out that way, so at the back of the bowel which l haven't even read the whole thing through because l usually follow my own guidelines or experience.* (Suzie MON7)

Betty also said:

> *I mean, we know this stuff from experience, but it probably isn't - I don't know of anything on paper. The health service doesn't have anything.* (Betty CO1)

Although Pretty an expert RN from the community mentioned that the Bristol

Stool form scale was accurate, she thought it was unreliable and was not sure if there was any literature supporting its validity:

> *It's pretty accurate, yeah, I'd say, plus the history. You wouldn't just use that. ..., it's always been the same. ...I mean, I'm not 100 per cent sure.* (Pretty CO2)

> *I have been in palliative care for about ten years probably and we have been using the same protocol… this is something we used to use way back when l first.* (Suzie MON7)

Portia from the community clinical setting also said:

> *I haven't looked at the clinical evidence, to be honest. I used the tools that I used in hospital.* (Portia CO5)

Having a valid constipation assessment tool may benefit clinical decisions made to manage constipated cancer patients. This suggests these nurses may have managed constipation in cancer patients differently if they had access to assessment tools:

> *I think it would be good if we had an actual tool, because I think it gets missed a bit because we just say, "How are your bowels?"* (Margaret MON 8)

Most RNs believe that unclear guidelines to assess constipation are a barrier to effective CDM, especially for novice RNs. This indicates that some RNs require clinical guidance and support from other health professionals, due to a lack of constipation assessment tools to inform their CDM:

> *For me, yeah, because I know – but I think, for the newer staff, it might be better if the guidelines were clearer. I just know because I'm a mentor for a younger nurse and she has a lot of problems with bowels.* (Christine MON11)

> *No, not any clear guidelines with that. I mean, if I'm not sure, I'll pick up the phone and ring CNS, the palliative care CNS.* (Betty CO1)

Furthermore, the availability of clear guidelines was emphasised by most RNs as fundamental to effective CDM to optimise patient outcomes. This suggests that poor constipation assessment may impact on clinical decisions being made, and patient wellbeing:

> *If there were clearer guidelines about what to do each day, because the longer you let it go, the harder it becomes.* (Pretty CO2)

> *I find that quite hard and the level of distress that it's causing the clients; they're looking at more than the actual physical constipation.* (Portia CO5)

RNs also exhibited frustration on how the lack of proper assessment tools made it difficult for them to make clinical decisions to manage constipation. These RNs reported that constipation assessment tools were not available or not validated outcomes:

> *Well, before, when I first started here, we had very, very clear guidelines.* (Christine MON11)

> *I don't know if it's hospital policy or not. I don't know what the policy [is].* (Suzie MON7)

This implies that a lack of organisation guidelines, policies, and procedures to assess constipation may influence how RNs make their CDs*.*

It appears that, at times, there is no consistency in constipation assessment and treatment choices, leading to RNs relying on their own experiences when making clinical decisions. Multiple options for treatment are based on trial and error, instead of adhering to constipation assessment outcomes or treatment guidelines, making it difficult to manage constipation. RNs seem to draw their decisions from experience:

> *It's just what works, I guess, what I know works. If it doesn't work, I'll try*

> *something else. Say the Movichol and Coloxyl with Senna doesn't work, then we go to the milkshake* (Pretty CO2)

Consequently, experienced RNs such as Christine may be guided less frequently by clinical guidelines and they may likely make decisions independently using their experience.

Most RNs, both in the community health and acute medical oncology ward clinical settings, stated that a comprehensive constipation assessment tool was important to informing their CDM. RNs pointed to a gap in the health organisation guidelines and their lack of availability of assessment tools in everyday clinical practice. Most of their clinical decisions were grounded on clinical experience rather than evidence-based practice. In an effort to reduce uncertainty, RNs comprehend that CDM should be based on established clinical guidelines rather than only on the presenting history of the constipated cancer patient. RNs in this study perceived that if their organisation were to provide validated constipation assessment tools this will help them with CDM. Lack of constipation assessment tools may impact on CDM and patient outcomes.

4.4 Theme 2: Developing partnerships

This session describes two subthemes conferring with other professional and partnership with patient and family. This describes the role of developing partnerships with other professionals, patients and their families to facilitate effective CDM to manage constipation in cancer patients. Effective communication and conferring with other health professionals were perceived to be important in providing an understanding of patients' health problems. RNs acknowledged the influence of other health professionals when making clinical decisions to manage constipation. RNs seemed to confer with other health professionals to seek approval, to minimise errors from risk taking and help solve clinical problems.

The importance of family support was also acknowledged by most of the RNs. Respecting, empowering, and building rapport with patients were important strategies that influenced their CDM. The RNs reflected that forming partnerships fostered collaboration with patients to achieve optimal outcomes.

4.4.1 Conferring with other health professionals

RNs from both study settings appeared to rely on their own experience to make clinical decisions; however, they acknowledged the importance of working as part of a multidisciplinary team (MDT) and sought expert support when faced with challenging clinical situations. It was evident that conferring with other health professionals, other nurses and doctors, or by just observing, influenced how RNs make their clinical decisions to manage constipation in cancer patients. Initially, RNs relied on other health professionals' advice and guidance but, as they progressed over time, this dependence seemed to decrease, indicating less reliance on others.

Other health professionals, especially in the community clinical setting, appeared to provide a safety net for these RNs, providing reassurance for them to take the ultimate responsibility of making clinical decisions:

> *It's only a phone call away to either ring a CNS or ring one of the doctors, or anything like that. So yeah, it's not like you're there on your own, so you don't have to try and think that you should make the decision on your own. You make the initial decision based on what you've learned and what you've been educated on.* (Alex, MNO9)

This suggests that the competent RN still required the assistance of experienced nurses to define clinical situations, to set priorities, and to integrate practical knowledge when making clinical decisions:

> *So, if I can't get the incontinence nurses to talk to me, I'll ring them. Even if it's*

> *not an incontinence problem, another bowel problem, I'll ring the CNSs and CNCs and get their advice. They'll either advise me what to do or ask me to contact the doctors.* (Portia CO5)

The reliance on the input of other health professionals in CDM to manage constipation in cancer patients was more evident with the less experienced RNs:

> *If it's complicated, and I am not sure, I will go and ask then I learn from her to take to the next patient* (Angie CO6)

This highlights that novice RNs had little or no conception of dealing with complexity, and CDM was supported by conferring with other health professions. Novice RNs may see other health professionals as a resource person to guide their CDM.

Initially, most RNs appeared dependent on the advice of others when making clinical decisions. Progressively, as expressed by the more experienced RNs, the dependence on experts appeared to decrease, suggesting less reliance on experts:

> *Usually, those decisions are made by doctors. Yes, they will, but I will make that kind-of decision [first], already senior nurses have decided on what to give, they do. I will say to the doctor: "This is what I am going to do. I am going [to], you*

> *know, give some suppositories and you write them up for me." Usually [they] are happy to do that.* (Suzie MON7)

Some RNs explained how they would prompt doctors on what to prescribe for managing constipation in cancer patients. This was evident in the narrative of RNs with more years of experience in clinical practice, who had experience involving themselves in making clinical decisions within a multidisciplinary team:

> *Sometimes, if they have got bowel history, we talk to the doctors first and make sure if they have bowel cancer or not, and ask, "Do you want me to continue or do you want me to just give Coloxyl with Senna?" Sometimes, if I am a bit concerned myself, I will say, "Can I do an X-ray? Can you order one?" So usually by day three or four, we are talking to the doctors anyway.* (Christine MON11)

Some RNs expressed how advice from other health professionals influenced the quality of their CDM to optimise their constipation management of cancer patients. However, others thought that advice from other health professionals may not reflect what they believe is acceptable. It was evident that not all health professionals can be consulted or relied on when making clinical decisions:

> *Yes, because they will go straight and write a Microlax enema or high Coloxyl enema. I usually tell them that this is what I will do, and this is what I found very effective as first-line and why I do that. I will say, "This works and it's not invasive," and I will say, "Let's try this first, a couple of suppositories."* (Margaret MON8)

Experience and understanding of a patient's condition played an important part in CDM during the first encounter with the patient. This suggests that knowledge of the patient's diagnosis and confirmation of that with other health professionals may provide the RN with an opportunity to make effective clinical decisions:

> *Opioids would be the reason for him because he's on this diagnosis of metastatic colorectal cancer and he's on opioids. I will check with the team but, as far as I know …* (Betty CO1)

Christine as an expert RN, further described how her level of clinical experience gave her confidence in dealing with clinical situations within a multidisciplinary team:

> *So, for me, because I have been here for so long, I can ring the consultant straight and say I am not happy with the resident. He is saying okay but I think, obviously,*

> *we should do olive oil, or can we get an x-ray or, usually, I will just do that, that's fine* (Christine MON11)

Conferring with experts played a crucial part in how clinical decisions were made when managing constipation in cancer patients. Conferring with experts suggests that the RNs were willing to make clinical decisions but at times needed collegial input.

4.4.2 Partnering with patient and family

This subtheme describes the importance of participants' perception of the role played by patient and family in CDM. Building partnership with patients and their families was perceived as important for CDM. Understanding patients' needs was acknowledged by most RNs. This provides an understanding of the patient's illness and facilitates better patient outcomes. RNs partnerships extended to the patient's family indicating their importance in how they made clinical decisions.

RNs emphasised the importance of effective communication when managing constipation in cancer patients and how this impacts on the clinical decisions made. Communication skills and understanding a patient's situation was perceived to be key to facilitate effective CDM to promote patient outcomes.

RNs said that discussing constipation with some cancer patients, who are embarrassed by the subject matter, is a barrier to effective CDM:

> *Most people don't want to talk about their bowels* (Angie CO6)
>
> *I think it's probably a gender thing and a generational thing that you keep things to yourself. He's a private person and talking about personal toilet habits. I think he finds it a bit embarrassing.* (Susan CO3)
>
> *Sometimes people just refuse to be part of it, even though you go through the consequences. It's hard to get information out of them* (Betty CO1)

This suggests that such awkward conversations are vital in understanding the patient's condition and the best way to approach CDM. Gathering the information needed to make a decision at times may be influenced by the patient's understanding of their constipation symptom.

> *Even if you say, "It's not diarrhoea; it's constipation," they might argue the point. Sometimes it's very hard to get the information* (Betty COI)

RNs encountered patients who are not able to verbally express themselves when asked about their bowel habits. This language barrier may impact on CDM:

> *At times, you get non-English-speaking-background patients and people don't quite understand.* (Alex MON9)

Effective communication was seen by most RNs as a major component of constipation assessment. It was apparent that the communication skills of an RN influenced effective clinical decisions.

Angie, a novice RN, noted how effective communication is important for CDM:

> *If you don't ask the right question, you are not going to get the right answer.* (Angie CO4)

Some RNs understood the nature of discussing constipation and how this influenced the clinical decisions they made. These RNs found that patients were often embarrassed and reticent to discuss their bowel habits. Good communication skills were needed to get accurate information from patients. RNs become more confident with their communication as they gain clinical experience:

> *So, it might be a bit embarrassing for us as well, but now, since I've been doing it for so long – I reassure people.* (Suzie MON 7)

Alex also said;

> *This is probably extremely embarrassing. You don't talk about this at every day at home and we need to be very careful because it may cause major problems.* (Alex, MON9)

Understanding the patient's point of view and respecting their dignity helps to open effective communication channels, which may be important to CDM and constipation treatment outcomes:

> *So, you let them know, "It's okay to be embarrassed, that's fine. But if it helps, I hear this all the time." Sort of comfort them, but not take away their embarrassment either.* (Margaret MON8)

However, RNs encounter challenges when dealing with difficult patients and this may influence their CDM:

> *If I've got a difficult patient saying they are not having treatment, there is nothing you can do. Everyone has got a choice. We try to bring them around.* (Christine MON11)

Most community RNs saw their time spent with patients as influential to CDM aimed at promoting effective constipation management in cancer patients. This suggests that time spent with the patient is crucial for constipation assessment and treatment plans:

> *I think that the hospital staff are probably run off their feet also, and I don't think that they've got the time to do a proper patient assessment.* (Pretty CO2)

Further, this implies that time devoted to patients by RNs especially in the community may be important in in relation- building in nursing practice.

Privacy was also considered to be important to CDM. RNs especially in the community said that patients feel safe to discuss constipation issues, without being afraid of other people listening.

> *You're in their home, you're not sitting in a ward with other people listening, and it's much more user-friendly in the home as opposed to being in a hospital ward.* (Angie CO6)

It is evident that working with cancer patients who have constipation requires effective communication skills for effective CDM and patient outcomes. RNs perceived that the time available to spend with patients was valuable and informed how they made their clinical decisions.

Another important factor that influenced RNs' CDM was empowering patients. Most RNs regarded the relationship with the patient as important in facilitating effective CDM to manage constipation. RNs, especially from the community clinical setting, viewed the patient's perspective as influencing how clinical decisions are made. This suggests that CDM may be influenced by the needs of the patient, rather than just the RN following other health professionals' recommendations, organisation protocols, or their own clinical experience.

> *Maybe client preference. You know, whatever they feel works. You might take that into consideration.* (Pretty, CO2)

> *Everybody's got to be treated as an individual because nobody's the same. everybody has a different cycle when it comes to their bowels and what means something to one person, doesn't mean the same thing to the next person.* (Margaret MON8)

> *The thing is every client's different. What works for one won't work for the other one. So, you've got to have all your medications and mix and match, as per client. One doesn't fit all.* (Portia CO5)

An understanding of the patient's preferences assists the RN with CDM.

Consequently, patients had an influence on how decisions were made. Furthermore, RNs in the community took into consideration the patients' needs and knowledge.

Some RNs described how building such patient relationships could facilitate a deeper understanding of patients' needs:

> *They don't know you ... You build rapport with them (Angie CO6)*

> *I think you must get good rapport with that client before ... Well, I have a good rapport with this man* (Susan CO3)

RNs, regardless of their clinical experience level, determined that patients' education was another major component that influences effective CDM when managing. RNs empowered patients to take charge of their constipation management:

> *You send them home and give them education – what to look for next time, if they haven't opened their bowels for number of days. Tell them what to do: go to the GP and seek some advice if they are not sure of what to do, or present to hospital.* (Margaret MON 8)

> *Mostly, you just educate the clients as to why constipation is happening and how important it is that they take regular aperients.* (Mary CO4)
>
> *Well, the thing is, in the community you must – because there could be a week between visits and, unless you educate the clients with that and encourage them* (Portia CO5)

These exemplars suggest that time spent with the patient is crucial for CDM and continuing patient care. RNs in the community clinical setting do not assess their patients on a daily basis, hence the importance of patient–nurse relationships.

Some RNs considered empathy as important to empower patients and create relationships. RNs seemed to consider their patients' situations when making clinical decisions:

> *Sometimes, I mean, it's for a good reason like if they had a good bowel motion, I will leave them if they don't want to take them that night or next day. I am happy to give them a holiday.* (Suzie MO7)
>
> *You kinda of think if it's worth doing this to them. Is the constipation not worrying them because they are not eating that much? They only eat hardly anything for last month. Is it worth doing things that cause discomfort to somebody who is kinda of*

> *dying?*

This suggests that empathy is important in creating patient trust, which may aid in establishing patient–nurse relationships.

In the community setting, regardless of the RN's level of experience, keeping in contact with the patient was important for constipation assessment and treatment. RNs in the community do not see their patients as frequently as do RNs in the hospital who are taking care of inpatients, so they empower their patients to promote continuing care:

> *because there could be a week between visits … I ask them to ring me, and I go and reassess.* (Portia CO5)

Empowering and trusting the patients encourages them to be part of their treatment process:

> *it was a kind-of difficult situation because he was still trying to maintain control over his own medication. I knew that he could do it.* (Betty CO1)

> *I find I approach them the way I would like to be approached, with respect and a bit of kindness and be professional.* (Susan CO3)

In addition, some RNs observed that linkage between what the patient desires and their own perception had an influence on effective constipation treatment outcomes:

> *He didn't want to lose control completely, we just let him go with it rather than stepping in and saying, "Sorry, you can't do this anymore, we need to take over." So, we kind-of let him go a little bit with it.* (Pretty CO2)

The RNs from both study settings, regardless of their clinical level of experience, considered the patient to be central to CDM during clinical practice. The patient's contribution may be direct or indirect, depending on the clinical situation. Therefore, the patient's perspective plays an important part to CDM.

Some RNs, especially in the community, extended their relationship to the patient's family or carers, indicating the importance of family involvement during CDM to promote patient outcomes. Involving family or carers, who had knowledge about the patient, informed CDM for optimal patient outcomes:

> *But, she was very stubborn, and her daughter was saying, "She doesn't listen," but we got her daughter involved as well.* (Christine MON11)

This RN saw these interactions as an opportunity to gain family support and to clarify clinical decisions regarding the patient's condition:

> *If I think they are lying, I will ask relatives because, often, they will lie. So, I will wait for the husband or wife to come in and I will tell them* (Christine M0N11)

Family support is important, and Portia notices the effectiveness of relationships with the patient's family through the patient's compliance with their treatment plans:

> *His wife monitors the tablets he takes, so he's now more compliant with taking his aperient and [has] not as many problems. So, I involved his wife and … we had to train them both.* (Portia CO5)

The RNs, particularly from the community clinical setting, rely on forming partnerships to provide quality of care and promote patient outcomes. Empowering patients, and engaging families or carers, influences how RNs make their clinical decisions to manage constipation in cancer patients.

4.5 Summary

This chapter has presented the major findings of the study, generated from data of the 11 RNs interviewed. Two themes and four subthemes were discussed. Exemplars, selected from the participants' experiences of CDM when managing constipation in cancer patients, were used to illustrate each theme to create resonance for the reader.

Level of experience impacted how RNs make their clinical decisions, regardless of their area of practice. Most RNs described how their clinical practice and CDM changed as they gained more clinical experience in their area of practice. RNs became more proactive when approaching clinical situations. Drawing on clinical or personal experience also influenced their CDM. RNs related their personal and clinical experiences, and how these influenced their CDM. Accessing clinical guidelines was observed by most RNs as important in guiding CDM. However, it was evident that most RNs relied on their own experience, or relied on other health professionals, because of a lack of appropriate constipation assessment tools or guidelines.

RNs mostly relied on previous experience to inform their clinical decisions; however, they acknowledged the importance of working as part of a multidisciplinary team and of reliance on other health professionals' advice. Conferring with other health professionals may be a reflection of the RN's level of independence when making clinical decisions. Novice RNs stated that other health professionals provided advice and reassurance, for safe and effective CDM.

It was evident that, when commencing clinical practice, RNs found that other health professionals played an important part in informing their CDM. Other health professionals were regarded as providing guidance and support towards making clinical decisions. As the RN gained more clinical experience, they felt the role of other health professionals was less important and started to rely on their own experience when making clinical decisions.

Empowering patients helps them to realise that their needs are an important component of clinical decision-making. Such relationships may provide a deeper understanding of the cancer patient's individual needs regarding constipation management. The RNs found that empathy for the patient's situations was important to CDM and facilitated the evaluation of the patients' cues and contributes to effective constipation treatment plans. Privacy, respecting the patient and the RNs' professionalism were also perceived as important in empowering patients to be part of their own constipation management. The next chapter presents a discussion on the key findings generated from this study in the light of contemporary literature.

CHAPTER 5: Discussion

5.1 Introduction

This chapter discusses the two major themes: “Factors influencing practice” and “Developing partnerships” in the light of contemporary literature. This chapter answers the research question of how RNs make CDs when managing constipation in cancer patients. Also discussed in this chapter are key issues relating to RNs’ CDM; influence of clinical and personal experience and forming partnerships to CDM.

Eleven RNs, working either in an acute medical oncology ward or a community health facility, took part in in-depth interviews to share their experiences of CDM. The RNs’ levels of experience will be discussed using Benner’s theoretical framework “From Novice to Expert” categories and serves as a reference for exploring the CDM processes and abilities of the RNs. Benner’s (1984) theory captures some aspects of RNs’ CDM. In this discussion chapter, CDM is referred to as the process of making clinical judgements and may incorporate clinical reasoning, intuitive awareness, and environmental factors that influence the clinical situation.

The impetus for this study, is to discuss what influences RNs CDM in relation to management of constipation in cancer patients.

5.2 Experience and clinical decision-making

The study RNs shared their experiences of what influenced their CDM when managing constipation in cancer patients. The themes developed explain what influenced clinical practice and informed the RNs' clinical decisions. These findings are consistent with previous literature which has shown that effective CDM is the most important element of nursing practice (Davis & Maisano, 2016; Ellis, 2017). Studies indicate that CDM is a complex process undertaken by RNs when making clinical judgements; planning, delivering, and evaluating care that requires knowledge; and gaining skills through education and clinical experience (Coffi, 2011; Payne, 2015). Studies have also indicated that CDM is a complex activity undertaken by RNs (Coffi, 2011; Payne, 2015; Davis & Maisano, 2016). However, studies have not identified how RNs make their CDs to manage constipation in cancer patients, hence the importance of the present study.

5.2.1 Influence of clinical and personal experience in clinical decision-making

Many RNs in this study described how clinical or personal experiences influenced how they made CDs when managing constipation in cancer patients. Clinical or personal experience has also been identified by other studies as influencing CDM in nursing (Benner, 1984; Benner & Tanner, 1987; Ellis, 2017; Jackson, 2016; Quick, 2016; Smith, 2016; Wainwright, Shepard, Harman, & Stephens, 2011). Although, RNs in this study identified their clinical and personal experiences as useful to their CDM, they did not discuss the need for evidence-based practice. CDs that are evidence-based are crucial to improve clinical practice and patient outcomes (Brower, 2017; Zimmerman, 2017). This brings attention to the importance of evidence-based practice in informing CDM to effectively address constipation in cancer patients.

The literature describes evidence-based practice as the implementation of the best available research evidence, together with patient perceptions, and combined with clinical expertise to address a clinical problem (McKeever et al., 2016). As such RNs have direct contact with patients throughout the continuum of cancer care (Woodward, 2012), and their CDM forms an essential component of achieving effective evidence-based strategies to manage constipation in this patient group. In nursing practice, evidence-based practice forms an integral component of patient care and contributes to improved patient outcomes (Brower, 2017). Health professionals need to incorporate evidence-based practice into their healthcare decisions and this starts by questioning current practice, looking for better solutions or alternatives (McKeever et al., 2016). RNs in this study were more likely to seek out evidence-based clinical guidelines if they acknowledged the importance their CDM. This is line with Johnston, Coole and Feakes (2016) who said clinical tools are more likely to be used if they are perceived as informing practice, relevant to both the nurse and the patient, and not a burden to document. The study findings indicated that most RNs' clinical decisions are grounded on familiar clinical or personal encounters, rather than being informed by an evidence-based approach.

The study findings showed that education had a significant role in how RNs developed CDM skills. The Hypothetico-Deductive Reasoning model asserts that education is critical for CDM (Melin-Johansson, Palmqvist, & Rönnberg, 2017). Therefore, nurses' education influences their CDM. Normally information that is obtained through formal studies provides the nurse with theoretical knowledge. Whereas clinical knowledge develops from clinical experience and usually does not necessarily reflect educational preparation. Noted as well in this study, clinical experience seemed to be more influential to CDM, hence the importance of understanding how RNs learn from experience. In this study, it was concluded that the amount of clinical or personal experience effects how RNs approach CDM rather than education. This implies that the in-depth knowledge that develops from clinical experience is important to developing CDM. This type of clinical knowledge has been referred to by Benner (1984) as domain knowledge which usually develops in relation to areas of experience. In nursing, domain knowledge has been recognised as important to CDM (Benner, 1984).

The RNs in this study described how they gradually gained clinical experience over time. It was clear that most RNs recognised themselves as novices at the beginning of their nursing practice and explained how they needed some guidance with CDM. This aligns with the work of Benner (1984) and Gillespi and Peterson (2009) who described that novice nurses usually refer to guidelines when making clinical decisions, due to a lack of experience. It has been proposed that CDM improves as the nurse gains more experience of nursing patients within a specific speciality and their CDM becomes more intuitive (Benner, 1984; Gillespie & Peterson, 2009). The RNs became confident with their CDM as they gained more clinical experience. Further, expert RNs are able recognise similarities in patients (Benner, 1984; Gillespie & Peterson, 2009; Wu, 2016) presenting with constipation symptoms and can use these to make their clinical decisions. In this study finding, RNs' CDM abilities are mostly drawn from clinical or personal experiences developed over time. In agreement, Ramezani-Badr et al. (2009) showed that nurses used their previous clinical experience when they recognised that the symptoms from one patient corresponded to other patients. Benner (1984) and Stinson (2017) postulated that nurses develop intuitive CDM through experience and they tend to make better decisions as they become experts.

The study finding suggests that most of the development of RNs' CDM skills were linked to the number of years working as a RN in a specialised clinical area. This contributes to the argument that CDM development is most probably the result of clinical knowledge gained through years of clinical experience (Davis & Maisano, 2016; Stinson, 2017) and aligns with Benner's (1984) theory. Over time RNs gained more experience and were continuously expanding their CDM skills needed for providing quality of care to cancer patients with constipation. This is consistent with previous studies, which stressed the importance of years of nursing experience in clinical practice (Benner, 1984; Gillespie & Peterson, 2009). RNs explained that as they stayed longer in their area of practice, their level of clinical experiences increased as well as their CDM skills.

Most of the RNs from both study settings acknowledged transitional period from being a novice to becoming an expert nurse and how it influenced the development of their CDM skills. Working in the same speciality for a long time helped these RNs gain confidence and experience to make clinical decisions. The RN's level of clinical experience became more evident when they started to confidently rely on experiences to make clinical decisions rather than organisation guidelines. This may suggest that the RN's level of clinical experience may have reached that of an expert, where clinical decisions are made independently.

The study findings revealed that, regardless of level of experience or the clinical setting (acute care versus community), there were no variations among the RNs as to how they made clinical decisions. Despite the RNs' levels of experience, there were similarities when describing their clinical decisions made to manage constipation in cancer patients. Importantly, the level of clinical experience plays an important in nursing practice can have influence on how RNs make CDs to effectively manage constipation in cancer patients.

5.2.2 Clinical decision-making and constipation management

The causes of constipation are often misinterpreted (Bardsley, 2017; Day, Wills, & Coffey, 2014; Fredericks, Hollis, & Stricker, 2010; Huang, 2016; Nancekivell-

Smith, 2010; Shu-Yu et al., 2016). The studies indicated that there are multiple factors that lead to constipation such as physical, psychological, emotional, and environmental causes (Huang, 2016; Kyle, 2011; Mitchell, 2014b; Nancekivell-Smith, 2010). Notably in the literature, health professionals and patients seem to differ in defining constipation, and this impacts on implementing effective treatment plans in this patient group (Dal Molin et al., 2012; Kyle, 2011; Lentz & McMillan, 2010). Usually, patients associate constipation with a change in their bowel habits, whereas health professionals tend to focus on the stool frequency and appearance (Brown, Henderson, & McDonagh, 2009; Kyle, 2011). These differences, regarding how constipation is interpreted, impacts on how RNs make their clinical decisions and may warrant further investigation to improve patient outcomes.

The literature shows that although there are many different medications available, there appears to be no consensus on the best approach to constipation management in cancer patients (Bardsley, 2017; Droney et al., 2008; Emly & Marriott, 2017; Fredericks et al., 2010; Woolery et al., 2008). This was probably why RNs' CDM were based on their previous successes and failures when addressing constipation in this patient group. However, management of constipation in cancer patients is complex and challenging, because there is more than one aetiology (Emly & Marriott, 2017). The study findings identified that RNs' CDM may be influenced by constipation treatment options. In support, Huang (2016) and Gardiner (2014) state that the success of constipation management may be influenced by the availability of treatment options.

During the interview process, RNs referred to a wide range of laxatives readily available to manage constipation in cancer patients. However, they did not elaborate on CDM regarding laxatives choices and their treatment options were evidently based on their own previous experience when administering these drugs. This aligns with the study conducted by McMillan, Tofthagen, Small, Karver, and Craig (2013), which showed that the lack of research on which to base treatment decisions is a significant problem facing oncology nurses treating constipation in cancer patients. Consequently, the finding of this study indicates that RNs encounter challenges in making clinical decisions regarding treatment choices, which at times lead to trial-and-error approaches, based on the previous successes and failures of past clinical exposures. The finding is consistent with Brown, Henderson, and McDonagh (2009); Chapman and Hungerford (2015); Diego, Atayee, Helmons, Hsiao, and Von Gunten (2011), who highlighted that the widely used guidelines to commence laxatives concurrently with prescribed cancer-related treatments are not routinely followed in daily practice. This finding is also supported by Thomas (2008) who observed that nurses' lack of expertise in understanding the constipation treatment options available contributes to patients often receiving more than one form of laxative belonging to the same drug group and action. This clearly affirmed that RNs' treatment choices are drawn from their experience of what worked in the past, rather than being driven by best practice. This was more evident in experienced RNs, who were confident in nurse-initiated laxatives based on what worked for them in the past.

Normally, the RN's role is to incorporate evidence-based interventions (NMBA, 2016) in managing or minimising constipation from becoming a medical problem for patients with a diagnosis of cancer (McMillan et al., 2013; Woolery et al., 2008). Consequently, it is essential for RNs to understand treatment options to inform their CDM to address this distressing symptom in cancer patients. In this study, as noted earlier, RNs used their past knowledge and experience to inform their CDM

5.2.3 Constipation assessment tools and clinical decision-making

Cancer patients who present with constipation need a comprehensive assessment to identify the causes and establish treatment approaches (Apau, 2010). Constipation assessment and diagnosis is usually symptom based, where a comprehensive history and proper guidelines impact on patient treatment outcomes (Bardsley, 2017; Huang, 2016; Kyle, 2011; Nancekivell-Smith, 2010). The use of validated constipation assessment tools becomes important when identifying the severity of constipation (Bardsley, 2017; Dal Molin et al., 2012). RNs encounter patients in a variety of clinical settings and are in a better position than other health professionals to assess and monitor symptoms (Zanik & Gray, 2015), including those of constipation in cancer patients (Woodward, 2012; Huang, 2016; Wickham, 2017).

Wickham (2016) and Huang (2016) highlighted that, in the management of constipation in cancer patients, thorough and appropriate assessment of symptoms is an essential component in evaluating symptom severity and planning effective treatments. Most RNs from both study settings acknowledged that a comprehensive constipation assessment tool was important in informing their clinical decisions. This is consistent with previous studies, which identified assessment as an important approach for improving the management of constipation in cancer patients (Bardsley, 2017; Lentz, 2010). However, the current study findings showed that RNs relied on their own clinical experience which, in turn, implies they used their individual assessment rather than a constipation assessment tool in their everyday clinical practice. Several reasons were identified including; the lack of constipation assessment tools readily available at the patient's bedside or in their home (for those patients nursed in the community settings); the challenge of implementing clinical guidelines in either setting; or the constipation assessment tools used previously were difficult to use and collate.

Some RNs, especially in the community, highlighted that there were constipation assessment tools, however they described them as out of date, difficult to interpret, and not helpful for their CDM. Day et al., (2014) highlighted that successful constipation assessment may depend on the availability of effective assessment tools. This is consistent with Librach et al., (2010), who recommended the use of good assessment tools for diagnosing and effectively managing constipation in cancer patients or patients with advanced illness. This lack of validated constipation assessment tools to guide CDM led RNs to rely on their own clinical experience and that of other health professionals. Importantly, as emphasised by Mitchell (2014a), adequate and appropriate assessment of symptoms is important in evaluating symptom severity and treatment benefit when managing constipation in cancer patients.

The RNs in this study did not use validated constipation assessment tools. It is possible that the reliance on experience overrode the importance of using evidence-based tools to guide their CDM. For example, the RNs most commonly used diagnostic criteria for determining the severity of constipation in this patient group were the frequency of bowel opening and the stool type. However, the symptoms of constipation can be affected by the patient's own interpretation or experience of what is a "normal" bowel habit and may not be congruent with a professional's assessment (Erichsén et al., 2016). Furthermore, Bardsley (2017) believes that diagnosing constipation using bowel movement per day can be misleading, as many people have fewer or more movements without having other symptoms. Consequently, CDM based on the above interpretations may be inaccurate, impacting on patient outcomes. Evidence-based studies recommend a holistic, person-centred assessment of constipation, focusing on bowel movement, current medications, history of laxative use, fibre and fluid intake, physical activity, and psychosocial history (Huang, 2016).

Studies show that assessment is the mainstay of constipation management in cancer patients and a step-wise approach is necessary (Bardsley, 2017; Nancekivell-Smith, 2010). However, in both the community and acute medical oncology clinical settings, the RNs did not mention the use of any constipation assessment tools during their daily clinical practice. This is probably an indication that the RNs in this study had no knowledge of, or skills to use, some of available tools such as the Rome III and Bistrol stool type forms (Andrews & Morgan 2013) to guide their CDM. The Rome IV criteria constipation assessment tool is a revised version of the Rome III criteria (Emly & Marriott, 2017; Mearin et al., 2016), and needs to be used together with the Bistrol stool form (Day, 2014). However, these tools are rarely used in clinical practice because not all patients who need treatment fit the criteria (Andrews & Morgan 2013). Although the Rome IV criteria is more comprehensive than the previous Rome III criteria, is only used to diagnose functional bowel disorders (FBDs) (Emly & Marriott, 2017; Mearin et al., 2016). The Rome III criteria was used to diagnose functional constipation, irritable bowel syndrome, functional abdominal bloating/ distention, functional diarrhoea, and unspecified bowel disorders. The Rome IV criteria now has included opioid-induced constipation as the sixth category, which is distinct from FBDs because of its specific aetiology and similar symptoms to functional constipation (Emly & Marriott, 2017; Mearin et al., 2016).

The guidelines in oncology nursing are limited to certain presenting symptoms, with a need for the user to identify the most severe or bothersome symptom to decide on treatment plans. This might also explain why constipation remains unrecognised, inadequately assessed, and ineffectively managed, despite being observed as a major source of distress that impacts on cancer patients' quality of life (Prichard, Norton, & Bharucha, 2016; Prynn, 2011; Wickham, 2016).

The RNs in this study emphasised the need for reliable constipation assessment tools for novice nurses to inform their CDM. However, they identified themselves as experts and did not believe they needed assessment tools for their CDM. This differs from extant literature. Emly and Marriott (2017) stated that, if assessment tools are correctly used, they can guide nurses' CDM, help reduce these unpleasant symptoms, avoid the tragic consequences of mismanagement, and improve patients' quality of life. Consequently, because these RNs did not use validated constipation assessment tools, the quality of nursing care by these RNs might not be based on a holistic assessment.

5.3 Clinical decision-making and partnerships

The second theme "developing partnerships" described the importance of patients, families, and other health professionals in CDM. RNs from both the community health facility and acute medical oncology ward clinical settings formed partnerships with patients, their families and carers, and other health professionals to inform their CDM. The study findings are consistent with Ali and

Muhammad (2014), who found that a shared decision-making process plays a significant role in improving the quality of care given to patients. Implementing these strategies can promote a patient-centred approach to the CDM process (Ali & Muhammad, 2014). Further, the findings are in line with the NMBA (2016), which stipulates that the patient is the constant factor in the CDM process, and acknowledging their preferences, thoughts, and feelings about their care should always be encouraged to promote better patient outcomes. The following section focuses on the influence of developing partnerships to inform clinical decisions to manage constipation in cancer patients.

5.3.1 Influence of collaboration on clinical decisions making

In this study, RNs from both study settings, although relying on their own experiences, acknowledged the importance of working as part of a multidisciplinary team (MDT), especially the importance of seeking expert support when faced with challenging clinical situations. However, the community RNs were more likely to seek the input of other health professionals such as General practitioner (GP), doctors, Clinical Nurse Consultants (CNC) and Clinical Nurse Specialist (CNS) compared to their counterparts working in an acute clinical setting. These RNs stressed that in hospitals there is a lot of support from the treating team, who are usually available most of the time. RNs in hospital seemed to consult with each other or doctors when faced with complex clinical situations.

Consulting other health professionals when faced with challenging situations provided RNs reassurance and support with their CDM process. This dependence on other health professionals was acknowledged by most RNs, who stated that at the beginning of their practice they were constantly seeking help when making clinical decisions. This is consistent with the literature which identified that RNs, especially novice nurses, often require verbal and physical cues to assist with CDM (Walton, 2016; Payne, 2015). When making clinical decisions, novice nurses are prone to making errors because of their limited clinical knowledge and experience; they tend to seek information from experts to help solve the problem (Payne, 2015; Standing, 2008). This is supported by Benner (1984) that, in the novice stage, the RNs do not have domain-specific experiences to guide their decision-making (Benner, 1984; Davis & Maisano, 2016). This finding implies that when RNs have little in-depth knowledge of the patient's symptom management, they rely on the management plans of other health professionals to guide their decisions.

The study findings highlighted the role of other health professionals in influencing CDM. As mentioned, some of the RNs were highly dependent on others at the beginning of their nursing practice. Notably when some RNs reached the “competent” level, they were able to practice without the direction of other health professionals, though the need to consult others was still seen as important. Dependence on other staff decreased as the years of clinical experience practice increased. This may be because these RNs were exposed to a variety of patient situations, which extended their clinical knowledge and improved their confidence. The RNs in this study with more years of clinical experience implemented treatment plans autonomously and they usually made suggestions to doctors regarding treatment options. Again, this is consistent with Benner (1984), who theorised that nurses with more years of experience can go beyond the existing standards and take responsibility to create their own interpretations of clinical situations. Furthermore, Benner (1984), described an expert nurse as someone with vast background experience and the ability to deal with complex situations with a deep understanding.

5.3.2 Patient and family partnerships and clinical decision-making

The study findings showed that forming partnerships was important for fostering collaboration with patients and their families to achieve optimal patient outcomes. Baillie (2016) cited that partnership is a respectful, negotiated approach of working together, which enables participation, choice, and equity within a trusting relationship that is based on support and mutuality. Further, Chaboyer et al., (2016) asserts that taking time to build trust and establish relationships with patients is worthwhile to facilitate positive patient outcomes. The RNs in this study placed great emphasis on involving patients when making decisions to manage constipation symptoms. This is in line with a systematic review conducted by Ali and Muhammad (2014), which emphasised the importance of involving patients in clinical decisions and the significant improvement this made in the quality of care given to patients. In the community clinical setting, regardless of the RN's level of experience, working with the patient was perceived as important for constipation assessment and treatment outcomes.

In the community, nurse–patient relationship building was important as the patient may refuse entry into their home; this relationship is different to the nurse–patient relationship in a hospital setting. The patient encounters of RNs working in the community clinical setting is limited to certain visiting days, compared to more frequent encounters of hospital-based RNs. Community RNs, like hospital-based RNs, established relationships with patients that foster collaborative CDM to promote constipation outcomes. Respecting, empowering, and building rapport with patients influenced how clinical decisions were made. These RNs saw patient engagement as essential to inform their decisions. This finding is in line with the Chummun and Bolan (2013) study, which showed that encouraging patients to verbalise their experiences of taking medication helps health professionals to identify issues associated with non-compliance, based on side effects. This affirms that developing relationships with patients helps the CDM of RN and allows them to gain a comprehensive understanding of constipation symptoms to achieve desired patient outcomes.

5.3.3 Communication and clinical decision-making

The RNs in this study spent time with patients and their families, assessing and discussing treatment options to alleviate constipation symptoms. In oncologic nursing, communication is a key component in providing cancer care and nurses have a role to support patients and their families regarding their illness (Wittenberg, Buller, Ferrell, Koczywas, & Borneman, 2017). In clinical practice, the main objective of CDM is to provide the highest quality patient care (Davis & Maisano, 2016; Stinson, 2017; Voldbjerg, Grønkjær, Wiechula, & Sørensen, 2017).

RNs in the present study stressed the importance of discussing constipation and were aware that the subject may cause some embarrassment for some cancer patients. As such, RNs identified communication as an integral part of assessing cancer patients with constipation. This is consistent with Mitchell (2014) and Wickham (2016), who showed that a lack of proper constipation assessment due to poor communication may lead to symptom misinterpretation, impacting on patient outcomes. Brownie, Scott and Rossiter (2016) added that communication between nurse and patient can be difficult impacting on therapeutic relationships and patient outcomes. Therapeutic communication skills strengthen patient - nurse relationships (Brownie et al., 2016), hence the importance of effective interaction with patients who are suffering from constipation and cancer.

Effective communication supports the nurse–patient relationship, which creates an environment of trust and makes patients feel involved and respected (Zamanzadeh et al., 2014). Effective communication is defined as a two-way process of exchanging the right information and allows individuals sharing information, meaning, and feeling through verbal or nonverbal messages (Ellington, Reblin, Clayton, Berry, & Mooney, 2012; Tay, Hegney, & Ang, 2011). Further, in an evidence gathered by Tay et al., (2011) and Chaboyer et al., (2016), patients appreciate open conversations and usually collaborate when they are given attention.

The nurse should be able to use their communication skill to initiate a conversion that will inform their clinical decisions (Tay et al., 2011). However, while the nurses use strategies to engage patients in communication, there are barriers to be considered such as a lack of privacy, literacy level, and the language barrier where English is a second language (Chaboyer et al., 2016). This also corresponds with studies which have shown that, at times, patients with constipation have some difficulties expressing their symptoms and may not discuss their symptoms voluntarily (Huang, 2016; Lentz & McMillan, 2010). Studies have also emphasised how a lack of communication between healthcare professionals and cancer patients may contribute to inadequate symptom control (Mitchell, 2014a; Nancekivell-Smith, 2010).

The study findings showed that effective communication is a major component to inform CDM to achieve optimal patient outcomes. Through skilled communication, RNs empowered patients and their families by engaging them in decisions about constipation treatment plans. In this study, respecting the patient was an effective strategy used by RNs during discussions which helped them gather information crucial for planning care. The experienced RNs in this study (with more than five years' clinical experience) demonstrated confidence when discussing constipation with patients.

In this current study, forming partnerships with patients provided RNs with clinical knowledge concerning individual patient responses to treat their constipation symptoms. Nurse–patient participation in decision-making empowers patient collaboration, which is the foundation for a plan of care that is focused on the needs of the patient (Ali & Muhammad, 2014; Cicekci et al., 2017; Zamanzadeh et al., 2014). RNs in this study, especially from the community clinical setting, recognised that the patient's perspective influences how clinical decisions are made. In addition, RNs saw education of patients as another major component that influenced effective CDM when managing constipation in cancer patients. RNs recognised how they were in an ideal position to educate patients about constipation symptoms, encouraging them to monitor their bowel function, dietary and lifestyle modifications. This is in line with a study conducted by Foster, Idossa, Lih-Wen, and Murphy (2016), which emphasised the importance of oncologic nurses in delivering effective patient education as an optimal approach to patient-centred care.

This study further showed that family involvement has an influence on how RNs make CDs to manage constipation in cancer patients. Most of the RNs had to collaborate with patients' families when making clinical decisions to promote better patient outcomes. Patients in the community are usually looked after by their families (Holroyd, 2015; Wickham, 2016), hence the importance of RNs developing partnerships with families to achieve effective constipation treatments. Expert RNs seek family support when dealing with cancer patients (Lentz & McMillan, 2010). Tariman et al., (2016) showed that the support of family becomes most important when patients are vulnerable with their life-changing illness; often, they can be overwhelmed with treatment decisions and, at times, by the overall treatment of the healthcare system.

In conclusion, the study findings indicate that RNs play an important role within a multidisciplinary team, which requires collaborative team communication regarding patient care plans. Building trust and having well-established relationships with patients and their families may be worthwhile in making decisions regarding constipation treatment plans. Patient and family partnerships in CDM are not only empowering but have the potential to lead to appropriate constipation management and promote patient quality of life. Such relationships may provide a deeper understanding of the cancer patient's individual needs regarding their constipation management. Further, empowering patients and their families encourages them to embrace the constipation treatment plans, improving patient outcomes.

5.4 Summary

This chapter has highlighted the similarities and differences between the study findings and contemporary literature. It has provided insight into what influences RNs' CDM when managing constipation in cancer patients. The key issues identified included those influencing RNs' practice such as level of experience, drawing on clinical or personal experiences, and lack of knowledge of, and use of, assessment tools. Many RNs identified developing partnerships with patients, families, and other health professionals as influential to their CDM. Through the discussion, an insight has been gained regarding RNs' CDM processes within the context of clinical experience, as stipulated by Benner's (1984) theory "From Novice to Expert".

It is important to understand the impact of constipation in cancer patients to promote educational prevention programs and to provide information to patients and their families. The next and final chapter presents the study conclusion, limitations of the study, implications for practice and recommendations for future research.

Chapter 6 Thesis Conclusion

This chapter presents the overall conclusion of the thesis which explored how RNs make their CDs when managing constipation in cancer patients. Limitations of the study, implications to nursing practice and recommendations of future studies are presented.

The study findings indicated that clinical decision-making (CDM) is crucial in the context of clinical practice. CDM is a unique complex process undertaken by RNs and involves individual healthcare professionals making decisions about patient care. In oncology nursing CDM is even more complex, considering the nature of cancer patients' disease trajectory and the complications associated with treatment. Several studies have identified theoretical frameworks about CDM and each has its relevance and contribution. However, there is no literature in relation to the what influences RNs' CDM when managing constipation in cancer patients.

This study has explored what influences RNs' CDM when managing constipation in cancer patients within acute medical oncology and community clinical settings in Sydney, NSW, Australia. The data revealed two major themes; "Factors influencing practice" and "Developing partnerships". The associated subthemes included clinical or personal experiences, lack of knowledge of, or use of, constipation assessment tools, developing partnerships with patients and their families, and conferring with other health professionals. It was evident that RNs' CDM processes were drawn from these clinical experiences rather than from evidence-base decisions. Regardless of where the RNs worked in this study, there were no differences in how RNs approached constipation management in cancer patients. This finding concluded that CDM skills development was most probably the result of clinical knowledge gained through years of clinical experience.

RNs seemed to have unique relationships with patients and were in a better place to make clinical decisions, which are essential for providing the quality care required by cancer patients with constipation. RNs from both study settings formed partnerships with patients and their families when making clinical decisions to manage constipation in cancer patients. Forming partnerships fostered patient collaboration aimed to achieve optimal patient outcomes.

The qualitative descriptive method used in this study was the most appropriate research approach in describing how study RNs made CDs. This study has successfully described what influences RNs' CDM when managing constipation in cancer patients. The body of knowledge generated through this study has the potential to improve clinical practice. Understanding what influences RNs' CDM process when managing constipation in cancer patients can increase the ability to provide high-quality care that promotes patient outcomes.

6.1 Limitations of the study

Although it is relatively normal for a qualitative study, one of the limitations of this study was the small sample size, which consisted of a cohort of RNs from only two clinical settings in New South Wales. Therefore, the experiences of these RNs may not reflect those of RNs in other clinical settings. There is a possibility that RNs who were not involved in this study, and who might be actively engaged with professional development programs and are more familiar with professional discourses, may make different clinical decisions. Furthermore, while the study findings contribute to the body of knowledge regarding the management of constipation in cancer patients, the results may not be transferable to other RNs in different clinical settings and contexts. Regardless of this, the aim of the study was achieved, which was to provide a rich understanding of and insight into what influences RNs' CDM when managing cancer patients with constipation. However, further research is recommended using a larger cohort of RNs to gain a more detailed understanding of the extent of these influential factors. A more representative sample would, in turn, provide more detail about RNs CDM regarding constipation this patient group.

Another limitation was that although the strategy of the purposive sampling technique used in this study was to find RNs from novice to expert, instead, the sample was mostly expert participants who had a high level of clinical experience. Thus, findings were described mostly from an expert point of view. For example, the novice level was represented by one participant, competent by two, proficient by two, and expert by six, respectively. Consequently, other RNs might have different experiences regarding the development of their CDM. In qualitative research, the representativeness of participants is not always an issue of concern, nevertheless, it is essential to consider the possibility that other RNs might have perceived CDM differently to the study participants.

6.2 Implications and recommendations for future research

RNs work in a practice-based profession, where CDM is essential for delivering high-quality care to promote positive patient outcomes. It is evident in this study that if RNs are to provide quality caring practices that are meaningful to them, healthcare organisations will need to provide adequate resources that facilitate effective CDM processes. Evidence from other studies shows that constipation remains unrecognised, inadequately assessed, and ineffectively managed, despite being observed as a major source of distress that impacts on cancer patients' quality of life. Therefore, educational programs are required for RNs who take care of cancer patients, to understand the impact of constipation on a patient's quality of life. RNs need to continue developing and expanding their skills to deliver evidence-based care to cancer patients with constipation. Constipation should be prioritised and managed properly, using an evidence-based approach to improve patient outcomes.

The study findings highlighted how lack of knowledge of, or use of, constipation assessment tools influenced how RNs made their CDs. RNs should utilise evidence-based constipation assessment tools to accurately assess constipation and formulate a holistic management plan. This will help prevent complications developing, decrease the severity and frequency of constipation, and improve the quality of life of cancer patients and their families. There is a need to support RNs to use clinical assessment tools that are standardised and evidence-based to promote positive patient outcomes. Constipation assessment guidelines need to be clearly outlined in the policy and procedure manuals of healthcare organisations and be readily accessible to the RNs. Future research, therefore, could explore RNs' knowledge of, and use of, validated constipation assessment tools when making clinical decisions. This will provide RNs appropriate tools to guide their CDM which are based on evidence rather than experience alone.

This study found regardless of area of practice, there was inconsistency in the use of laxatives. Individual RNs seemed to favour certain laxatives over others due to what worked in the past. There is a need to develop evidence-based treatment guidelines, together with educating RNs, to avoid the unnecessary use of multiple courses of laxatives in this patient group. It is recommended, therefore, that health organisations provide clear instructions to RNs, based on the latest evidence available, regarding administering nurse-initiated laxatives. This will empower RNs to manage constipation proactively, without relying on experience alone or doctors' prescriptions.

RNs in this study stressed the importance of developing partnerships with patients and their families. This affirms the pivotal role of RNs who engage with patients and families, supporting them as they struggle to deal with this distressing symptom of constipation. Supporting RNs in developing partnerships with patients and their families should be encouraged to improve patients' quality of life. Further research is needed to focus on patients' and their families' perspectives regarding clinical decisions made by clinicians to manage constipation. RNs need to be taught in undergraduate programs good communication skills to enable them to develop trusting relationships that empowers patients, their families and carers.

The study findings affirmed that communication skills form the foundation for developing a strong bond of trust between the patient and a nurse. However, as identified by the RNs in this study, discussing constipation with patients may cause some embarrassment during bowel assessments, due to the nature of the subject; patients may have some difficulties expressing their symptoms and may not volunteer information. In this study, RNs acknowledged the need for effective communication to CDM. It is, therefore, recommended that these significant communication skills be taught at undergraduate level, as well as in clinical practice, to promote quality of care and improve patient outcomes.

Academic and clinical educators need to create experiences that provide students with opportunities to learn CDM skills and abilities along the continuum of professional development within the oncology specialty. Furthermore, an understanding of how novice RNs make their clinical decisions to manage constipation in cancer patients during their first year of practice will enable nursing managers, educators, and other health professionals to give them support and promote evidence-based practice. Workshops, in-services, mentoring and online learning to upgrade health professionals' CDM skills may bring change to their practice, which is evidence based. Nursing managers need to provide continuing professional development programs to create high-quality learning environments that promote evidence-based, patient-centred care.

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Appendices:

Appendix 1: Human Research Committee

HUMAN RESEARCH ETHICS COMMITTEE

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JK/pme

27 August 2013

Ms Faith Moyo

Acute Medical Oncology Ward

Nepean Hospital

Dear Ms Moyo

Study Reference: Study 13/51 – LNR/13/NEPEAN/100

Study Title: *"Registered Nurses' clinical decision-making when managing constipation in patients with cancer"*

Thank you for your emailed response of the 13th August 2013 addressing the matters raised in the Committee's letter dated 12 August 2013 following ethical review of the above project.

Your request to undertake the above protocol as a Low and Negligible Risk has now been given approval. We are satisfied that your protocol meets the criteria for a Low and Negligible Risk study. It was considered that this study was exempt from full ethical review.

This HREC has been accredited by the NSW Department of Health as a lead HREC to provide the single ethical and scientific review of proposals to conduct research within the NSW public health system. This lead HREC is constituted and operates in accordance with the National Health and Medical Research Council's *National Statement on Ethical Conduct in Human Research* and the *CPMP/ICH Note for Guidance on Good Clinical Practice.*

I am pleased to advise that the HREC has now granted ethical approval of this **multi-site** research project to be conducted at the following sites:

- *Westmead Hospital by Ms Jo-Anne Greaves*
- *Lemongrove Community Health Facility by Ms Louise Maher*

Study 13/51 – LNR/13/NEPEAN/100 – *cont'd*

The following documentation has been reviewed and approved by the HREC:

- LNR NEAF AU/6/A7A2114
- Scientific Protocol Version 1 dated 17/5/2013
- Participant Information and Consent Sheet Master Version 3 dated 27/8/2013
- Letter to Nursing Unit Manager Master Version 1 dated 27/8/2013

- Recruitment poster Master Version 1 dated 27/8/2013
- Confidentiality agreement Version 1 dated 17/5/2013
- Participant Demographic data sheet Version 1 dated 17/5/2013
- Interview Guide Version 1 dated 17/5/2013

Please note the following conditions of approval:

- The coordinating investigator will immediately report anything which might warrant review of ethical approval of the project in the specified format, including unforeseen events that might affect continued ethical acceptability of the project.
- The coordinating investigator will immediately report any protocol deviation / violation, together with details of the procedure put in place to ensure the deviation / violation does not recur.
- Proposed amendments to the research protocol or conduct of the research which may affect the ethical acceptability of the project, must be provided to the HREC to review in the specific format. Copies of all proposed changes must also be provided to the relevant Research Governance Officer.
- The HREC must be notified, giving reasons, if the project is discontinued at a site before the expected date of completion.
- The coordinating investigator must provide an annual report to the HREC and a final report at completion of the study, in the specified format. HREC approval is valid for 12 months from the date of final approval and continuation of the HREC approval beyond the initial 12-month approval period is contingent upon submission of an annual report each year.

- It should be noted that compliance with the ethical guidelines is entirely the responsibility of the researcher.

You are reminded that this letter constitutes *ethical approval only*. You must not commence this research project until separate authorisation from the Chief Executive or delegate has been obtained. Copies of this letter, together with any approved documents as enumerated above, must be forwarded for submission to the relevant Research Governance Officer.

In all future correspondence concerning this study, please quote approval number **Study Ref 13/51 – LNR/13/NEPEAN/100.**

Study Ref 13/51 – LNR/13/NEPEAN/100 – *cont'd*

The HREC wishes you every success in your research.

Yours sincerely

Dr Jamshid Kalantar

Chair

Nepean Blue Mountains

Local Health District

Human Research Ethics Committee

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Appendix 2: Participant Information Sheet

Health
Nepean Blue Mountains
Local Health District

PARTICIPANT INFORMATION SHEET

Study Title: Registered nurses' clinical decision-making when managing constipation patients with cancer. **Name of Investigators:** Ms Louise Maher (**Principal investigator**)

Faith Moyo (**Co-investigator**)

Doctor Amanda Johnson (**Principal Supervisor**)

Professor Esther Chang (**Co-Supervisor**)

Invitation:

Who is carrying out the study?

You are invited to participate in a study conducted by Faith Moyo. The research will form the basis for the degree of Master of Nursing (Honours) at the University of Western Sydney under the supervision of Dr Amanda Johnson, Professor Esther Chang and Ms Louise Maher.

Before you decide whether you wish to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish.

What is the purpose of the Study?

The study aims to explore the experiences of Registered Nurses' clinical decision-making when managing constipation in patients with cancer. The study may provide further knowledge regarding the management of constipation in patients with cancer through improved nursing knowledge.

Who will be invited to enter the Study?

You are invited to participate in this research study if you who are an RN directly responsible for taking care of patients with cancer who are experiencing constipation. You should be employed in a permanent position, either full time or part time.

What will happen on the Study?

If you decide to participate in the study, you will be asked to sign the Participation Consent Form and attend an interview. For your convenience, the date, time and location of the interview can be negotiated with the researcher. The interview may last between 45 and 60 minutes and will be audiotaped. You will be interviewed once during this period. The researcher may contact you to check the accuracy of the data collected and to validate whether the reported findings represent your experiences. During the interview, you will be asked a series of questions. These questions will relate to your experiences of clinical decision-making as RN when managing constipation in patients with cancer. You may not directly benefit from this study but sharing your valuable experiences may contribute to nursing knowledge. Your participation in this study will be confidential and your name will not be made known to anyone other than the researcher.

Are there any Risks?
There are no foreseeable risks of harm or discomfort.

Do you have a Choice?
Participation in this study is entirely voluntary and you are not obliged to be involved. You can withdraw at any time without giving a reason.

Can I tell other people about the Study?
Yes, you can tell other people about the study and provide them with the researcher's contact details but refrain from discussing the questions asked during your interview.

How is this study being paid for?
The study is not funded. You will not be offered any incentives to participate in this study.

Will anyone else know the results?
The researcher, the researcher's supervisors and the person who will transcribe the audiotapes are the only people with access to the study data. All the data collected will be confidential.

How will the results be disseminated?
The results from this study will be disseminated through journal publications, conference presentations and thesis documents.

What if I require further information?
When you have read this information, the researcher, Faith Moyo will discuss it with you and answer any questions you may have. If you would like to know more about the study at any stage, please feel free to contact the researcher, Faith

Moyo.

Contact details:

Telephone No: 0425284152
Email address: 17334974student@uws.edu.au

What if I have a complaint?

This study has been approved by the Nepean Blue Mountains Local Health District Human Research Ethics Committee.

The Approval number is [---------------]

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services. Telephone No: 02 47 34 3441 or
Paula.Ewings@swahs.health.nsw.gov.au

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

Thank you for taking the time to consider participating in this nursing research study.

If you agree to participate in this study, you will be asked to sign the Participant Consent Form. This information sheet is for you to keep.

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Appendix 3: Participant Consent Form

Health
Nepean Blue Mountains
Local Health District

PARTICIPANT CONSENT FORM

Study Title: Registered nurses' clinical decision-making when managing constipation in patients with cancer.

CONSENT TO PARTICIPATE IN THIS RESEARCH

Name of Researcher: Faith Moyo

1. I understand that the researcher will conduct this study in a manner conforming to ethical and scientific principles set out by the National Health and Medical Research Council of Australia and the Good Clinical Research Practice Guidelines of the Therapeutic Goods Administration.
2. I acknowledge that I have read the Participant Information Sheet relating to this study. I acknowledge that I understand the Participant Information Sheet. I acknowledge that the general purposes, methods, demands and inconveniences which may occur to me during the study have been explained to me by Faith Moyo ("the researcher").

3. I acknowledge that I have been given time to consider the information and to seek other advice.
4. I acknowledge that refusal to take part in this study will not affect my current or future position as a registered nurse
5. I acknowledge that I am volunteering to take part in this study and I may withdraw at any time.
6. I acknowledge that this research has been approved by the Nepean Blue Mountains Local Health District Human Research Ethics Committee.
7. I acknowledge that I have received a copy of this form and the Participant Information Sheet, which I have signed.
8. I acknowledge that any regulatory authorities may have access to my records to monitor the research in which I am agreeing to participate. However, I understand that my identity will not be disclosed to anyone else or in publications or presentations.
9. I understand that my involvement is confidential, and that the information gained during the study may be published or used for future research but no information about me will be used in any way that reveals my identity unless otherwise authorised by me.

Before signing, please read the "IMPORTANT NOTE" following.

IMPORTANT NOTE:

This consent should only be signed by the participant personally.

Name of participant: ______________________________

Contact details of participant: _____________________________

Signature of participant: _______________________________

Date: ______________________________

This study has been approved by the Nepean Blue Mountains Local Health District Human Research Ethics Committee. The Approval number is: _________________________

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services. Telephone No: 02 4734 3441 or Paula.Ewings@swahs.health.nsw.gov.au

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

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Appendix 4: Transcriber confidential form

I ____________________________ [Print full name] agree to transcribe the tapes provided to me.
I agree to keep all the information provided to me confidential.
I will not make any copies or keep any record of them of the transcripts, other than those required for the project.

Signature: ____________________________

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Appendix 5: Nurse Unit Manager request letter

Dear Nurse Unit Manager,

Study Title: *"Registered Nurses' clinical decision-making when managing constipation in patients with cancer"*

Following my recent telephone conversation with you, this letter provides additional information regarding the study entitled "Registered Nurses' clinical decision-making in managing constipation in patients with cancer". The research forms the basis for my Master of Nursing (Honours) degree at the University of Western Sydney under the supervision of Dr Amanda Johnson, Professor Esther Chang and Ms Louise Maher.

The study participants will be RNs in your clinical area, responsible for patients with cancer who experiencing constipation. For recruitment purposes, I would appreciate you attaching a copy of the Participant Information and Consent Sheet to all RNs' pay slips. I would also appreciate the opportunity to conduct an in-service to discuss this study with your nursing staff. I have prepared a poster advertising the study, which could be displayed in the tea room. The interview will take 40 to 60 minutes and will be conducted one-on-one in a place and time convenient to the individual participant. The study participants will also be asked to complete a demographics sheet.

This is a voluntary study, which provides participants with an opportunity to be interviewed in person and to be part of a nursing research project. Participants may find an opportunity for selfreflection of their nursing practice in regard to managing constipation in patients with cancer. The study may potentially increase awareness in the clinical area regarding managing constipation in patients with cancer.

All generated study data will be kept confidential and securely stored in a locked cabinet at the University of Western Sydney Research Office. The results from the study will be disseminated through nursing journal publications, conference presentations and the thesis.

At the conclusion of the content analysis, a summary of the findings will be provided to the participants and yourself, if requested.

Please call or email with questions or concerns through 0425284152 or

17334974student@uws.edu.au. I look forward to working with you in the future.

Regards

Faith Moyo

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Appendix 6: Recruitment Poster

Health
Nepean Blue Mountains
Local Health District

RECRUITMENT POSTER!

WANTED

ARE

Registered Nurses working in [insert site] who want to be part of a nursing study on experiences of making clinical decisions when managing constipation in patients with cancer.

YOUR EXPERIENCES ARE IMPORTANT TO NURSING.

For more information contact:
Faith Moyo
0425284152
17334974student@uws.edu.au

The research will form the basis for the degree of Master of Nursing (Honours) at the University of Western Sydney under the supervision of [insert names].

This study has been approved by the [insert relevant HREC]. The Approval number is [insert number].

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Appendix 7: Participant's demographic data

Participant's demographic data

Gender: ___________________

Age range:

- 20–24
- 25–29
- 30–34
- 35–44
- 45–49
- 50 and above

Language spoken at home: __________________

How long have you been a registered nurse in years? _______________

How long have you been nursing in this area (acute medical oncology ward/community health facility?) _______________________

What made you choose to work in this area?

Have you done any other courses related to cancer nursing? Yes/No

If yes, list: ____________

____

Are you considering doing any courses related to cancer nursing? Yes/No

If yes, list: ______________

____

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Appendix 8: Interview guide

Interview guide

1. As an RN working in medical oncology ward/in the community, tell me about a patient with constipation who you have nursed. What was the most interesting experience of taking care of this patient?
2. Can you share with me some of the clinical decisions you made …?
3. What are some of the things you talk about and then do when a patient tells you they are constipated …?
4. How do you think you developed these skills of making such clinical decisions?
5. How have your thoughts and actions, as an RN, influenced or not influenced you in making these clinical decisions?
6. What are other things from your experience that might have influenced or not influenced your clinical decision-making that you have not yet mentioned?

7. In your experience, what is the best way of improving clinical decision-making in the management of constipation in patients with cancer?

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