

**BARRIERS AND FACILITATORS IN THE METICULOUS
COMPILATION AND ADAPTATION OF
STANDARDISED NURSING CARE PLANS IN A PUBLIC
HOSPITAL OF THE EDEN DISTRICT, SOUTH AFRICA:
A NURSING PERSPECTIVE**

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DECLARATION

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ABSTRACT

Background: South African Nursing Council Regulation, No. R.2598 (as amended) requires that registered nurses (RNs) develop, implement and evaluate nursing care plans as part of their legal scope of practice. Keeping meticulous records forms an indispensable part of nursing care in order to provide continuity and quality patient care. Risks associated with poor care planning can include non-attainment of patient goals, patient dissatisfaction with care received, inferior quality of nursing care and lengthened hospitalisation. Document audits conducted in the study hospital provided evidence that standard care plans were often incomplete, inaccurate and not relevant to the patient's condition. However, these audits cannot provide insights into why this poor practice occurs.

The aim of this study was to describe the particular barriers and facilitators RNs experienced in the meticulous compilation and adaptation of standardised nursing care plans as part of their patient care activities in order to inform strategies that may be developed to promote meticulous practice in this aspect of care planning by RNs.

Four study objectives were formulated, namely: to describe (i) barriers and (ii) facilitators influencing RNs in the meticulous compilation and adaptation of standardised nursing care plans, (iii) to determine if associations exist between demographic data and the most reported barriers and facilitators, and (iv) to identify strategies suggested by RNs to reinforce facilitators or minimise barriers.

Methods: A quantitative approach with a descriptive design was used to meet the stated objectives. A 41-item structured questionnaire which was developed by the researcher, consisting of three sections, was used as the data collection tool. It was available in Afrikaans and English. Data were collected from RNs working in medical and surgical units of a public hospital in the Eden District. Of the 43 possible respondents, 29 respondents completed the questionnaire, with a response rate of 67% (n=29).

A descriptive analysis of each of the scale items was conducted. Hypothesis tests between each of the five demographic variables and all the scale items were performed to identify trends showing associations between these variables and scale items by using the non-parametric Kruskal-Wallis and Mann-Whitney U tests.

Results: The most prominent barriers reported included lack of multidisciplinary collaboration, failure to update objectives and plans daily, a lack of plans for every type of diagnosis, lack of involvement in the development of plans, and workload. Facilitators included ease of identifying priorities of care, compiling individual care plans when necessary, adequate knowledge, and predominantly positive attitudes towards the application of standardised nursing care plans.

Significant associations were found between age and availability of a policy as well as the availability of plans for every diagnosis, and also between gender and completion of plans being a waste of time. Furthermore, type of basic qualification showed significant associations with validation of plans, minimising unnecessary documentation, careful use, aiding in the provision of high-quality care, and continuity of care. The type of qualification, specifically the 4-year diploma, impacts on how RNs view and experience the use of standardised nursing care plans.

Meliorating strategies included the use of individual care plans or a combination of standardised and individual care plans, regular refresher training, as well as more audits – specifically aimed at the content of the standardised nursing care plans.

Conclusion: Study results confirmed that RNs experience various barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans, and associations exist between demographic variables and the identified barriers and facilitators. RNs offered meliorating strategies regarding the most reported barriers that were incorporated into the study recommendations.

Keywords: nursing process, care planning, standardised nursing care plan, individualised nursing care plan

OPSOMMING

Agtergrond: Regulasie R.2598 (soos gewysig) van die Suid-Afrikaanse Raad op Verpleging vereis dat geregistreerde verpleegkundiges (GVs) as deel van hulle wetlik voorgeskrewe praktykbestek verpleegsorgplanne opstel, implementeer en evalueer. Nougeseette rekordhouding is 'n onmisbare deel van verpleging om kontinuïteit te verseker en pasiëntsorg van gehalte te voorsien. Die gevare verbonde aan swak sorgbeplanning sluit in die nieverwesenliking van pasiëntdoelwitte, pasiënt-ontevredenheid met die sorg wat hulle ontvang, verpleegsorg van 'n swak gehalte, sowel as verlengde hospitalisasie. Dokumentoudits in die studiehospitaal het bewys dat standaardsorgplanne dikwels nie volledig, akkuraat óf relevant is vir die pasiënt se toestand nie. Tog kon die oudits nie insig bied in die redes vir hierdie swak praktyk nie.

Die doel van hierdie studie was dus om te beskryf watter spesifieke hindernisse en katalisators GV's in die nougeseette opstelling en aanpassing van gestandaardiseerde verpleegsorgplanne as deel van hulle pasiëntsorgaktiwiteit ervaar. Op grond daarvan kan moontlike strategieë ontwikkel word om nougeseette praktyk in hierdie faset van GV's se sorgbeplanning te bevorder.

Vier studiedoelwitte is geformuleer. Dit was (i) om hindernisse en (ii) katalisators te beskryf wat die nougeseette opstelling en aanpassing van gestandaardiseerde verpleegsorgplanne deur GV's beïnvloed, (iii) om enige verwantskappe tussen demografiese data en die belangrikste hindernisse en katalisators te bepaal, en (iv) om te identifiseer watter strategieë GV's self voorstel om katalisators te versterk of hindernisse te beperk.

Metodes: 'n Kwantitatiewe benadering met 'n deskriptiewe ontwerp is gebruik om dié doelwitte te bereik. Die navorser het 'n gestruktureerde vraelys met 41 items en drie afdelings opgestel om as datainsamelingsinstrument te dien. Die vraelys is deur die navorser opgestel en was in Afrikaans en Engels beskikbaar. Data is ingesamel onder GV's wat in die mediese en chirurgiese eenhede van 'n openbare hospitaal in die

Eden-distrik werk. Van die 43 moontlike deelnemers het 29 die vraelys voltooi, met 'n responssyfer van 67% (n=29).

'n Deskriptiewe ontleding is van elke skaalitem onderneem. Hipotesetoetse is op elk van die vyf demografiese veranderlikes en alle skaalitems uitgevoer om tendense te identifiseer wat op verwantskappe tussen hierdie veranderlikes en die skaalitems dui. Hiervoor is die nie-parametriese Kruskal-Wallis- en Mann-Whitney-U-toetse gebruik.

Resultate: Die vernaamste hindernisse wat aangemeld is, sluit in 'n tekort aan multidissiplinêre samewerking, versuim om oogmerke en planne daagliks by te werk, 'n gebrek aan planne vir elke tipe diagnose, gebrekkige betrokkenheid by die ontwikkeling van planne, en werkklas. Katalisators sluit in die gemak waarmee sorgprioriteite geïdentifiseer kan word, die opstelling van individuele sorgplanne waar dit nodig is, voldoende kennis, sowel as 'n oorwegend positiewe ingesteldheid jeens die gebruik van gestandaardiseerde verpleegsorgplanne.

Beduidende verwantskappe is opgemerk tussen ouderdom en die beskikbaarheid van 'n beleid sowel as die beskikbaarheid van planne vir elke diagnose, en ook tussen geslag en die beskouing dat dit 'n verkwisting van tyd is om planne op te stel. Daarbenewens was daar 'n sterk verwantskap tussen die tipe basiese kwalifikasie en die staving van planne, die beperking van onnodige papierwerk, sorgvuldige gebruik, die ondersteuning van sorg van gehalte en sorgkontinuiteit. Die tipe kwalifikasie, in die besonder die vierjaardiploma, beïnvloed hoe GVs die gebruik van gestandaardiseerde verpleegsorgplanne beskou en beleef.

Voorgestelde verbeteringstrategieë sluit in die gebruik van individuele sorgplanne of 'n kombinasie van gestandaardiseerde en individuele sorgplanne, gereelde opknappingskursusse, sowel as meer oudits wat spesifiek op die inhoud van die gestandaardiseerde verpleegsorgplanne konsentreer.

Gevolgtrekking: Die studieresultate bevestig dat GVs verskeie hindernisse en katalisators in die nougesette opstelling en aanpassing van gestandaardiseerde verpleegsorgplanne ervaar. Die resultate bring ook duidelike verwantskappe tussen demografiese veranderlikes en die geïdentifiseerde hindernisse en katalisators aan

die lig. GVs het verbeteringstrategieë vir die meeste van die aangemelde hindernisse aan die hand gedoen, wat in die studieaanbevelings vervat is.

Trefwoorde: verpleegproses, sorgbeplanning, gestandaardiseerde verpleegsorgplan, geïndividualiseerde verpleegsorgplan

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ABBREVIATIONS

RN Registered Nurse

CHAPTER 1

FOUNDATION OF THE STUDY

1.1 Introduction

The nursing process is a systematic framework that provides a scientific method for the planning and delivery of quality patient care (Berman & Snyder, 2014:192; Habermann & Uys, 2006:3; Hapooja, 2014:8). Several national governments and nursing organisations base their legal directives for quality nursing on the nursing process. This scientific process of nursing care delivery is used in clinical practice in many countries, and has been regarded as a key element in nursing in most developed countries (Habermann & Uys, 2006:3; Mahmoud & Bayoumy, 2014:300; Zamanzadeh, Valizadeh, Tabrizi, Behshid & Lofti, 2015:411).

The nursing process is grounded in the problem-solving model and the systems theory. This process consists of six contiguous steps, namely assessment, nursing diagnosis, planning, implementation, evaluation, and recording (Berman & Snyder, 2014:192, 194).

The nursing care plan encompasses both the specific method and manner of formulating and documenting the action of care planning. The care plan is the culmination of the assessment and nursing diagnosis phase, and is the antecedent to the implementation phase. In this way, the nursing care plan supports every phase of the nursing process (Ballantyne, 2016:51, 55; Elf, Poutilova & Öhrn, 2007:1379). Different types of nursing care plans exist, with the format of the plan depending on the specific care setting and nursing model used; some examples being standardised care plans, individualised care plans, multidisciplinary care plans and checklists (Van Rooyen, Jordan & Kotzé, 2009:316, 324; Berman & Snyder, 2014:233).

A registered nurse (RN) should make use of scientific methods to plan and initiate a nursing regimen (which follows the steps of the nursing process), in order to meet the health needs of patients. This nursing regimen includes compiling nursing care plans, as well as implementing and evaluating these. Additionally, the nursing regimen

incorporates recording the person's progress as related to their health problem, the healthcare delivered to a patient, and the outcome thereof (South African Nursing Council, 1984:2). It follows then that assessment of the patient and planning the nursing regimen is the overarching responsibility of the RN (Lubbe & Roets, 2014:60-61).

Standardised nursing care plans are legal documents that form part of the requirements of recordkeeping when providing nursing care. This requirement implies that these care plans must be meticulously compiled and documented. The word "meticulous" is an adjective that means to show great attention to detail or to be very careful and precise (*English Oxford Living Dictionaries*, 2017:n.p.). Meticulous documenting and compiling of standardised nursing care plans require detailed, careful and precise attention in compiling clear, legible, accurate, complete, relevant, and timely written entries that conform to the legal requirements for documentation (Blair & Smith, 2012:64, 166; Chabeli, 2007:87-88; Prideaux, 2011:1450).

For this study, the concept "meticulous" also encompasses the duty of care of the RN (*Collins Dictionary of Law*, 2006:n.p.). Meticulous, in this duty of care, is the RN's diligent, competent and prudent execution of care planning practices, promoting the patients' best interests, and avoiding any acts or omissions that may cause physical or emotional harm to patients. If this duty of care is not adhered to with regard to the care plan as a measure of care delivered, a claim of negligence on the part of the RN may be established. Should standardised care plan documentation be inaccurate or incomplete, personnel and institutions are at risk of legal detriment, and patients are placed at risk of physical or psychological harm which may lead to disciplinary processes and litigation (Blair & Smith, 2012:166; Prideaux, 2011:1450). The effective implementation of the nursing process and a meticulously documented plan of care provides a foundation for quality patient care (Pokorski, Moraes, Chiarelli, Costanzi & Rabelo, 2009:302-307; Wang, Yu & Hailey, 2015:561-569).

The main focus of this study is on the planning stage of the nursing process, in particular, the compilation, documentation and adaptation of standardised nursing care plans.

1.2 Rationale

In the researcher's experience as a lecturer accompanying students in clinical practice, the most regularly utilised tool to record care planning in public hospitals in the Eden District is standardised nursing care plans. Standardised care plans are pre-written, printed, formal plans specifying nursing care for groups of patients with common needs (Berman & Snyder, 2014:233; Jansson, Bahtsevani, Pilhammar-Anderson & Forsberg, 2010:26; Barret, Wilson & Woollands, 2009:106; Olsson, Petersson, Willman & Gardulf, 2009:820). Standardised care plans are usually written in the nursing process format and may include checklists, blank lines, or spaces to facilitate a measure of individualisation of the standard nursing actions (Berman & Snyder, 2014:235). Standardised care plans in the study hospital are problem-oriented, based on the phases of the nursing process, and includes blank lines to facilitate individualisation as necessary (Refer to Appendix 8).

File audits conducted using a facility-specific standardised audit tool at a local regional hospital on 540 files over a period of 3 years, revealed that standardised nursing care plans were often incomplete, inaccurate, and not relevant to the patient condition. Sixty per cent of standardised nursing care plans were not compliant with regards to the required standards of completeness, applicability to patient diagnosis, and adaptation to changing patient needs (Moolman, 2017). Moreover, the unit manager of a medical-surgical ward in the same hospital conducted an independent audit, using the same audit tool for 40 patient files. The audit results indicated that 30% of care plans were not applicable to the patient diagnosis and 50% were not updated and adapted to changing patient needs (Ehlers, 2017).

Maharaj (2015:105) conducted a study to evaluate the use of nursing care plans in general nursing practice at a Level 3 hospital in Kwazulu-Natal. The study revealed that nursing care plans were incorrectly implemented due to, amongst other variables, an indifferent approach and negative attitude towards nursing care plans. This is the only South African study that could be found that focussed on nursing care plans, indicating a paucity of current South African studies related to the study topic.

The care plan is an essential element of the patient documentation that corroborates and validates nursing care, acting as the RN's vehicle of protection in a medico-legal challenge (Ballantyne, 2016:51-57; Wang *et al.*, 2015:561-569). Consequently, this discussion, demonstrating gaps in the care planning process, highlighted the necessity for collecting information to describe the deficiencies regarding the meticulous compilation and adaptation of standardised care plans. Therefore, this study focussed on the planning stage of the nursing process, specifically on the compilation and adaptation of the documented plan of care in the form of a standardised nursing care plan.

1.3 Problem statement

A comprehensive, documented nursing care plan has been shown to facilitate holistic patient care and contributes to providing evidence of RNs working within the ethical-legal practice framework, which, in turn, protects these RNs against complaints or disciplinary action (Ballantyne, 2016:51, 55). Furthermore, the South African Nursing Council Regulation No. R.2598, as amended, requires RNs to develop, implement and evaluate nursing care plans as part of their legal scope of practice (South African Nursing Council, 1984:2). Keeping meticulous records forms an indispensable part of nursing care in order to provide continuity and quality patient care (Jansson, Pilhamar & Forsberg, 2011:66; Prideaux, 2011:1450).

However, document audits of the nursing care records in a local hospital offered evidence that standardised nursing care plans were often incomplete, inaccurate, and not relevant to the patient condition (Moolman, 2017; Ehlers, 2017). Furthermore, planned nursing interventions were frequently not related to the problems noted in the standardised nursing care plan (Moolman, 2017; Ehlers, 2017). The audits also revealed that enrolled nurses and auxiliary nurses had completed some of the standardised nursing care plans, but RNs failed to verify and counter-sign the plans as required by South African Nursing Council Regulation, No. R.2598, as amended (Moolman, 2017; Ehlers, 2017; South African Nursing Council, 1984:2, 5-6). A reasonable conclusion to draw from the audit data is that standardised nursing care plans were not meticulously compiled and adapted in the clinical setting, and patient-specific care planning was not evident in these documents.

Failure to meticulously formulate and apply a comprehensive, documented nursing care plan may have the following consequences: failure to fulfil patient goals, patient dissatisfaction with care received, negative patient outcomes, inferior quality of nursing care, and lengthened hospitalisation (Elf *et al.*, 2007:536; Blair & Smith, 2012:164). Furthermore, poor documentation practices, for example, non-adjustment of plans to specific patient needs or failure to implement a care plan, could be seen as missed care and may be interpreted as professional misconduct (Prideaux, 2011:1450).

Although document audits provided evidence that care planning was inadequately conducted, these did not offer insight into why RNs failed to compile and adapt standardised nursing care plans meticulously. Therefore, this study investigated and describes the barriers and facilitators RNs experience in compiling and adapting standardised nursing care plans in order to inform strategies that may be developed to promote meticulous practice in this aspect of care planning by RNs.

1.4 Research question

What do RNs experience as the particular barriers and facilitators to the meticulous compilation and adaptation of standardised nursing care plans?

1.5 Research aim

The aim of this study was to describe the particular barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans.

1.6 Research objectives

The study objectives were:

- To describe the barriers influencing RNs in the meticulous compilation and adaptation of standardised nursing care plans.

- To describe the facilitators influencing RNs in the meticulous compilation and adaptation of standardised nursing care plans.
- To determine if there are associations between demographic data and the most reported barriers and facilitators.
- To identify the strategies suggested by RNs to reinforce the most reported facilitators or minimise the most reported barriers.

1.7 Conceptual framework

The researcher adapted Cabana's Framework for Improvement to guide the study (Cabana, Rand, Powe, Wu, Wilson, Abboud & Rubin, 1999:1458-1463) as presented in Figure 1.1. Cabana and colleagues generated a determinant framework to explain barriers to physician adherence to practice guidelines.

Determinant frameworks are descriptive in nature and aim to explain factors that influence implementation outcomes (Nilsen, 2015:2). However, the mechanisms of change are not specified; rather, relevant barriers and facilitators are identified with respect to aspects of implementation (Nilsen, 2015:3). Determinant frameworks follow a systems approach as these acknowledge various levels of influence on implementation outcomes. Additionally, these frameworks recognise the interrelationships between levels and different types of determinants (Nilsen, 2015:5).

Cabana *et al.* (1999:1458-1463) developed their determinant framework from a review of 76 articles that investigated barriers influencing physician adherence to practice guidelines. The authors grouped the reported barriers into themes and then categorised these according to a framework of knowledge, attitudes, and behaviour (Cabana *et al.*, 1999:1458-1459). Cabana's Framework for Improvement assumes that knowledge will affect a person's attitude, followed by behaviour, and then practice (Roelens, Verstaelen, Van Egmond & Temmerman, 2006:2).

For the purposes of this study, Cabana's Framework for Improvement was used to provide a structure to the design, implementation and reporting phases of the study.



Figure 1.1: Conceptual framework: Barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans (Adapted from Cabana *et al.*, 1999:1458-1463)

A brief introduction to the adapted framework is provided next. A more detailed discussion of how the framework was applied in the various phases of the study is presented in the appropriate chapters.

1.7.1 Knowledge

Knowledge encompasses the facts, information and skills a person acquires through experience or education, bringing about awareness of, and familiarity with, a subject or situation (*English Oxford Living Dictionaries*, 2017:n.p.).

The knowledge-base that underpins meticulous application of the nursing process, specifically care plan completion, includes theoretical knowledge of all the phases of the nursing process, as well as a capability to apply this knowledge in a scientific manner (South African Nursing Council, 1985:2). Applying knowledge in a scientific manner implies the use of critical and analytical thinking, as well as the ability to integrate theory and practice in the delivery of patient care (Lubbe & Roets, 2014:62). Another aspect an RN needs to be knowledgeable about is the ethical and moral codes of the profession, as well as the prescriptions of the relevant acts and regulations that govern nursing practice. Furthermore, RNs should continuously evaluate their personal practice and accept responsibility for continuing their personal and professional development (South African Nursing Council, 1985:2).

1.7.2 Attitude

Attitudes are established ways of thinking or feeling about something and can be construed as positive or negative (*English Oxford Living Dictionaries*, 2017:n.p.). RNs' belief systems about, and attitude towards, the nursing process and nursing care plans may govern how these are used in everyday nursing practice. Furthermore, preconceptions about the usefulness and value of the nursing process and care plans may impact on its use (Jooste, Van der Vyfer & van Dyk, 2010:92-93).

1.7.3 Behaviour

Behaviour signifies the way in which a person behaves in response to a particular situation. Behaviour, in this study, speaks to RNs' responses to the elements that influence their compilation and adaptation of standardised nursing care plans (*English Oxford Living Dictionaries*, 2017:n.p.).

The working environment in which nursing care is delivered may influence behaviour related to the application of the nursing process and care plans. Workload, time limitations, staff shortages, available resources and hospital culture may foster behaviour that impacts on how standardised nursing care plans are compiled, adapted and implemented (Asertie, Murugan & Molla, 2014:1; Okaiso, Kalikwani, Wanyana & Coetzee, 2014:n.p.). Due to the aforementioned influences, nursing practitioners may, under certain circumstances, delay, abbreviate or omit care, constituting missed care (Kalisch, Landstrom & Hinshaw, 2009:1510). Nurses have also reported that care plans were not always used as reference when delivering patient care (Cheevakasemsook, Chapman, Francis & Davies, 2006:367).

The combination and interrelation of knowledge, attitude and behaviour will be an influential determinant of the meticulous compilation and adaptation of standardised nursing care plans.

1.8 Research methodology

This section contains a synopsis of the research methodology followed in the study. A full description of the research methodology is provided in Chapter 3.

1.8.1 Research design

A quantitative approach with a descriptive design was used to meet the stated objectives. Descriptive quantitative research frequently occurs in a natural, uncontrolled, real environment, where the researcher does not manipulate the environment in any way (Burns & Grove, 2011:40).

1.8.2 Study setting

The study was conducted in the natural setting of a selected regional hospital environment of the public health sector in the Eden District, as permission to conduct the study in the five district hospitals were denied. The Eden District is situated in the Western Cape and includes seven local municipalities, namely George, Oudtshoorn, Knysna, Bitou, Mossel Bay, Hessequa, and Kannaland (*The Local Government*

Handbook, 2017:n.p.). The public health sector consists of public health institutions, designed to provide various forms of health services to society (Republic of South Africa, 2003:12).

1.8.3 Population and sampling

The target population included all RNs, community service practitioners and operational managers working in general medical/surgical nursing units where standardised nursing care plans are utilised, in the regional hospital in the Eden District (N=45). The sample included the whole target population (n=45).

1.8.4 Data collection tool

A 41-item structured questionnaire, developed by the researcher and consisting of three sections, was used as data collection tool. It was available in Afrikaans and English.

1.8.5 Pilot test

A pilot test was conducted on a representative sample of the target population (n=2), in one of the medical/surgical units in the study hospital. Feedback received indicated that no changes to the questionnaire were required.

1.8.6 Validity and reliability

The questionnaire was not statistically tested for reliability as the items measured different constructs. A pilot test was conducted to identify errors in the questionnaire and the research process. Feedback was obtained from respondents of the pilot test regarding the clarity of questions and whether questions needed to be added, removed or revised. No alterations of the instruments were necessary.

The questionnaire was developed through a thorough review of the literature and used sections of an available questionnaire that was developed to measure nurses' opinions about using standardised care plans and quality standards for clinical practice (Dahm

& Wadensten, 2008:n.p.) (Refer to Appendix 5). The pilot test feedback added to the validity, readability and language acceptability of the questionnaire. A statistician, nursing lecturers, and the study supervisor were consulted for their expertise in research methodology and setting of questionnaires. Furthermore, a nursing lecturer, a clinical facilitator, and an RN with a nursing education qualification reviewed the questionnaire for validity, and to ascertain whether the content would allow the stated objectives to be met. The questionnaire was developed in English, translated into Afrikaans, and then reverse-translated back into English by another translator to ensure consistency and to assist with readability and language acceptability (Refer to Appendix 6).

1.8.7 Data collection

Once ethical approval was granted for this study, permission was obtained from the operational managers to collect data in medical/surgical units in the study hospital, after the conclusion of the pilot test. Data collection took place at a convenient time, over a period of 4 months to cover all shifts of day and night duty, and to allow those on leave to participate on their return. All willing respondents who complied with the inclusion criteria and who signed informed consent were included for data collection. A final study sample of 29 respondents contributed data to this study.

1.8.8 Data analysis

Data analysis was conducted using SPSS version 25, with the assistance and guidance of a statistician. A descriptive analysis of each of the demographic variables and scale items was performed in the form of frequency tables. Hypothesis tests between each of the five demographic variables and all the scale items, using the non-parametric Kruskal-Wallis and Mann-Whitney U tests, were performed to identify trends showing associations between different variables and scale items. Responses to the open-ended question were analysed by identifying common themes and grouping responses together according to these themes. Consequently, the most prominent barriers, as experienced by RNs, were identified, as well as proposed strategies to meliorate barriers to the meticulous compilation and adaptation of standardised nursing care plans.

1.9 Ethical considerations

Research was conducted after review and approval from the Health Research Ethics Committee, Stellenbosch University (HREC reference number: 0610). Further permissions were obtained from the Western Cape Department of Health: Health Impact Assessment, and via them, from the organisational manager of the hospital included in the study (Refer to Appendix 2).

Human Rights are embedded in the Constitution of the Republic of South Africa, Act 108 of 1996 (Republic of South Africa, 1996:130). Human Rights encompass the three fundamental ethical principles mentioned by Terre Blanche, Durrheim and Painter (2006:67-68), namely the principles of respect for persons, beneficence, and justice.

1.9.1 Principle of respect for persons

In this study, the autonomy of the respondents, as well as their right to self-determination (Grove, Burns & Gray, 2013:164) were protected by their right to voluntarily participate in the study or not, without any risk of disadvantage or intimidation. The researcher respected the decisions of the facilities declining to take part in the study and necessary adaptations were made to the methodology as described in Chapter 3. The sample comprised the total population; all willing respondents who met the inclusion criteria were invited to complete a questionnaire. Respondents were not coerced to take part in the study. Respondents were assured of their right to withdraw from the study at any time and to ask for clarification regarding the purpose of the study. Informed consent was acquired with a written form which provided clear information about the purpose of the study and participation in the study (Refer to Appendix 4). There were no incentives offered for participation in the study.

Another aspect forming part of the principle of respect for persons is the right to anonymity and confidentiality (Terre Blanche *et al.*, 2006:67). Study respondents and the different medical-surgical units remained anonymous by using codes to identify questionnaires. To protect the anonymity of respondents and units, completed questionnaires and informed consent forms are stored separately in a locked safe. Additionally, codes identifying questionnaires and units are also kept in the safe to

which only the researcher has access. Respondents were assured that all information and responses received from them would remain confidential – no identifying information will be revealed in the thesis or in the feedback to the hospital. Moreover, only the researcher has access to the raw data and completed questionnaires. Questionnaires will be kept for five years, after which they will be destroyed.

1.9.2 Principle of beneficence

Beneficence signifies the right to protection from discomfort and harm (Grove *et al.*, 2013:174). The planned research did not involve any harmful intervention as it involved a self-administered questionnaire. The questionnaire contained no questions that could cause psychological harm. All respondents signed informed consent, thus ensuring that they were aware of the purpose and process of the study.

As explained in the previous section, respondents were assured of their anonymity in the study processes, the confidentiality of data obtained, and their right to withdraw from the study at any time.

Data were collected with the permission of the operational manager of each unit at a convenient time in order to ensure that there was minimal interruption to patient care. Sufficient time was allowed for completion of questionnaires so that the study did not interfere with respondents attending to patient needs. This measure of flexibility ensured that patients were protected from discomfort and harm as a result of the proposed study.

Furthermore, the Health Research Ethics Committee of Stellenbosch University reviewed the study proposal (Department of Health, 2015:14). The results of this study will add to the scientific knowledge-base and may foster efficient care planning practices, which, in turn, may improve the quality of care and better patient outcomes.

1.9.3 Principle of justice

The fair treatment and selection of respondents (Grove *et al.*, 2013:173) were managed in the following ways: The total population was used to include all willing

respondents who met the inclusion criteria of the proposed study. Therefore, no discrimination took place in the selection of respondents (Department of Health, 2015:16). All available respondents were invited to take part in the study and they signed informed consent to ensure their clear understanding of the objectives of the study. No incentives were offered for participation in the study. The results of the study will be disseminated to the facility managers of the study hospital, for distribution to the respondents (Department of Health, 2015:17).

1.10 Operational definitions

Barriers: Circumstances or obstacles that prevent progress (*English Oxford Living Dictionaries*, 2017:n.p.). For the purpose of this study, barriers are defined as any circumstances, obstacles, activities or content that hinder the meticulous compilation and adaptation of standardised nursing care plans.

Facilitators: To make easier; something that increases the ease with which a function or action is carried out (*English Oxford Living Dictionaries*, 2017:n.p.; *Blackwell's Dictionary of Nursing*, 1994:258). For the purpose of this study, facilitators are defined as circumstances, activities, content or aids that promote the meticulous compilation and adaptation of standardised nursing care plans.

Meticulous: Showing great attention to detail; very careful and precise (*English Oxford Living Dictionaries*, 2017:n.p.). For the purpose of this study, regarding standardised nursing care plans, it means clear, legible, accurate, complete, relevant, timely entries, conforming to legal requirements for documentation, and which can be evaluated through nursing documentation audit instruments (Blair & Smith, 2012:64, 166; Chabeli, 2007:87-88; Prideaux, 2011:1450). In this study, the concept also encompasses the duty of care of the RN (*Collins Dictionary of Law*, 2006:n.p.); the diligent, competent and prudent execution of care planning practices, promoting the patients' best interests, and avoiding any acts or omissions that may cause physical or emotional harm to patients.

Public hospital: a hospital owned and funded by an organ of state such as the Department of Health (Republic of South Africa, 2003:16).

Registered Nurse: means a person who is registered as a nurse or as a midwife in terms of Nursing Act, No 50 of 1978, as amended (Republic of South Africa, 1978).

Standardised nursing care plan: Standardised nursing care plans are pre-written, printed, formal plans, specifying nursing care for groups of patients with common needs, which can then be adapted for a patient's individual health needs (Berman & Snyder, 2014:233).

1.11 Duration of the study

The duration of the study is presented in Table 1.1.

Table 1.1: Study duration

Year	Month	Activity
2017	31 August	Ethics approval
2017	12 October	Provincial / institutional permission
2017	November	Pilot test
2017/2018	November 2017 to January 2018	Data collection
2018	February	Data analysis
2018	1 September	Submitted for examination

1.12 Chapter outline

Chapter 1: Foundation of the study

Chapter 1 presents a concise introduction to the study, followed by the rationale, problem statement, research question, as well as the research aim and objectives. The conceptual framework guiding the study is discussed. A brief summary of the research methodology is provided and ethical considerations are described. Operational definitions are clarified and the significance of the study is explained.

Chapter 2: Literature review

Chapter 2 covers a discussion on, and review of, the relevant literature.

Chapter 3: Research methodology

Chapter 3 offers a thorough account of the research methodology used in the study.

Chapter 4: Research findings

Chapter 4 presents the results of the study as well as the analysis, description and discussion thereof.

Chapter 5: Discussion, conclusions and recommendations

In Chapter 5, the results of the study are determined relative to the study objectives. Recommendations are provided pertaining to the scientific evidence obtained in the study, and conclusions are presented.

1.13 Significance of the study

This study provides insight into the barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans in a public hospital in the Eden District. This insight may be used to create realistic strategies that could minimise the most reported barriers and support the most reported facilitators. The insights drawn from this study may assist educators, managers and clinical nurses to promote effective care planning practices, with the aim of improving the quality of nursing care delivered, resulting in better patient outcomes. Furthermore, the results of the study add to the existing South African knowledge-base concerning the application of the nursing process and the compilation and adaptation of standardised nursing care plans.

1.14 Summary

This chapter includes an introduction as well as the rationale for the study. Additionally, the problem statement, research question, aim and objectives which direct the study, have been conveyed. The research methodology, including the research design,

target population, sampling size and method, and data analysis are all briefly summarised. Significant ethical matters and the management thereof are addressed. Operational definitions are clarified and the significance of the study is explained. In conclusion, the chapter stipulates the study outline and duration.

Chapter 2 will consist of a detailed literature review relevant to the study topic.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

A review of available literature provides information regarding published research relevant to the specific study topic. Furthermore, the history, current situation and the identification of knowledge gaps within the specific area are highlighted. This literature review lays the foundation of the study and explains the historical and current developments pertaining to the nursing process, standardised nursing care plans and the various factors influencing the application of the nursing process and nursing care plans.

2.2 Selecting and reviewing the literature

A search for studies relevant to the study topic was conducted and the relevant literature was reviewed. Search terms included “nursing process”, “individualised nursing care plan”, “standardised nursing care plan” and “care planning”, and combinations thereof. These search terms and combinations were entered into the following search engines and databases: EBSCOhost (Elton B Stephens Company research database), PUBMED (National Center for Biotechnology Information Research Resource) and SUNSearch (Stellenbosch University Library and Information Service), in order to locate and identify relevant scholarship related to the research focus area and topic.

Journals, periodicals, theses and textbooks in the date range of 2006–2018 were used. The use of literature in this timeframe ensured the use of the newest available information on the topic. Some older sources were, however, included to illuminate the historical progress of the nursing process and nursing care plans, for example, Yura and Walsh (1978). International and local scholarship were reviewed. South African research generally seems to focus on service delivery, quality care, clinical practice and the teaching environment. Although only one published South African research study conducted within the last 10 years on the specific study topic could be located,

other relevant South African literature was reviewed, for example, Acts, Ethical Codes and Regulations.

The literature review that follows is structured according to the following aspects as these relate to the nursing process and nursing care plans:

- Historical perspective
- Theoretical framework of the nursing process
- The nursing process
- Legal and professional framework
- Planning and nursing care plans
- Factors influencing the application of the nursing process and nursing care plans

2.3 Historical perspective

The term “nursing process” was first used in 1955 in a journal article by Hall (1955:212-215). Here the term referred to nursing as a process as opposed to a set of different actions (De la Cuesta, 1983:365-371). Since the term’s first use in the 1950’s, the nursing process has developed as a concept of nursing, to such an extent that it is recognised and used throughout the world and is considered to be a key element of nursing practice (Habermann & Uys, 2006:3; Mahmoud & Bayoumy, 2014:300; Zamanzadeh *et al.*, 2015:411).

Various nursing leaders and theorists have since referred to the nursing process as a series of phases applied to the practice of nursing. One of the first theorists to engage deeply with the nursing process was Ida Jean Orlando (Johnson, 1959:198-200; Orlando, 1961:n.p.; Wiedenbach, 1963:55).

2.3.1 Ida Jean Orlando

The nursing process, applied in many clinical care environments, has its formative roots in the scholarship of Ida Jean Orlando. In her work, Orlando focussed on the

reciprocal relationship between the patient and the nurse, and how to improve the patient's behaviour (Wayne, 2014:n.p.).

Orlando was one of the first authors to discuss the nursing process in detail in her first book *The Dynamic Nurse-Patient Relationship: Function, Process and Principles* (Orlando, 1961:n.p.) based on observations from a study she conducted at Yale University. In the book, Orlando describes the middle-range theory she developed, namely the "Deliberative Nursing Process", where she notes the function of the nurse being to identify and meet the patient's immediate need for help (Crane, 1985:159; De la Cuesta, 1983:365-371; Yura & Walsh, 1978:23). The Deliberative Nursing Process demarcates five specific stages in terms of the interpersonal relationship between a patient and a nurse, namely assessment, diagnosis, planning, implementation, and evaluation. Furthermore, the Deliberative Nursing Process provides for the compilation of an easily adaptable nursing care plan to meet the patient's unique, current needs for help (Wayne, 2014:n.p.).

Orlando defines the nursing process as the interaction of the patient's behaviour, the nurse's reaction to that behaviour, and the specific nursing actions planned for the patient's benefit. Orlando states that deliberative actions can only occur when the nurse correctly identifies the patient's needs, which are then validated by the nurse's reaction to the patient's behaviour (Crane, 1985:168). Furthermore, Orlando postulates that any activity can only be professional when it intentionally achieves the objective of assisting the patient (Orlando, 1961:70).

Orlando's theory assists RNs to focus on the patient as an individual, base their practice on logical thinking, and allows for the constant evaluation of care provided. As such, the Deliberative Nursing Process theory contributed significantly to the growth of nursing practice and remains useful in guiding nurse-patient interactions (Crane, 1985:175).

2.3.2 International context

Since the first mention of the nursing process in the 1950's by Hall (1955:212-215), the concept has grown to become an easily recognised and widely used activity in

many countries. The nursing process originated in the United States of America (USA) due to disgruntlement, mostly experienced by nurses in the academic sector, with the insufficient knowledge-base in the nursing discipline. Several research projects resulted, leading to the application of scientific principles in the delivery of nursing care (De la Cuesta, 1983:365-371; Sirra, 2006:2). For example, during the 1960's, several nurses explored ways to analyse their differing philosophies and values in relation to the provision of patient care. A case in point: in 1967 a faculty group at the school of nursing at the Catholic University of America identified the nursing process phases as assessing, planning, implementing, and evaluating (Yura & Walsh, 1978:25).

Later, during the mid-1970's, the nursing process was utilised as a professional strategy to achieve professional status in the USA when there was a move towards obtaining professional status for nurses working in the USA. Emphasis was placed on total patient care, which shaped the content of the nursing process (De la Cuesta, 1983:365-371). Including the nursing process in the Standards of Nursing Practice of the American Nurses Association in 1973 further added to its value in clinical practice (Berman & Snyder, 2014:192).

Although the term "nursing diagnosis" was first used by Fry in 1953, it was only added as a separate step of the nursing process (following assessment) in 1974, after the first meeting of the North American Nursing Diagnosis Association (NANDA) (White, Duncan & Baumle, 2011:4). NANDA has been developing a taxonomy of nursing diagnoses since 1973. These approved classifications of patient care problems aim to simplify the capturing of nursing data which can be used for evaluation, quality improvement and research endeavours (Hage, 2014:n.p.).

The early impetus for using the nursing process differs across countries. The nursing process arrived in the United Kingdom (UK) in a context where nurses were dissatisfied with the existing care delivery system. Nurses were also pursuing more satisfactory methods of nursing care. Several approaches in use at the time did not remedy this discontent, and the first discussions regarding the use of the nursing process in the UK took place in 1973. By 1977 the nursing process was implemented in hospitals, although mostly as a teaching tool. In this milieu, adapted to suit the UK context, the nursing process rose to the forefront as one comprehensive approach that

could resolve the issues raised by nurses. Thus, the nursing process was seen as a method of enhancing the quality of care provided (De la Cuesta, 1983:365-371).

Currently, the nursing process is used internationally as a means of providing comprehensive patient care (Mahmoud & Bayoumy, 2014:300; Zamanzadeh *et al.*, 2015:411). For instance, the present American and Canadian practice standards mandate the skilful use of the nursing process in everyday nursing practice as a means to improve and guide quality of care (Pokorski *et al.*, 2009:302-307). Skilful use implies the thorough, accurate and meticulous execution of all steps of the nursing process (Chabeli, 2007:82).

Moreover, in contemporary practice, the nursing process is embedded in the legal prescriptions for nursing practice and quality nursing, forming part of the legal regulations of several countries (Doenges, Moorhouse & Murr, 2010:7; Habermann & Uys, 2006:3). Organisations, including the International Council of Nurses, the United Kingdom Central Council, and the American Joint Commission on Accreditation of Hospital Nursing Service Standards, endorsed the use of the nursing process in nursing documentation through standards, laws and regulations during the 1980's and early 1990's (Björvell, 2002:10). Likewise, in 1985 the World Health Organisation officially adopted the four-phase operationalisation of the nursing process, namely assessment, planning, implementation, and evaluation. This established the use of the nursing process as a way to systemise nursing actions and improve quality nursing care (Barra & Sasso, 2012:441).

Despite these developments, for various reasons the nursing process is still not fully implemented in practice in most countries. Several studies mentioned by Habermann and Uys (2006:4-7) cite the following issues with the implementation of the nursing process: there are problems with the acceptance of the nursing process as a whole, implementation tends to decrease with each subsequent step of the process, formulation of objectives and evaluation of outcomes are often excluded from the process, nursing care plans are compiled at shift end and therefore do not guide the actual care provided. Furthermore, care plans were found to be illegible, confusing, and lacking reliability and validity – the plans are viewed as a responsibility in order to fulfil legal or management-imposed requirements. Another factor found to influence

the poor implementation of the nursing process was the pervasive inferior education of nurses during their formal nursing education. However, classification systems and information technology may provide promising solutions to some of these implementation problems (Habermann & Uys, 2006:10).

From the aforementioned discussion, it appears as though the application of the nursing process is widely used and viewed as one of the components of quality nursing care. However, it is also clear that there are still several challenges regarding the comprehensive implementation of the nursing process and nursing care plans.

2.3.3 South African context

This study takes place in the South African context and, as such, it is necessary to describe the introduction and expansion of the nursing process in this country.

The nursing process was introduced to South Africa in the 1970's when presenters at a provincial forum for nursing and midwifery presented a paper based on Mayers' (1972) book, *A systematic approach to the nursing care plan*. This book described a design to systematically organise and manage patient information in a care plan, with the aim of enhancing patient-centred and goal-directed care. A series of workshops were presented across the country, leading to the implementation of the nursing process in the province then named Orange Free State; this inspired its implementation throughout the country (Habermann & Uys, 2006:125).

Irene M. Miles was instrumental in the implementation of the nursing process in South Africa; first in Groote Schuur Hospital in Cape Town in 1978 and then in Livingstone hospital in Port Elizabeth (Habermann & Uys, 2006:125). The authors state that the system initially depended mostly on a standard care plan and nurses only planned individually for unusual problems.

During the same period two South African authors, Van den Berg and Mashaba, identified a fifth step in the nursing process, when they included "recording" as the final step after assessment, planning, intervention, and evaluation. Both these authors emphasise the recording step as essential for patient safety, continuity of patient care

and acceptance of accountability for nursing actions provided (Van den Berg, 1978:41-78; Mashaba, 1981:28-32). It is interesting to note that South African nursing is unique in identifying the recording of nursing actions as a distinct final step in the nursing process, in addition to this being part of every other step in the process (Mashaba, 1981:28-32; Rakuom, Wagoro, Mirereh & Galo, 2016:1-20).

Between 1991–1992 there was a move towards using individual care plans in order to promote patient-centred care, with standard care plans primarily used as reference tools. However, during this time around 50% of nursing posts were frozen to decrease government spending, resulting in a shortage of nurses in hospitals. This affected individual care planning by RNs, as the development of these plans was time-consuming in the face of staff shortages. Changes were necessary to resolve these challenges and support RNs in delivering quality patient-centred care. A review of the nursing process system in use at that time resulted in uniform nursing process record documents, including standardised care plans, to be used across all public hospitals (Habermann & Uys, 2006:130).

On the educational front, the nursing process was first taught in South Africa in the 1970's by the University of the Free State. At the time, most local nursing textbooks originated from the University of the Free State, shadowing their views of the nursing process. For example, Uys (1978:36-37), who was affiliated with the University of the Free State at the time, describes the nursing care of groups of patients by making use of standardised nursing care plans – contemporary editions of these textbooks are still in use today. Currently, most South African textbooks contain at least one chapter on the nursing process, and nursing care plans are frequently employed in explanations and descriptions of required nursing care (Habermann & Uys, 2006:125-128).

Nursing Education Institutions throughout South Africa must educate students on the use of the nursing process and care plan development in clinical practice, since it is included in the South African Nursing Council's nursing education and training standards (Cardwell, Corkin, McCartan, McCulloch & Mullan, 2011:1382; South African Nursing Council, 1985:1; South African Nursing Council, s.a.:9).

The advent of the nursing process in South Africa contributed to local nurses' cognisance of thorough assessment, nursing diagnosis, care planning, focussed interventions and evaluation of nursing care.

2.4 Theoretical framework of the nursing process

Grounded in the problem-solving model and general systems theory, the nursing process is a scientific, organised basis for the planning and delivery of quality patient care (Berman & Snyder, 2014:192; Habermann & Uys, 2006:3; Hapooja, 2014:8).

2.4.1 The scientific problem-solving model

The scientific problem-solving model has been defined as a methodical means of managing data, a systematic quest for knowledge, and discerning the whole from the distinct parts. Scientific problem-solving is a process that moves from the parts of an element to the whole of the element (Marriner, 1979:6). Problem-solving involves the following steps: identify the problem, determine the desired outcome or a goal to work towards, determine which strategies to implement in order to solve the problem or achieve the desired outcome, and evaluate the outcome for goal achievement (Yura & Walsh, 1978:55).

The steps of the nursing process are similar to that of the problem-solving model; in order to create an effective nursing care plan, it is essential to identify a clear and specific patient problem. In the nursing process, this problem is identified as the nursing diagnosis and follows a comprehensive assessment of the patient (Mayers, 1972:27-28). The complete assessment and formulation of a nursing diagnosis involve critical thinking and decision-making skills, while gathering all the necessary data to assess the patient's health needs/problems (White *et al.*, 2011:9). Once a nursing diagnosis is made, the nursing care plan can be compiled and implemented. Finally, the interventions are evaluated to see whether the desired outcome was achieved. The input from, and collaboration with, the patient during the phases of the nursing process is essential to ensure appropriate management of the patient's problem (Berman & Snyder, 2014:194; Hughes, 1997:81-83).

2.4.2 General systems theory

A system is defined as a group of elements that interact with each other in order to achieve a specific goal. Furthermore, the system is more than the sum of its parts (Marriner, 1979:250). The general systems theory also posits that living systems are open structures that continuously exchange information and energy with the environment in which they function.

Systems can be either open or closed. An open system constantly interacts with its environment, gathering and receiving information in order to signal directions or adaptations towards the agreed goal. A closed system, on the other hand, does not require a lot of outside interaction or intervention, and the relationships within tend to be fixed and automatic (Marriner, 1979:250). A characteristic of the general systems theory is its ability to use a planned approach to solve problems. Conclusions are drawn after analysing the problem as a complete process. The information obtained from these conclusions are then used to make the necessary decisions. This is why the nursing process is regarded as having its roots in the general systems theory. The nursing process provides a planned approach to nursing care by integrating the knowledge and action elements (assessment, nursing diagnosis, goal formulation, and planned interventions) of the nursing process. The nursing process can be regarded as the vehicle employed to realise the purpose of the nursing subsystem within the greater health care system (Marriner, 1979:251).

To be viable, a system needs at least three crucial elements, namely goal direction, feedback, and the ability to change. Applying these elements to the planning phase of the nursing process, goals should be operational and measurable to allow evaluation of goal achievement (Marriner, 1979:250). Feedback guides the system for future behaviour. Setting criteria to evaluate nursing care, as incorporated in the nursing process, should relate to the stated goals in the nursing care plan. The ability to adapt is essential for any system in order to maintain goal direction. Change can be brought about by focussing on any combination of (i) the methods of goal attainment, (ii) the methods themselves, or (iii) the feedback capacities (Marriner, 1979:251).

General systems propose that the treatment of people takes precedence over the treatment of illnesses (*The Free Dictionary*, 2018). This implies that the patient should be involved and informed throughout all phases of the nursing process, particularly the development of the plan of care. The nursing care plan can be regarded as an open system made up of numerous interconnected parts, operating within and affecting a specific environment, which, in turn, interacts with and influences the care plan. The objectives stated in the care plan explain the expected outcome of nursing interventions. These objectives are formulated subsequent to a thorough assessment of the patient. The information collected during assessment will direct the planned nursing interventions in order to resolve a specific health problem or need. These interrelated steps also provide the structure and criteria for evaluating the outcome of the plan of care (Marriner, 1979:252).

2.5 The nursing process

The nursing process provides a scientific framework in which to organise nursing care in a non-linear, dynamic way (Cheevakasemsook *et al.*, 2006:367; Kalisch *et al.*, 2009:1512). The nursing process, forming the basis of the nursing care plan, is a versatile and scientific method to be applied in a variety of healthcare settings, with any patient, as well as within various nursing models (Basavanthappa, 2008:90; Ballantyne, 2016:51, 53; Sirra, 2006:16; Van Rooyen *et al.*, 2009:316, 325).

2.5.1 Phases of the nursing process

The nursing process is cyclical in nature. It consists of four to six cyclical, problem-solving phases – most authors consider at least assessment, nursing diagnosis, implementation, and evaluation as crucial elements of the nursing process, while others include planning as a fifth phase. In South Africa, recording is added as a separate sixth phase (Habermann & Uys, 2006:3; Mashaba, 1981:28-32; Rakuom *et al.*, 2016:1-20; White *et al.*, 2011:9-10). These phases are followed in order to achieve the identified outcomes of care, forming the foundation of nursing practice (Doenges *et al.*, 2010:7; Yura & Walsh, 1978:1, 20). The different phases of the nursing process, as applied in South Africa, will now be explained.

Assessment is a continuous process which takes place during all phases of the nursing process. The term refers to the systematic collection, corroboration and documentation of data, with the focus on a patient's responses to their particular health problems (Berman & Snyder, 2014:194). After analysis of the collected data, health problems and needs are identified and articulated into diagnostic statements onto the nursing care plan – these statements become the nursing diagnosis (Berman & Snyder, 2014:192).

Compiling a nursing care plan, for an individual or for a group, forms part of the planning stage of the nursing process. Following a patient-centred approach, the care plan is organised according to the patient's problems rather than nursing goals (Berman & Snyder, 2014:194). According to these authors, planning starts when a patient enters a health facility, and it continues until the nurse-patient relationship ends. Clear statements of planned care, in written form, is the end product of the planning phase. These statements should be specific, measurable, achievable, realistic and time-oriented (Van Rooyen *et al.*, 2009:324-325). The written statements of planned care are then performed and documented in the implementation phase of the nursing process. These actions assist the patient in achieving the desired outcomes for his/her particular health needs (Berman & Snyder, 2014:195, 245).

In the evaluation phase, the RN determines whether the desired outcomes for a patient's particular health problems have been achieved. This is realised through re-assessment of the patient's condition. The care plan is then continued, modified or terminated, depending on the degree of outcome achievement (Berman & Snyder, 2014:195).

Recordkeeping forms a vital component of each stage of the nursing process, as it provides the legal documentation whereby the RN accepts responsibility for his/her behaviour (Geyer, Mogotlane & Young, 2009:200).

Meticulous application of these interrelated phases of the nursing process assists the RN in the provision of holistic patient-centred care, while involving the patient in every decision regarding his/her healthcare.

2.5.2 Purpose of the nursing process

The nursing process is embedded in holistic patient-centred care, involving the patient and significant others throughout all the phases (Habermann & Uys, 2006:3; White *et al.*, 2011:3). As a caring science, nursing encompasses care of the whole person where the physical, as well as the psychosocial needs of the patient, should be addressed. This includes keeping the patient informed and involved in any decision regarding his/her health. Furthermore, it is essential to prevent fragmentation of care into depersonalised tasks, with emphasis on the relationship between the nurse and the patient (Kitson, Athlin & Conroy, 2014:331-339). This implies that the individual wholeness of the particular person is encompassed in every nurse-patient encounter (Hughes, 1997:81-83).

The purpose of the nursing process is to identify the health needs of an individual or group, form a plan of care, provide specific nursing care, and evaluate the effectiveness of the implemented nursing interventions in solving the identified needs (Berman & Snyder, 2014:192; Asertie *et al.*, 2014:2; Basavanthappa, 2008:90). During this process the RN collaborates with the patient to establish and pursue health goals in order to facilitate healing and wholeness, incorporating patient routines into the care plan (Berman & Snyder, 2014:194; Hughes, 1997:81-83).

Additionally, the nursing process should guide the development of the nursing care plan, providing the documented proof of care planning (Asertie *et al.*, 2014:1; Ballantyne, 2016:51; Habermann & Uys, 2006:3). The nursing process phases provide a general format for developing and documenting a nursing care plan (Karimi, 2011:564). Irrespective of the nursing model used or the physical layout of the plan, all phases of the nursing process should be reflected in the care plan documentation (Rich & Brady, 2002:22). Referring to assessment data and the nursing diagnoses, the RN needs to consolidate the patient's problems into a plan of care that can be implemented. The care plan is organised according to patient problems rather than nursing goals, reiterating the patient-centred focus of the nursing process (Berman & Snyder, 2014:194). Well written care plans provide guidance, clarity and continuity in patient care, as it communicates current needs as well as solved problems (Ballantyne, 2016:55; Doenges *et al.*, 2010:10; Jansson *et al.*, 2011:66). Moreover,

recordkeeping forms a fundamental part of nursing care, given that RNs are responsible and accountable for maintaining accurate records of all care provided (Prideaux, 2011:1450).

2.6 Legal and professional framework

In South Africa, the practice of nursing is currently governed by Nursing Act no. 33 of 2005. Section 58 of Nursing Act no. 33 of 2005 makes provision for the formulation of regulations regarding various aspects of nursing practice (Republic of South Africa, 2005). Nursing Act no. 33 of 2005 replaces Nursing Act no. 50 of 1978, although some of the promulgated regulations are still applied under the old Nursing Act no. 50 of 1978 (Republic of South Africa, 1978).

Section 30 of Nursing Act no. 33 of 2005 states that an RN should practice comprehensive nursing (Republic of South Africa, 2005). The draft Regulations Regarding the Scope of Practice of Nurses and Midwives R786 of 15 October 2013, defines comprehensive nursing as “integrated nursing interventions that apply the scientific process of the full range of nursing that promote and maintain the health status of healthcare users”. Furthermore, an RN should develop an integrated, comprehensive nursing care plan, and provide direction for the implementation of the nursing care plan (Republic of South Africa, 2013).

The current Regulations Relating to the Scope of Practice of Persons Who are Registered or Enrolled under the Nursing Act of 1978 (Regulation 2598, 1984), stipulates in Chapter 2 that an RN should make use of scientific methods to plan and initiate a nursing regimen (which follows the steps of the nursing process), in order to meet the health needs of patients (South African Nursing Council, 1984:2). Consequently, the assessment and planning of the nursing regimen is the RN’s responsibility (Lubbe & Roets, 2014:60-61). Enrolled nurses and enrolled nursing auxiliaries may only carry out the plan under the direct or indirect supervision of an RN (South African Nursing Council, 1984:4-5). This implies the overarching responsibility and accountability of the RN with regard to the planning and documenting of care, in spite of delegation to subcategories of nurses (South African Nursing Council, 1984:2, 4-5). Although the draft Regulations Regarding the Scope of Practice of Nurses and

Midwives R786 of 15 October 2013 allow Staff Nurses to develop an integrated, comprehensive nursing care plan and to direct the implementation thereof, they may still only practice under the supervision of an RN (Republic of South Africa, 2013).

Prescribing, providing and executing a nursing regimen implies the effective and correct use of the whole nursing process, which is essential to fulfil the duties of the RN according to legal requirements (South African Nursing Council, 1984:2). Realistic expected outcomes cannot be developed if the nursing process, specifically the planning stage, is not correctly and effectively applied (Haapoja, 2014:8).

The planning stage of the nursing process requires the compilation of a nursing care plan, whether for an individual or a group. A nursing care plan stipulates the recorded plan of care, following a complete patient assessment, specific health needs identification, and the development of an action plan to resolve these health needs (Ballantyne, 2016:51). Documented, specific, measurable, achievable, realistic and time-oriented statements of planned care conclude the planning phase of the nursing process (Van Rooyen *et al.*, 2009:324-325).

Regulation 767 of 2014 (Regulations setting out the acts or omissions in respect of which the council may take disciplinary steps) describes the acts or omissions in respect of which the council may take disciplinary steps. An RN may be found guilty of misconduct when failing to maintain the health status of a patient through incorrect care and treatment (South African Nursing Council, 2014:n.p.). This is reiterated by the Code of Ethics for nurses in South Africa (South African Nursing Council, 2013:1-9). In order to maintain the health status of a patient, it is necessary to plan the patient's care according to identified health needs, and to record, implement and evaluate this plan of care (Ballantyne, 2016:51; Leach, 2008:1728-1733; Van Rooyen *et al.*, 2009:316, 324).

Nursing Act 33 of 2005 defines nursing as “a caring profession which supports, cares for and treats a healthcare user to achieve or maintain health and where this is not possible, cares for a health care user so that he or she lives comfortably and with dignity until death” (Republic of South Africa, 2005:6). The ethical and legal framework within which RNs function provides guidelines for the standard of care expected and

assists in defining the RN's duty of care (Water, Rasmussen, Neufeld, Gerrard & Ford, 2017:7-20). In this study, the duty of care forms an integral part of the concept "meticulous". The term "meticulous" can, for the purpose of this study, be defined as the diligent, competent and prudent execution of care planning practices and promoting patients' best interests. Furthermore, the duty of care requires an RN to choose the best option of care under any given circumstance, refraining from causing harm to the patient in any way (South African Nursing Council, 2013:1-9). Care plans provide a written record of the care planning process. When standardised care plan documentation is inaccurate or incomplete, patients are placed at risk of physical or psychological harm (Blair & Smith, 2012:166; Prideaux, 2011:1450). For example, the development of pressure ulcers due to ineffective/omitted planning regarding patient mobility.

Moreover, according to the Patients' Rights Charter (Department of Health, 1999:n.p.), healthcare institutions have the responsibility to provide an environment conducive to the provision of high-quality care, enabling members of the nursing profession to work within their scope of practice and code of ethics. For instance, developing a care plan may be delayed or omitted amid staff shortages, constituting missed care. Evidence shows that missed care may result in negative consequences for patients, for example, increased length of stay (Kalisch *et al.*, 2009:1510).

2.7 Planning and nursing care plans

The planning phase in the nursing process follows the preceding phases of assessment and nursing diagnosis. Care planning can be defined as the process of formulating goals and a proposed course of action, to purposefully address a patient's problems (Ballantyne, 2016:51; Leach, 2008:1728-1733). Moreover, the planning activity allows for prioritising the care to be rendered. Care plans can take different forms, depending on the specific situation, for example, standardised care plans, multidisciplinary care plans, individualised care plans or checklists (Van Rooyen *et al.*, 2009:316, 324). Care planning is an indispensable part of patient care delivery and benefits patients, the multidisciplinary team and healthcare institutions, by hastening the achievement of outcomes (Leach, 2008:1728-1733). Poor planning may lead to missed nursing care, which refers to all required acts of nursing care that is either

delayed or omitted (Kalisch *et al.*, 2009:1509-1517). Added risks associated with poor care planning could be: non-attainment of patient goals, patient dissatisfaction with care received, inferior quality of nursing care, and lengthened hospitalisation (Elf *et al.*, 2007:536). These aspects may result in complaints, negative publicity for the institution, litigation, and bringing the nursing profession into disrepute – the South African media constantly challenges the desired image of nursing as a caring profession with reports of poor care, neglect and misconduct (Oosthuizen, 2012:49-62).

A nursing care plan is defined as a documented guide which consolidates information regarding a patient's care (Berman & Snyder, 2014:233). The role of the nursing care plan encompasses the facilitation of standardised, evidence-based, holistic care as well as the recording and measurement of care (Ballantyne, 2016:55). The nursing care plan also allows the nurse to provide evidence of working within their legal scope of practice and may afford protection in case of complaints or disciplinary action (Ballantyne, 2016:55).

Furthermore, nursing care plans facilitate continuity of care by communicating the patient's documented plan of care to nurses and other members of the multidisciplinary team (Cook, Dover, Dickson & Colton, 2012:89). Proper coordination of care is essential in order to prevent duplication and omission of required nursing care (Carpenito-Moyet, 2008:45). It has been found that inadequate communication has a negative impact on patient outcomes, adverse events and length of hospital stay; for instance, missed care and non-adaptation for specific needs may lead to medico-legal risks and the occurrence of adverse events. These may include the development of pressure ulcers due to ineffective/omitted planning regarding patient mobility (Curtis, Murphy, Hoy & Lewis, 2009:134).

Both the process of care planning and the actual documented record of care are vital in the resolution of a patient's problems or health needs. This study focusses on the standardised nursing care plan, which will now be described.

2.7.1 The standardised nursing care plan

Standardised nursing care plans are of particular interest for this study, as they are commonly used in the study hospital. In the South African context, the draft Regulations Regarding the Scope of Practice of Nurses and Midwives R786 of 15 October 2013 defines a standardised nursing care plan as a generic plan of care for specific conditions or interventions, developed by a professional nurse, midwife or staff nurse (South African Nursing Council, 2013:1).

Standardised care plans are pre-written, printed, formal plans, specifying nursing care for groups of patients with common needs and may include checklists and/or blank lines or spaces to facilitate recording for individual patient needs (Berman & Snyder, 2014:233, 235). Standardised care plans are an accepted form of documenting planned care for common conditions, simplifying the process of care planning (Berman & Snyder, 2014:233, 235; Dahm & Wadensten, 2008:2138, 2143; Olsson *et al.*, 2009:820). As an example, a standardised care plan may be used to document and guide the care of patients with diabetes mellitus. However, a standardised nursing care plan cannot be used as the sole means of planning a patient's care, as this type of plan is only a general plan of action for a group of patients with common problems or routine care (Dahm & Wadensten, 2008:2138). An individual care plan should thus be developed for specific patient needs, unusual problems, and non-routine care not included in the standardised care plan (Olsson *et al.*, 2009:821).

Evidence-based knowledge should be used to identify common actual and potential problems of specific conditions, which are then used to formulate standardised nursing care plans, while using the nursing process as basis (Cook *et al.*, 2012:89; Dahm & Wadensten, 2008:2138; Olsson *et al.*, 2009:820; South African Nursing Council, 2013:6). Often, standardised nursing care plans are developed by an institution's staff based on relevant literature, as well as institutional policies and procedures. Standardised nursing care plans are also available in reference books, nursing textbooks and online (Nursing care planning, 2018).

All nursing care plans must be validated and signed by an RN if the task of compilation or adaptation was delegated to subcategories of nurses (Geyer *et al.*, 2009:206). In

order to remain current and complete, standardised nursing care plans should be continually updated after evaluating the patient's progress towards desired outcomes (La Duke, 2009:110; South African Nursing Council, 2013:5).

Advantages associated with the use of standardised nursing care plans include saving time, providing consistent nursing care for patients with the same problems, and promoting evidence-based care. Furthermore, they can be used as a guide by staff unfamiliar with a specific clinical area (Geyer *et al.*, 2009:205). However, the disadvantages include that patients' individual needs may not be taken into account. Therefore, the goals and interventions of this type of care plan are general, and if they are not used meticulously, they become pointless (Barret *et al.*, 2009:107-108). Additionally, standardised care plans are not always updated with the latest scientific knowledge on the specific problem (Jansson *et al.*, 2010:26; Dahm & Wadensten, 2008:2138).

When standardised nursing care plans are compiled and applied as intended, they should facilitate the provision of standardised, evidence-based nursing care.

2.7.2 The multi-disciplinary care plan

Multi-disciplinary care plans, also called integrated care pathways, care protocols or care maps, are increasingly used as an alternative method of care planning. Developed in the United States of America (USA) as an element of "managed care", multi-disciplinary care plans aimed at reducing costs and increasing the quality of care provided. Several studies linked the implementation of these plans with increased quality of care provided, while reducing costs and length of hospital stay (Barret *et al.*, 2009:109). This type of care plan comprises a single document where all the members of the multidisciplinary team record their care. The document is typically developed for a particular disorder or group of patients, and involves expected problems, interventions (processes) and goals (outcomes) to be reached in a specific time frame. Current evidence for best practices form the knowledge base for these plans, which are updated continuously to ensure care according to the newest evidence, while representing the needs of individual patients. The clear, step-by-step instructions

contained in these plans provides a valuable guideline for student nurses and inexperienced RNs (Barret *et al.*, 2009:109-111; Van Rooyen *et al.*, 2009:329-330).

2.8 Factors influencing the application of the nursing process and nursing care plans

Several factors that influence the non-application of the nursing process, specifically nursing care plans, are a common denominator throughout international literature. The conceptual framework guiding this study is Cabana's Framework for Improvement, which categorises these factors into three main categories, namely knowledge, attitude, and behaviour (Cabana *et al.*, 1999:1458-1463). The premise of Cabana's framework is that knowledge will affect attitude, and then behaviour (Roelens *et al.*, 2006:2).

2.8.1 Knowledge

According to Cabana *et al.* (1999:1458-1463), the concept "knowledge" encompasses awareness and familiarity. Literature suggests that knowledge influences the application of the nursing process and nursing care plans (Mahmoud & Bayoumy, 2014:300-312; Mamseri, 2012:71-102). Furthermore, standardised care plans are not always updated with the latest scientific knowledge on the specific problem (Jansson *et al.*, 2010:26; Dahm & Wadensten, 2008:2138). Mahmoud and Bayoumy's (2014:300-312) study on the barriers and facilitators for executing the nursing process from nurses' perspective supports this premise. They reported that 94.6% of respondents had adequate knowledge regarding the nursing process, and 79.8% felt confident in applying it. These authors also found that the most prominent facilitators in the application of the nursing process were: being educated about the nursing process during undergraduate studies (93.9%), having theoretical knowledge and practical skills (97.3%), and receiving in-hospital training on the nursing process (93.3%) (Mahmoud & Bayoumy, 2014:300-312).

However, Mamseri (2012:71-102) found that although 81% of respondents in her study received training on the nursing process, only 43% were able to implement it. Although practical and theoretical education on bachelor's degree level will assist in the

implementation of the nursing process, a lack of knowledge remains an obstacle for proper implementation (Heidari & Mardani Hamooleh, 2016:101-104). Similarly, other studies found that despite adequate theoretical knowledge regarding the nursing process and nursing care plans, it has not been assimilated into practice. The reasons for the lack of full implementation included insufficient experience in the use of the nursing process, care plan goals not always being evaluated, staff shortages, and a lack of administrative supplies (Afolayan, Donald, Baldwin, Onasoga & Babafemi, 2013:34-43; Dahm & Wadensten, 2008:2142).

Another factor related to knowledge is the way these standardised nursing care plans are developed and compiled. These plans are developed in advance for a specific patient group and aim to foster standardised, evidence-based nursing care for these patients (Barret *et al.*, 2009:107; Berman & Snyder, 2014:233, 235). The use of outdated standardised nursing care plans which are not updated with the latest scientific knowledge related to the problem, will impede its appropriate use (Jansson *et al.*, 2010:26; Dahm & Wadensten, 2008:2138). Furthermore, a lack of awareness regarding the importance of care planning may also negatively impact the meticulous compilation and adaptation of standardised nursing care plans (Leach, 2008:1729).

2.8.2 Attitude

In Cabana's Framework for Improvement attitude embodies agreement, outcome expectancy, self-efficacy and motivation (Cabana *et al.*, 1999:1458-1463). The effect of these attitudinal elements will impact how standardised nursing care plans are compiled and adapted. RNs' agreement with the content of the care plan involves several aspects, namely applicability to a specific patient diagnosis and health needs, the amount of documentation involved, format, and ease of use. Outcome expectancy refers to the expectation that the meticulous compilation and adaptation of standardised nursing care plans will lead to improved outcomes for personnel and patients (Cabana *et al.*, 1999:1462). This will include aspects such as the influence on high-quality care, continuity of care, and the nurse-patient relationship.

Self-efficacy signifies the belief that one has the ability to perform a specific behaviour (Cabana *et al.*, 1999:1462). For example: do RNs feel confident to compile and adapt

standardised nursing care plans? Motivation involves the habits and routines one is used to, as well as the will to change one's behaviour, for example, RNs' failure to check and sign care plans compiled by enrolled or auxiliary nurses (Cabana *et al.*, 1999:1462). Furthermore, the credence that is awarded to the nursing process in general, and nursing care plans specifically, may determine how it is utilised (Jooste *et al.*, 2010:93). Credence refers to the belief in or acceptance that something is true or plausible (*English Oxford Living Dictionaries*, 2017:n.p.). Various international studies established the negative perceptions of nurses towards nursing care plans, which may further impact on its use. Some of these perceptions have been identified as nursing care plans being perceived as a requirement only, with a lack of conviction in the value of the care planning process, or a time-consuming nuisance and an unnecessary burden, with no contribution to the planning or evaluation of care, or a negative attitude towards formal recordkeeping in general (Cheevakasemsook *et al.*, 2006:368; Dellefield, 2006:129; Keenan, Yakel, Tschannen, & Mandeville, 2008:3-184; Blair & Smith, 2012:164).

Similarly, an indifferent approach and negative attitude towards nursing care plans were found in results from a study evaluating the use of nursing care plans in general nursing practice at a Level 3 hospital in Kwazulu-Natal (Maharaj, 2015:1-140). Moreover, attitudinal barriers in 60% of respondents were reported by Mahmoud and Bayoumy (2014:300-315). These barriers included dissatisfaction with content, inability to individualise patient care, lack of interest, and inability to see the purpose of care plans. Additionally, students tend to see the implementation of the nursing process as a theoretical paper exercise, resulting in their dissatisfaction with the use of the nursing process in clinical practice (Heidari & Mardani Hamooleh, 2016:101-104).

Nurses' attitudes towards the nursing process, as measured by the Dayton Attitude Scale, established that nurses with higher education levels had more positive attitudes towards care planning, although less than 30% were satisfied with the way care planning was executed in their hospital (Martin, Dugan, Freundl, Miller, Phillips & Sharritts, 1994:35-40).

Habit or unit routines may influence a nurse's decision to complete, delay or omit certain care items – if the decision has no harmful effect on the patient, it will be easier to repeat in future (Kalisch *et al.*, 2009:1513). This is illustrated by the fact that students feel the nursing process has become a habit, with which they are bored – they are not motivated to use it and do not see the use of the nursing process (Heidari & Mardani Hamooleh, 2016:101-104).

2.8.3 Behaviour

Behavioural elements include care plan characteristics, organisational factors, and environmental factors. Even with sufficient knowledge and positive attitudes, certain external barriers can influence the behaviour of RNs related to how standardised nursing care plans are compiled and utilised (Cabana *et al.*, 1999:1462).

Specific care plan characteristics may influence the behaviour of RNs with regard to the compilation and adaptation thereof. The ease with which care priorities can be identified, as well as the adaptability of the plans for specific patients, are instances of this element. Organisational factors like the interrelation between multidisciplinary team members, regular audits, and unit routines also play a role in how the preferred behaviour will be performed (Cabana *et al.*, 1999:1462). Environmental factors that influence behaviour include lack of time, workload, and the availability of care plans (Cabana *et al.*, 1999:1462).

Relating to the discussed behavioural elements, barriers described in literature involved workload, staff shortages, absence of supplies and materials, lack of time, lack of organisational support, extensive writing, and care plans being confusing and lacking validity and reliability (Mahmoud & Bayoumy, 2014:300-315; Dellefield, 2006:128-133; Habermann & Uys, 2006:4).

When communication through documentation is inadequate, it may contribute to poor patient outcomes and patient dissatisfaction (Prideaux, 2011:1450, 1451). Evidence suggests that nursing care plans are seen as an arduous nuisance, left until last (Blair & Smith, 2012:164; Cheevakasemsook *et al.*, 2006:368; Jooste *et al.*, 2010:93). This is confirmed by a study conducted by Ball, Murrels, Rafferty, Morrow and Griffiths

(2012:4) on care left undone during nursing shifts. These authors found that 47% of RNs failed to develop or update nursing care plans. Another study on variations in nursing care quality across hospitals described RNs' reports of unmet nursing care needs, concluding that 41%, on average, did not develop or update nursing care plans (Lucero, Lake & Aiken, 2009:2304). Kalisch (2006:306-313) reported that staff chose to omit time-consuming tasks.

2.9 Summary

The nursing process as a scientific method of delivering nursing care underpins the compilation of a nursing care plan to meet the health needs of the patient. When any part of the nursing process is applied ineffectively, it negatively impacts on every other part of the process, since the nursing process is cyclical in nature. Poor care planning and poor documentation practices adversely affect patient outcomes, which could result in physical and psychological impairment of the patient. Furthermore, these practices may expose the RN to disciplinary procedures and litigation, damaging the image of the nursing profession.

In Chapter 3 the research methodology and its application in the study will be explained.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

Chapter 3 provides a thorough description and explanation of the manner in which the selected research methodology and methods were applied to describe the particular barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans in a public hospital in the Eden District, South Africa.

3.2 Aim and objectives

The aim of this study was to describe the particular barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans.

The study objectives were:

- To describe the barriers influencing RNs in the meticulous compilation and adaptation of standardised nursing care plans.
- To describe the facilitators influencing RNs in the meticulous compilation and adaptation of standardised nursing care plans.
- To determine if there are associations between demographic data and the most reported barriers and facilitators.
- To identify the strategies suggested by RNs to reinforce the most reported facilitators or minimise the most reported barriers.

3.3 Study setting

The study was conducted in the natural setting of a regional hospital environment in the public health sector in the Eden District. The Eden District is situated in the Western Cape and includes seven local municipalities, namely George, Oudtshoorn,

Knysna, Bitou, Mossel Bay, Hessequa, and Kannaland (*The Local Government Handbook*, 2017:n.p.). The public health sector consists of public health institutions, designed to provide various forms of health services to society (Republic of South Africa, 2003:12).

Level 1 or district hospitals typically have between 30 and 200 beds and provide generalist hospital care to inpatients as well as outpatients who are referred from primary health care facilities in that health district. Level 2 or regional hospitals provide more specialised care to referred patients from several district hospitals and have between 200 and 800 beds (Department of Health, 2002:3; Department of Health, 2012:5).

The study site is a regional hospital with 272 beds which offers services including surgical, internal and family medicine, as well as orthopaedics, psychiatry, oncology, radiotherapy, chemotherapy, urology, ophthalmology, paediatrics, obstetrics, gynaecology and neonatology, amongst others (Western Cape Government, 2013). The population served by this hospital is 645 266 people (as of 2011 census) is drawn from George, Oudtshoorn and Knysna, amongst other areas in the Eden District (574 265) and Central Karoo District (71 011) (Municipalities of South Africa, 2018). The hospital accepts patients referred from local community clinics, and refers patients to Tygerberg Hospital, Grootte Schuur Hospital and Red Cross Children's Hospital. The average long-stay admission rate is 1750 patients per month. Nursing services are provided by 109 nurses in the study hospital, of whom 45 are RNs, community service practitioners or operational managers. In these ward settings, the operational managers, RNs and community service practitioners are responsible for care planning (Pietersen, 2018).

The study hospital has one dedicated medical unit, two dedicated surgical units (general surgery and orthopaedics) and two units with a combination of medical and surgical patients, which formed part of the study. Other units include psychiatry, obstetrics, gynaecology, paediatrics, renal unit, emergency centre, theatre, out-patient department, day unit for minor surgical procedures, and intensive care units for adults/children and neonates.

3.4 Research design

This study was conducted within a quantitative approach using a descriptive design to meet the stated objectives. Descriptive quantitative research frequently occurs in a natural, uncontrolled, real environment, where the researcher does not manipulate the environment in any way (Burns & Grove, 2011:40).

The quantitative approach (Grove *et al.*, 2013:74) enabled the researcher to classify and describe the barriers and facilitators that may influence the compilation and adaptation of standardised nursing care plans by RNs.

A descriptive design is appropriate when the researcher wants to gain information regarding a particular situation and variables are not manipulated (Grove *et al.*, 2013:215). In this study there were no interventions – a self-administered questionnaire was used as data collection tool. Furthermore, no attempts were made to manipulate variables or prove causality between variables. The sample consists of a single study group, and trends were stratified rather than statistically compared (Grove *et al.*, 2013:47, 215). The variables investigated in this study included five demographic variables, namely gender, age, years' experience as an RN, basic nursing qualification, and nursing category. Additionally, 35 scale items in the form of statements depicting barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans were investigated.

3.5 Population and sampling

A target population consists of all the individuals in a particular population who satisfy the sampling criteria (Grove *et al.*, 2013:351). A sample, on the other hand, is a subcategory of the target population who is selected to participate in a particular study (Burns & Grove, 2011:51).

Initially, six public hospitals in the Eden District of South Africa were purposively sampled as sites for data collection in the study. The target population (N=76) and total sample (n=76) would have included all RNs, community service practitioners and operational managers working in general medical/surgical nursing units in these

hospitals where standardised nursing care plans are utilised. However, after ethical clearance was received from FMHS HREC, the researcher was only granted permission by the Western Cape Department of Health: Health Impact Assessment to access one public hospital in the Eden District of South Africa, and this then became the study site for this research project. The reason provided by the hospitals that refused permission to the researcher was the heavy workload on nursing staff. As a result of this challenge, a protocol amendment notification was submitted to FMHS HREC on 7 November 2017, as required, due to the changes in the sample size. The statistician advised the researcher to use whole population sampling as a result. This study site is the only Level 2 (regional) public hospital in the Eden District and uses standardised care plans.

The target population of this study included all RNs, community service practitioners and operational managers working in general medical/surgical nursing units where standardised nursing care plans are utilised, in one public hospital in the Eden District (N=45). Due to the small size of the target population, the whole population was invited to participate. This approach was confirmed with a biostatistician as a reasonable manner of increasing the sample size and its representativeness of the target population (Grove *et al.*, 2013:351-352).

RNs and community service practitioners educated in South Africa are familiar with the nursing process and nursing care plans, as nursing education institutions in South Africa include it in the curricula according to the South African Nursing Council's nursing education and training standards (South African Nursing Council, 1985:1; South African Nursing Council, s.a.:9).

Furthermore, all RNs and community service practitioners in the study hospital are involved in direct patient care and make use of standardised nursing care plans in their daily activities. Community service practitioners, although not yet registered as RNs, have completed their formal education and function under the scope of practice of the RN (South African Nursing Council, 2007:1). In the study hospital, operational managers are all RNs and they are often involved in direct patient care, involving the use of standardised nursing care plans.

RNs working in short-term units, paediatrics and specialised units were excluded from the study. Standardised nursing care plans and other nursing documentation are specifically developed for specialised units. This may have caused non-representativeness of the sample regarding the type and format of documentation used.

Short-term patients are not hospitalised long enough to fully enable identification of barriers and facilitators to the meticulous compilation and adaptation of standardised nursing care plans for these patients.

Private hospitals were excluded from the study as the standardised care plans they use differ significantly from those in public hospitals.

The target population and possible sample size of this study were limited by the size of the units and the allocation method of personnel to specific units – the smaller the unit, the fewer RNs and community service practitioners are allocated to it. Therefore, with the approval of the statistician, it was considered appropriate to use the total accessible population, as it increased the sample size and its representativeness of the target population (Grove *et al.*, 2013:351-352).

The total target population was accessed in the following way: The personnel allocation list for each medical/surgical unit in the selected hospital was obtained from the facility manager. All RNs, community service practitioners and operational managers allocated to these units for day and night duty were invited to participate in the study. The researcher explained the inclusion criteria to the operational managers, who then handed envelopes containing an information leaflet, informed consent form and questionnaire (Refer to Appendix 3 & 4) to the staff members who agreed to read the request for participation. None of the possible respondents refused to take an envelope.

At current count, there were a total 45 RNs, including operational managers and community service practitioners, working in medical-surgical units in the study hospital. After conducting the pilot test, the final sample consisted of 6 operational managers, 30 RNs and 7 community service practitioners (n=43). A response rate of

67% was achieved (29 completed questionnaires). According to Fincham (2008:1), researchers should aim for a 60% response rate.

3.5.1 Inclusion criteria

The selected respondents were RNs, operational managers or community service practitioners who worked in general medical/surgical units where standardised nursing care plans are utilised.

3.6 Instrumentation

Since a descriptive research design was used, it was appropriate to use a survey in the form of a self-administered questionnaire as a data collection instrument (Grove *et al.*, 2013:224).

It was necessary to make use of a researcher-developed questionnaire since no validated questionnaire could be found that was completely relevant and applicable to the study topic. A 41-item structured questionnaire, developed by the researcher, was used as the data collection tool. This questionnaire was developed from a literature review and applied previous related study questionnaires as sources. Permission was obtained from Dahm, M.F. and Wadensten, B. to use sections of their questionnaire, titled "Investigating nurses' opinions about using standardised care plans and quality standards for clinical practice", as well as to adapt these questions to suit the questionnaire format, study topic and South African context (Refer to Appendix 5). This questionnaire was used in their study regarding nurse's experience of, and opinions about, using standardised care plans in electronic health records (Dahm & Wadensten, 2008:2137-2145). Only items in the original questionnaire relating purely to standardised care plans were used. Furthermore, language adaptations were made in order to rewrite items into statement form, to fit in with the scale format of the questionnaire:

- No items of the original questionnaire were used verbatim.
- The following items were adapted from the original questionnaire as described previously: 6B, D, T, U, V, Z, AA, GG, HH – the original questionnaire consisted of 18 items (excluding 2 items related to demographic details), for example the original question was “How familiar are you with the content of the standardized care plans at your unit?”, whereas the adapted question stated “Registered nurses are familiar with the content of the standardised nursing care plans in medical/surgical units”.
- The rest of the items in the questionnaire of the current study was developed by the researcher.

The final study questionnaire consisted of three sections. Section 1 contained demographic data, such as age, gender, nursing category, type of qualification obtained, and years’ experience as an RN. The demographic data were used to provide a substantial description of the study respondent cohort, and was applied to establish if there were associations between demographic data and the most reported barriers and facilitators.

Section 2 comprised statements (in the form of a Likert Scale) regarding the possible barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans. Thirty-five statements were formulated from literature and the work of Dahm and Wadensten (2008:2137-2145). Cabana’s Framework for Improvement (Cabana *et al.*, 1999:1458-1459) was used to structure and organise the self-report questionnaire. Questionnaire items formulated as statements were classified into the three main categories and sub-categories portrayed in the framework, namely knowledge (awareness and familiarity), attitudes (agreement with content of care plan, outcome expectancy, self-efficacy and motivation), and behaviour (care plan characteristics, organisational factors and environmental factors) (Refer to Table 3.1). The statements were intermingled on the questionnaire so that these categories were not apparent to respondents, to avoid any preconceived notions about responses. Furthermore, statements E, F, P, W and Z were phrased in the negative in order to avoid response-set bias (Grove *et al.*, 2013:431).

Table 3.1: Distribution of statements in line with the conceptual framework

CATEGORY	STATEMENT
Knowledge (awareness and familiarity)	6A, C, D, K, M, O, R, V, Y
Attitude (agreement with content of care plan, outcome expectancy, self-efficacy, motivation)	6E, F, H, I, P, T, U, W, Z, EE, FF, GG, HH
Behaviour care plan characteristics, organisational factors, environmental factors	6B, G, J, L, N, Q, S, X, AA, BB, CC, DD, II

Reported barriers and facilitators were classified into the major categories and subcategories of the conceptual framework, as displayed in Figure 1.1. A statement was classified as a barrier or facilitator, according to whether a positive or negative response was provided. For each of the statements in Section 2, the respondent was required to mark one of the following choices: “Strongly Agree”, “Agree”, “Disagree” or “Strongly Disagree”. For example:

Table 3.2: Example of questionnaire format

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
		4	3	2	1
6A	The standardised nursing care plans we currently use are based on the latest research evidence				

Section 3 consisted of one open-ended question for RNs to identify the way they feel possible barriers may be meliorated or facilitators may be supported in the meticulous compilation and adaptation of standardised nursing care plans. The open-ended question afforded respondents to provide their personal viewpoint of the biggest barrier to the meticulous compilation and adaptation of standardised nursing care plans, as well as ways to meliorate these barriers. Additionally, RNs might identify barriers that were not addressed in the questionnaire, which could result in a broader view of the study topic.

Respondents took between 10 to 15 minutes to complete the questionnaire.

The questionnaire was available in English and Afrikaans. These are the two main languages spoken in the Eden District, although the language used in official communication in the Department of Health is English. The questionnaire was compiled in English, then translated into Afrikaans, and then the Afrikaans questionnaire was reverse-translated back into English by a different translator (Refer to Appendix 6). This added to the face validity, content validity, as well as the readability and language acceptability of the questionnaire (Grove *et al.*, 2013:394-395, 398).

Questionnaires were identified by a unique code to maintain the anonymity of respondents and specific units. A code generated by and known only to the researcher was allocated for each unit and a number was allocated for each respondent, e.g. GA1004.

Data were analysed by conducting a descriptive analysis of each of the variables and scale items in the form of frequency tables. The non-parametric Kruskal-Wallis and Mann-Whitney U tests were used to perform hypothesis tests between each of the five demographic variables and all the scale items, to identify trends showing associations between different variables and scale items. Responses to the open-ended question were classified into common categories and then analysed descriptively.

3.7 Pilot test

According to Terre Blanche *et al.* (2006:490), the purpose of a pilot test is to test the data collection instrument for any flaws or inconsistencies, and to assess the clarity of questions. Conducting a pilot test on a data-collecting instrument is the best way to determine whether it is adequately designed (Fox & Bayat, 2007:102).

A pilot test of the data-collecting instrument was performed with a representative sample (n=2) of the target population who complied with the inclusion criteria. The pilot test was conducted in one of the medical/surgical units in the study hospital. The respondents from this unit who partook in the pilot test were excluded from the main study.

Feedback from respondents was obtained to ensure the clarity of questions and to ascertain whether questions needed to be added, removed or revised. No corrections or revision of the instrument was necessary according to the pilot test respondents.

3.8 Validity and reliability

The construct validity of an instrument refers to the extent to which it measures the construct being studied and includes face and content validity (Grove *et al.*, 2013:393-394). Reliability of a measurement instrument refers to the consistency with which that instrument will produce similar results with repeated use (Grove *et al.*, 2013:389).

3.8.1 Validity

As previously discussed, the questionnaire consisted of 41 items divided into three sections, where Section 1 encompassed the demographic data and Section 2 covered statements related to categories of possible barriers and facilitators. Section 3 contained one open-ended question relating to strategies proposed by RNs to reinforce the most reported facilitators or minimise the most reported barriers.

Face validity and content validity of the developed questionnaire were tested through the following means as identified by Grove *et al.* (2013:394). Firstly, the questionnaire was developed from a thorough review of the literature, together with using sections of an available questionnaire after permission was obtained from the authors. Furthermore, a pilot test was conducted on representatives of the target population under similar circumstances as the actual study, to obtain information regarding the clarity of questions and whether questions need to be added, removed or revised. No corrections or revision of the questionnaire was required. Moreover, a statistician, the study supervisor, and nursing lecturers at a higher education institution were consulted for their expertise in research methodology and setting of questionnaires. The expertise of study supervisor and nursing lecturers is validated by them being RNs and academics who have either completed a doctorate degree or are busy with doctoral studies. Furthermore they have experience in supervising masters' degree students. They have a sound background in clinical practice and have theoretical as well as practical knowledge regarding standardised nursing care plans. These content

experts reviewed the study proposal and questionnaire for methodology and appropriate content to ensure that the study objectives would be achieved. Also, a nursing lecturer (with a nursing education qualification) at a public higher education institution, a clinical facilitator, (with a nursing education qualification) at a private higher education institution, and an RN with a nursing education qualification reviewed the questionnaire for validity and whether the content would allow the stated objectives to be met. All of these experts have clinical practice expertise and a thorough knowledge of the nursing process and standardised nursing care plans. No adjustments to the final proposal or the questionnaire were deemed necessary.

Readability and language acceptability of the questionnaire is essential for the validity and reliability of an instrument (Grove *et al.*, 2013:397-398). Readability and language acceptability of the questionnaire was established during the pilot test through feedback from respondents, as well as by consulting the study supervisor and nursing lecturers at a higher education institution. Furthermore, the questionnaire was developed in English, translated into Afrikaans, and then reverse-translated back into English by another translator to assist with readability and language acceptability. The questionnaire was available in English and Afrikaans as these are the two most common languages used in the Eden District, even though the official language for communication in the Department of Health is English.

3.8.2 Reliability

The questionnaire did not lend itself to reliability testing with statistical measures, since the questionnaire did not measure a single concept, like attitude, and the scale items measured different constructs. The questionnaire statements were arranged in a Likert Scale format, but total scores would not be calculated, since each statement referred to a different aspect of possible barriers and facilitators related to the meticulous compilation and adaptation of standardised nursing care plans.

A pilot test was conducted in order to identify possible errors in the questionnaire and research process as a whole, prior to conducting the main study. This improved the reliability of the study and the data collection tool (Fox & Bayat, 2007:102). Additionally, feedback was obtained from respondents included in the pilot test

regarding the clarity of questions and whether questions needed to be added, removed or revised. Based on their feedback, no alterations of the instrument were necessary.

3.9 Data collection

Permission was obtained from the operational managers to collect data in their medical/surgical units in the study hospital, after the conclusion of the pilot test. It was decided to use the operational managers as contact persons with possible respondents, since they have contact with all their staff members on a regular basis.

Respondent packs, consisting of a respondent information leaflet, informed consent form and questionnaire, in both English and Afrikaans, was placed in an unmarked brown envelope and were left with the operational manager. The researcher explained the inclusion criteria to the operational managers, who then handed the envelopes to the staff members who met these criteria in their units who agreed to read the request for participation. None of the possible respondents refused to take an envelope. All willing respondents who met the inclusion criteria and who signed informed consent, were included for data collection. There was no discrimination in the selection of respondents, therefore observing the ethical principle of justice.

A sealed box was placed in each of the units where completed questionnaires could be posted (in the unmarked envelope). The researcher collected these envelopes on a weekly basis. Unmarked envelopes and the box used to collect completed questionnaires were used to ensure anonymity of respondents. Operational managers were asked to remind their staff to return the questionnaires when the researcher noticed that the response rate was poor or slowing down. However, the researcher emphasised respondents' right to voluntarily participate in the study or not, without any risk of disadvantage or intimidation, as well as their right to withdraw from the study at any time and to ask for clarification regarding the purpose of the study.

Data collection took place over a period of 4 months (November 2017 to February 2018) to ensure coverage of all shifts (day and night duty) and to allow those on leave/sick leave to participate upon their return. Furthermore, the extended period of

data collection was a result of a slow return rate from some units – several reminders were sent by the researcher to obtain the optimum response rate.

Respondents were free to choose a convenient time to complete the questionnaire, thus ensuring that there was minimal interruption to patient care, and that the study did not interfere with respondents attending to patient needs. This measure of flexibility ensured that patients were protected from discomfort and harm which might have occurred as a result of the study conducted.

On opening the questionnaire envelopes, the researcher verified the contents of the envelope and ensured that each respondent had signed a consent form, confirming that they were aware of the purpose and process of the study. Questionnaires were also checked for validity. For a questionnaire to be valid, more than 50% of the questionnaire had to be completed, with a signed consent form attached to the questionnaire. An identifying code was then allocated to each respondent pack, according to the defined coding on the allocation list of each unit (for example: *GA1004*). This supported the anonymity of the unit and respondent, but assisted in keeping track of the completed questionnaires. Consent forms were then separated from the questionnaires and stored separately, together with the allocation lists, in a locked safe to which only the researcher has access. This measure safeguarded the confidentiality as well as anonymity of respondents.

A personnel allocation list for each of the medical/surgical units was obtained from the facility manager. The researcher then provided a code for each possible respondent who complied with the inclusion criteria. This code was written down next to the respondent's name on the allocation list. On receipt of completed consent forms and questionnaires, both were coded according to the allocated respondent code. The consent forms and questionnaires were then separated and consent forms and allocation lists were stored separately, in a sealed envelope, in a locked safe in order to maintain the anonymity of respondents and units. Only the researcher has access to this list. The final sample consisted of 6 operational managers, 30 RNs and 7 community service practitioners (n=43). A response rate of 67% was achieved (29 completed questionnaires).

3.10 Data analysis

Data analysis was conducted using SPSS version 25, with the assistance and guidance of a statistician. A descriptive analysis of each of the scale items and demographic variables was performed in the form of frequency tables. Hypothesis tests between each of the five demographic variables, and all the scale items, were performed to identify trends showing associations between different variables and scale items. This was done using the non-parametric Kruskal-Wallis and Mann-Whitney U tests.

3.10.1 Data management

The researcher entered the 41 variables and scale items, as well as respondent codes, into the variable view data sheet of SPSS version 25. Thereafter the type of variable and type of measure were entered. Furthermore, values were allocated to each response option, for example, male = 1, female = 2. Finally, respondent replies were entered into the program. Any missing data was marked in red on the questionnaire for later reference. Once data had been entered, missing data was checked against questionnaires to ensure accuracy. With the concurrence of the statistician, missing data were coded as 999, to avoid confusion with response option values (Refer to Appendix 7). Frequencies of each variable were calculated via computer analysis to check for values outside the predetermined value ranges (Grove *et al.*, 2013:543). After entering all the data, random checks were performed to assess the accuracy of data entries (Grove *et al.*, 2013:531-532). SPSS version 25 has a function in which a random sample of cases can be selected – 10% (n=3) were selected and checked. This process was repeated twice after the initial check, therefore, a total of 9 cases were randomly checked. No errors were found. Consequently, the researcher deduced that the rest of the data entries were correct.

Statements E, F, P, W and Z were reverse-coded as these statements were phrased in the negative (Grove *et al.*, 2013:431). Coding rules were established to guide data entries in ambiguous cases, such as when a respondent marked a response between two options – in this case the item would be marked as a missing value. However, there were no such instances. Responses to the open-ended question were classified

into common categories and then analysed descriptively. Datasets were saved on an external hard-drive and placed in a locked safe, to which only the researcher has access.

3.10.2 Data analysis

Data is described in terms of descriptive statistics, e.g. frequency tables and percentages, as most of the data were at the nominal and ordinal level of measurement (Grove *et al.*, 2013:429). A statistician was consulted regarding applicable measures for data analysis.

Univariate statistics in the form of frequency tables and percentages (Grove *et al.*, 2013:429; Terre Blanche *et al.*, 2006:194, 242) were used to analyse the following: demographic variables, to classify and describe the barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans, as well as to classify the strategies suggested by RNs to support the most reported facilitators or lessen the most reported barriers. Whether a statement was classified as a barrier or facilitator depended on the positive or negative responses to the statements.

Using SPSS version 25, a frequency table was produced for each demographic variable, namely age, gender, nursing category, type of qualification obtained, and years' experience as an RN. The frequency tables for each demographic variable included the frequency, percentage, valid percentage, and cumulative percentage of responses. The same process was utilised for the responses to each of the 35 statements in Section 2 of the questionnaire, distinguishing between the frequencies for the different scale item options, namely agree, strongly agree, disagree, and strongly disagree.

To identify the different barriers and facilitators, results of scale item options were combined, for example, the sum of the frequency of all those who agreed and the frequency of all those who strongly agreed was calculated. If the result of the calculated combined frequencies (and percentages) represented more than 50% of the final sample, that statement was classified as a facilitator. The same process was

followed for the scale item options “disagree” and “strongly disagree” in order to identify a statement as a barrier. In cases where the combined percentage exceeded 65%, the statement was classified as a most reported barrier or facilitator.

As mentioned previously, statements were classified into the three main categories portrayed in the conceptual framework, namely knowledge, attitudes, and behaviour. In Chapter 4 the results are discussed in terms of these three categories and the statements are grouped under each category. Certain statements relate to each other and the results of these statements were compared and discussed together, for example: statement E states “using standardised nursing care plans involve unnecessary paperwork” and statement T states “using standardised nursing care plans minimise unnecessary documentation”.

In order to meet study objective 3, The Kruskal-Wallis and Mann-Whitney U tests were applied for hypotheses testing. These statistical tests were used to establish possible associations between demographic variables and the scale items. These tests were chosen because a descriptive analysis was done on variables on an ordinal level of measurement (Grove *et al.*, 2013:586). For both these tests on independent groups, the significance level was set at 0.05, which represents the minimum significance level at which the null hypothesis will be rejected. Setting the significance level at 0.05 infers that a statistical significant relationship has a 95% chance of existing in the whole population, and therefore the results are less likely to be the consequence of chance factors (Fox & Bayat, 2007:127). Independent groups are defined as two or more groups that are selected from the same target population and do not have any effect on one another. Results of the groups are presumed to be unrelated (Grove *et al.*, 2013:581).

The Mann-Whitney U test for two independent groups was used to determine whether there was an association between gender and the 35 scale items. The Kruskal-Wallis test for more than two independent groups was used to determine whether there were any associations between the 35 scale items and the other demographic variable categories, namely those of age, years’ experience as an RN, basic nursing qualification, and nursing category.

Responses to the open-ended question were analysed thematically through identifying common themes in the respondents' responses. Consequently, the most prominent barriers, as experienced by RNs, were identified. The same process was followed to identify proposed strategies to meliorate barriers to the meticulous compilation and adaptation of standardised nursing care plans.

Research was conducted after review and approval from the Health Research Ethics Committee, Stellenbosch University (HREC reference number: 0610). Further permissions were obtained from the Western Cape Department of Health: Health Impact Assessment, and via them, from organisational managers of the hospital included in the study (Refer to Appendix 1 & 2). A detailed discussion of relevant ethical considerations can be found in Chapter 1.

3.11 Summary

Chapter 3 discussed the methodology employed in this study. The aims and objectives of the study are outlined. Research took place in the natural setting of a regional hospital environment in the public health sector in the Eden District, utilising a quantitative approach with a descriptive design to meet the stated objectives. The population and sampling methods are described, as well as the inclusion criteria. The researcher-developed questionnaire is discussed in detail, including the reliability and validity of the said questionnaire. Furthermore, the pilot test, data collection and data analysis are explained.

Chapter 4 will provide a complete review of the results obtained from the data analysis conducted.

CHAPTER 4

RESEARCH FINDINGS

4.1 Introduction

The aim of the study was to describe the particular barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans. In this chapter, a discussion of the results, obtained by applying the methods and methodology as discussed in Chapter 3, is provided. Findings are displayed as frequency tables and graphs.

Out of the possible 43 study respondents who met the inclusion criteria, 29 submitted complete and valid questionnaires that were included in the final dataset. For a questionnaire to be valid, more than 50% of the questionnaire had to be completed, with a signed consent form attached to the questionnaire. The research findings will be discussed within the context of Cabana's Framework for Improvement (Cabana *et al.*, 1999:1458-1459) as discussed in Sections 1.7 and 2.8.

4.2 Section A: Demographic data

Section 1 of the questionnaire elicited the demographic data of each respondent. The specific respondent demographic data collected for the purpose of this study were: gender, age, professional category, basic nursing qualification, and years of experience as an RN. Demographic data were collected to determine if there were associations between demographic data and the most reported barriers and facilitators, as stated in study objective 3.

Twenty-nine respondents' questionnaires were included in the final dataset. Of these, 24.1% (n=7) were completed by community service practitioners, 58.6% (n=17) by RNs, and 17.2% (n=5) by operational managers.

The majority of respondents (93.1%) were female (n=27), with 6.9% being male (n=2). The gender balance of the sample is greatly skewed as there are only 3 male RNs employed at the study hospital. Two of these men participated in the study.

Most of the respondents (55.2%) completed a 4-year diploma programme as basic nursing qualification (n=16). A further 27.6% (n=8) completed the 2-year Bridging programme for Enrolled Nurses leading to registration as a General Nurse. Only 17.2% (n=5) held a 4-year bachelor’s degree as basic nursing qualification, and all five were in their community service year. Figure 4.1 summarises the demographic data results in the form of a panelled chart.

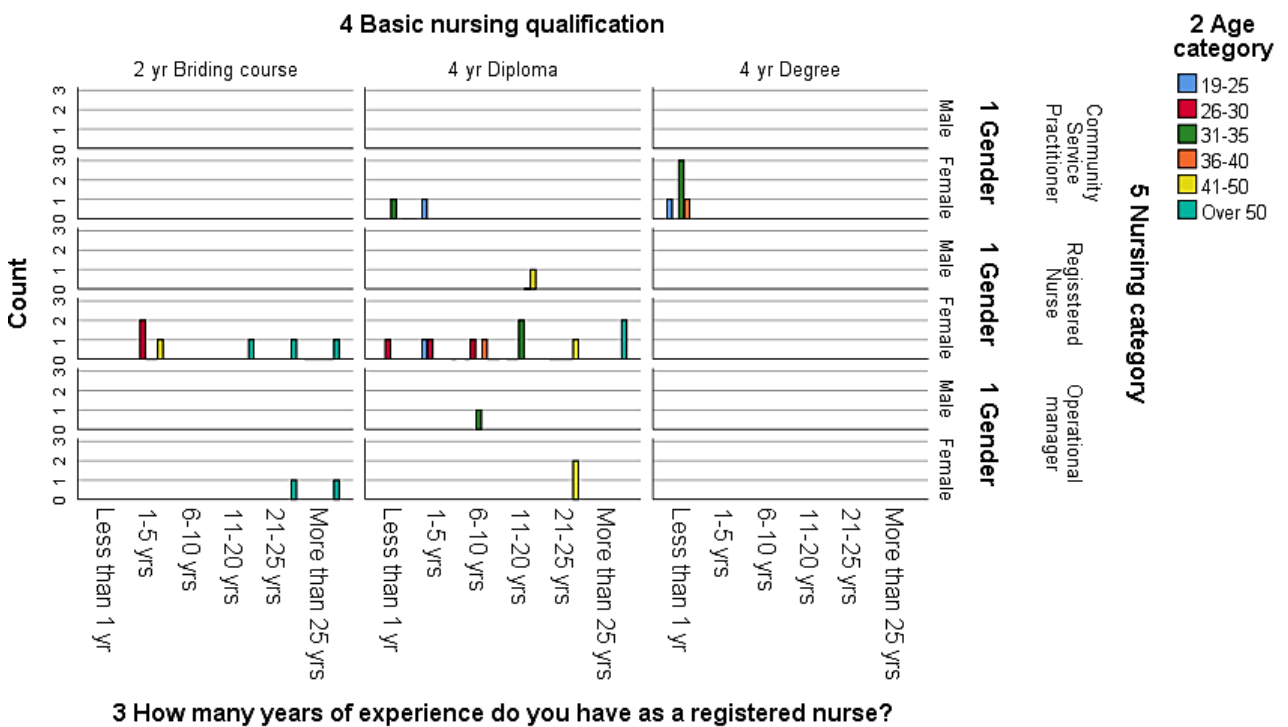


Figure 4.1: Panelled chart of all demographic variables

Table 4.1 indicates the age distribution of respondents across six categories. The respondents’ ages were classified into predetermined categories as indicated in Table 4.1. The range of ages of the respondents was 22 years to 58 years. In the specified age categories, there were 10.3% (n=3) respondents between 19 and 25 years, 17.2% (n=5) between 26 and 30 years, 24.1% (n=7) between 31 and 35 years, 6.9% (n=2)

between 36 and 40 years, 17.2% (n=5) between 41 and 50 years, and 24.1% (n=7) over the age of 50 years.

Table 4.1: Age category

AGE CATEGORY	FREQUENCY	PER CENT
19-25	3	10.3
26-30	5	17.2
31-35	7	24.1
36-40	2	6.9
41-50	5	17.2
Over 50	7	24.1
Total	29	100.0

With regard to the years' experience as an RN summarised in Table 4.2, 24.1% (n=7) respondents had less than 1 year experience – these respondents were all community service practitioners. The rest of the results were distributed as follows: 20.7% (n=6) had between 1 and 5 years' experience, RNs with 6 to 10 years' experience constituted 10.3% (n=3) of the respondents, 13.8% (n=4) had 11 to 20 years' experience, and 17.2% (n=5) had 21 to 25 years' experience. RNs with more than 25 years' experience totalled 13.8% (n=4).

Table 4.2: Years' experience as an RN

YEARS' EXPERIENCE AS RN	FREQUENCY	PER CENT
Less than 1 yr	7	24.1
1-5 yrs	6	20.7
6-10 yrs	3	10.3
11-20 yrs	4	13.8
21-25 yrs	5	17.2
More than 25 yrs	4	13.8
Total	29	100.0

A summary of age category versus the years' experience as an RN is displayed in Figure 4.2.

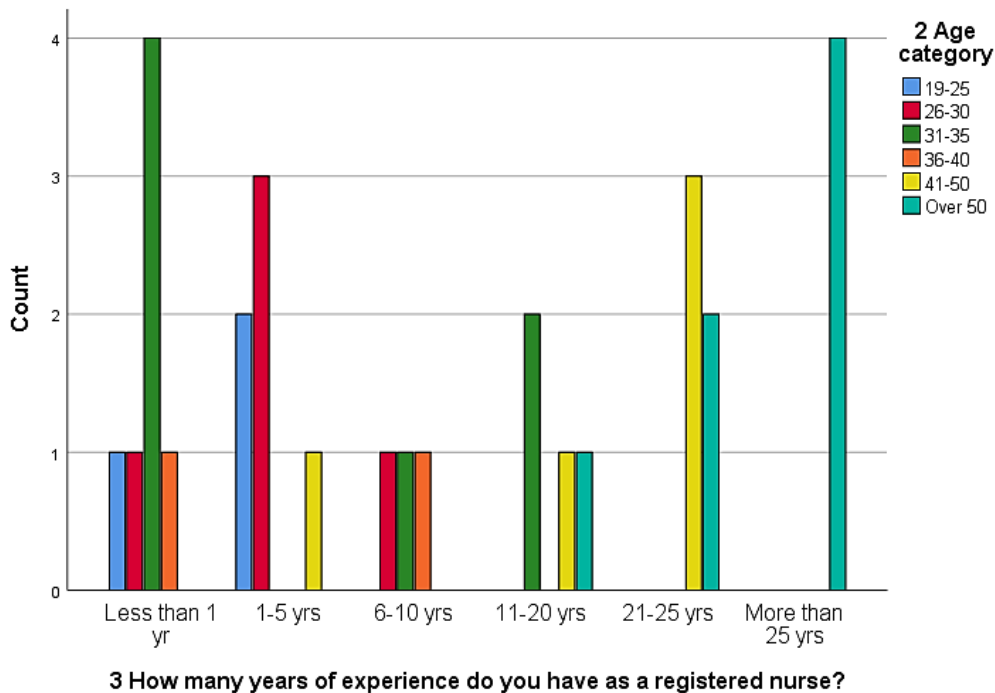


Figure 4.2: Age category versus the years' experience as RN

The ages of community service practitioners with less than 1 year experience as an RN were distributed as follows: 3.4% (n=1) were between the ages of 19 to 25 years, 3.4% (n=1) were between the ages of 26 to 30 years, 3.4% (n=1) were between the ages of 36 to 40 years, and 13.8% (n=4) were between the ages of 31 to 35 years. Of the RNs with 1 to 5 years' experience, 6.9% (n=2) were between 19 and 25 years old, 10.3% (n=3) were between the ages of 26 to 30 years, and 3.4% (n=1) were between 41 and 50 years of age. Three RNs had 6 to 10 years' experience, of which 3.4% (n=1) were between 26 and 30 years old, 3.4% (n=1) were between 31 and 35 years old, and 3.4% (n=1) were between 36 and 40 years old.

No RNs younger than 30 years had more than 10 years' experience as an RN. Four out of the five RNs between the ages of 41 and 50 years had more than 11 years' experience as an RN. Two (6.9%) RNs between the ages of 31 and 35 years had more than 11 years' experience. All of the RNs over the age of 50 years had more than 11 years' experience, with 3.4% (n=1) in the category of 11 to 20 years' experience, 6.9% (n=2) with between 20 and 25 years' experience, and the majority (13.8%; n=4) with more than 25 years' experience as an RN.

Analysis of the results regarding the different demographic variables assisted in establishing a clear understanding of the characteristics of the study sample to facilitate meeting the stated objectives.

4.3 Section B: Subsections of the questionnaire

4.3.1 Section 2 – Scale items

Section 2 of the questionnaire included 35 statements regarding RNs' current clinical environment and experience with regard to the possible barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans. As discussed on page 46 – 47, no items of the original questionnaire (Dahm & Wadensten, 2008:2137-2145) were used verbatim, however as explained previously, items 6B, D, T, U, V, Z, AA, GG and HH were adapted from the original questionnaire and the rest of the items were developed by the researcher.

These statements were classified into the three main categories each with specific subcategories as portrayed in Cabana's Framework for Improvement (Cabana *et al.*, 1999:1458-1459), namely knowledge (awareness and familiarity), attitudes (agreement with content of care plan, outcome expectancy, self-efficacy and motivation), and behaviour (care plan characteristics, organisational factors and environmental factors). Statements in each category, including the subcategories are explained in sequence (Table 3.1 is repeated here for ease of reference).

Table 3.1: Distribution of statements in three categories in line with the conceptual framework

CATEGORY	STATEMENT
Knowledge (awareness and familiarity)	6A, C, D, K, M, O, R, V, Y
Attitude (agreement with content of care plan, outcome expectancy, self-efficacy, motivation)	6E, F, H, I, P, T, U, W, Z, EE, FF, GG, HH
Behaviour care plan characteristics, organisational factors, environmental factors	6B, G, J, L, N, Q, S, X, AA, BB, CC, DD, II

For each of the statements in Section 2, the respondent was required to mark one of the following choices: “Strongly Agree”, “Agree”, “Disagree” or “Strongly Disagree”. Whether a statement was classified as a barrier or facilitator depended on the positive or negative responses to the statements, for example, Statement 6L states: “With standardised nursing care plans it is easy to identify priorities with regard to care”. If more than 50% of respondents agreed or strongly agreed with this statement, it was classified as a facilitator. Conversely, if more 50% disagreed or strongly disagreed with the statement, it was classified as a barrier.

Through analysing these results, the most reported barriers and facilitators were identified. When the combined responses of “Agreed” and “Strongly Agreed” totalled more than 65%, it was classified as a “most reported facilitator”. Similarly, when the combined responses of “Disagreed” and “Strongly Disagreed” totalled more than 65%, it was classified as a “most reported barrier”. The percentage of more than 65% was chosen as the cut-off point, as it represents the opinion of at least two-thirds of the sample.

Barriers and facilitators for each category of knowledge, attitude and behaviour will be listed at the end of each section (Refer to Tables 4.3, 4.7 and 4.15). A summary of the distribution of all the barriers and facilitators will follow at the end of the discussion (Refer to Tables 4.18 and 4.19).

4.3.1.1 Knowledge

In line with Cabana’s Framework for Improvement (Cabana *et al.*, 1999:1458-1459), the concept of knowledge here refers to an RN’s awareness and familiarity with the standardised nursing care plans in use.

Within the context of the clinical suitability of care plan activities, which links with familiarity and awareness, the majority of respondents either agreed (n=13, 44.8%) or strongly agreed (n=5, 17.2%) that the standardised nursing care plans currently in use, are based on the latest research evidence. However, 31% (n=9) disagreed with this statement and 3.4% (n=1) strongly disagreed. A total of 72.4% (n=21) disagreed (n=15, 51.7%) or strongly disagreed (n=6, 20.7%) with the statement that developers

involve nursing personnel in all units when new standardised nursing care plans are developed. Most respondents agreed (n=13, 44.8%) or strongly agreed (n=8, 27.6%) that standardised nursing care plans can be used to assist in the orientation of new nurses.

With regard to personal knowledge and familiarity with care plans, the following was noted: The statement “RNs have the necessary knowledge and skills to formulate standardised nursing care plans meticulously”, revealed that 44.8% (n=13) of respondents agreed with the statement, while 27.6% (n=8) strongly agreed with the statement. Those who disagreed constituted 24.1% (n=7), and 3.4% (n=1) strongly disagreed with the statement. Almost all respondents (n=22, 75.9%) received training on the nursing process and nursing care plans during their formal education. Furthermore, the majority of respondents either agreed (n=14, 48.3%) or strongly agreed (n=3, 10.3%) that there are opportunities in the hospital to update their knowledge on compiling and adapting standardised nursing care plans. However, 41.3% (n=12) of the respondents responded that they do not have sufficient opportunities to update their knowledge, with 31% (n=9) indicating that they disagreed, and 10.3% (n=3) indicating they strongly disagreed with the statement. Almost all of the respondents (n=22, 75.9%) either agreed (n=20, 69%) or strongly agreed (n=2, 6.9%) that RNs are familiar with the content of standardised nursing care plans in medical/surgical units.

Within the perspective of awareness of care plans, legality and institutional policies, most respondents agreed (n=19, 65.5%) or strongly agreed (n=7, 24.1%) that the standardised nursing plans in patient files meet the legal requirements for documentation. Furthermore, the statement regarding the availability of a policy to describe the correct compilation and adaptation of standardised nursing care plans elicited an interesting response. A total of 37.9% (n=11) of respondents agreed on the availability of such a policy, while 6.9% (n=2) strongly agreed. However, 37.9% (n=11) disagreed that such a policy was available, and 17.2% (n=5) strongly disagreed.

The most reported barriers and facilitators relating to knowledge are displayed in Table 4.3. Each of these was supported by at least 65% of the sample to be identified as

being either a barrier or facilitator in this category of the framework, namely, knowledge.

The Kruskal-Wallis test for more than two independent groups was applied to determine whether there were any associations between the demographic variables, other than gender, and the scale items related to knowledge. Data is presented in a table, specifying the null hypothesis, the relevant variable, the number of respondents in each category, the mean rank of that category, p-value, alpha, and the decision whether to reject the null hypothesis in case of statistically significant results.

Table 4.3: Most reported barriers and facilitators regarding knowledge

BARRIERS	FACILITATORS
Developers do not include the nursing personnel from all units when developing new standardised nursing care plans	RNs have the necessary knowledge and skills to formulate standardised nursing care plans meticulously and feel confident about their knowledge and skills when using standardised nursing care plans.
	Standardised nursing plans in patient files meet the legal requirements for documentation.
	Standardised nursing care plans help to orientate new nurses to the unit.
	RNs receive training on the nursing process and nursing care plans during their formal nursing education.
	RNs are familiar with the content of the standardised nursing care plans they use.

The significance level or alpha is a measure to control the risk of making a Type I error when the null hypothesis is true. In other words, determining the probability that a relationship exists between groups when no such relationship exists in the larger population (Fox & Bayat, 2007:126). The p-value represents the probability value or actual observed level of significance obtained from data analysis. When the p-value is smaller than the set level of significance, it implies that there is a significant relationship between the groups and the null hypothesis should be rejected (Burns & Grove, 2011:377-378). Mean rank is defined as the sum of all the ranks in a distribution,

divided by the number of ranks. The higher the mean rank, the greater the inclination to accept the null hypothesis (Beginner's statistics, s.a.). A discussion of these results follows.

The Kruskal-Wallis test established that there was a significant association between the type of basic qualification and the statement that the use of standardised nursing care plans minimises unnecessary documentation ($p=0.008$). As displayed in Table 4.4, data from respondents who completed a 4-year diploma programme displayed the lowest mean rank (11.06) to the null hypothesis. This finding implies that this group feels standardised nursing care plans do not minimise unnecessary documentation.

Table 4.4: Kruskal-Wallis test for qualification type versus scale item 6T

NULL HYPOTHESIS	QUALIFICATION TYPE	N	MEAN RANK	p-value	Alpha	DECISION
"Using standardised nursing care plans minimises unnecessary documentation" is the same across categories of "Basic nursing qualification"	2-Year Bridging programme	8	18.25	0.008	0.05	Reject the null hypothesis
	4-Year Diploma	16	11.06			
	4-Year Degree	5	22.04			
TOTAL		29				

The Kruskal-Wallis test results further revealed that there was a significant association between the age category and the statement regarding the availability of a policy to describe the correct compilation and adaptation of standardised nursing care plans ($p=0.028$). Table 4.5 summarises the results described here. Two age categories displayed low mean ranks to the null hypothesis: those from 41 to 50 years, with a mean rank of 6.20, and those in the age category 19 to 25 years, with a mean rank of 8.33. The results imply that these two age categories are not aware of a policy that describes the correct compilation and adaptation of standardised nursing care plans.

Table 4.5: Kruskal-Wallis test for age category versus scale item 6R

NULL HYPOTHESIS	AGE CATEGORY	N	MEAN RANK	p-value	Alpha	DECISION
"There is a policy available to describe correct compilation and adaptation of standardised nursing care plans" is the same across categories of "Age"	19 – 25 yrs	3	8.33	0.028	0.05	Reject the null hypothesis
	26 – 30 yrs	5	17.80			
	31 – 35 yrs	7	18.07			
	36 – 40 yrs	2	24.50			
	41 – 50 yrs	5	6.20			
	Over 50 yrs	7	16.36			
TOTAL		29				

The Mann-Whitney U test for two independent groups was employed to determine whether there were any associations between gender and the scale items relating to knowledge. The Mann-Whitney U test results (Refer to Table 4.6) pointed to a significant association between gender and the statement that the use of standardised care plans is a waste of time ($p=0.020$). Males had the lowest mean rank (2.50) to the null hypothesis, implying that they viewed the use of standardised nursing care plans as a waste of time.

Table 4.6: Mann-Whitney U test for gender versus scale item 6W

NULL HYPOTHESIS	GENDER	N	MEAN RANK	p-value	Alpha	DECISION
"Using standardised nursing care plans are a waste of time" is the same across categories of "Gender"	Male	2	2.50	0.020	0.05	Reject the null hypothesis
	Female	27	15.93			
TOTAL		29				

The analysis of results related to knowledge reveals that RNs are aware of, and familiar with, the standardised nursing care plans in use. Furthermore, they mostly perceive the knowledge component as an enabling factor in the meticulous compilation and adaptation of standardised nursing care plans.

4.3.1.2 Attitudes

The category of attitude in Cabana's Framework for Improvement represents the elements of agreement, outcome expectancy, self-efficacy and motivation in relation to the meticulous compilation and adaptation of standardised nursing care plans (Cabana *et al.*, 1999:1458-1463).

Agreement with the content of the care plan involves several aspects, for example, applicability to a specific patient diagnosis and health needs, the amount of documentation involved, format, and ease of use.

With regard to agreement as an element of attitude towards standardised care plans in general, respondents mostly disagreed (n=14, 48.3%) or strongly disagreed (n=4, 13.8%) that the use of standardised nursing care plans involves unnecessary paperwork. In contrast, 24.1% (n=7) agreed and 13.8% (n=4) strongly agreed with this statement. This result is comparable to the result obtained with regard to the statement that the use of standardised nursing care plans minimises unnecessary documentation. Forty-four per cent (n=13) agreed and 13.8% (n=4) strongly agreed with the statement. However, some respondents felt that standardised nursing care plans increased unnecessary documentation – 34.5% (n=10) disagreed that standardised nursing care plans minimise unnecessary documentation, and 6.9% (n=2) strongly disagreed. These results are portrayed in Figures 4.3 and 4.4.

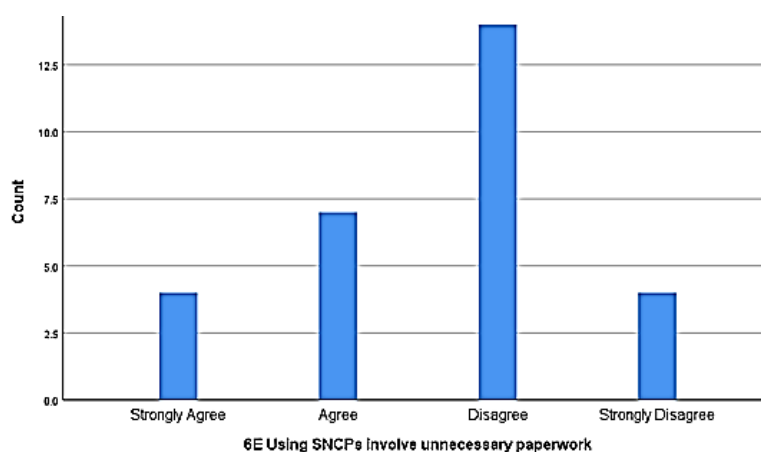


Figure 4.3: Using standardised nursing care plans involve unnecessary paperwork

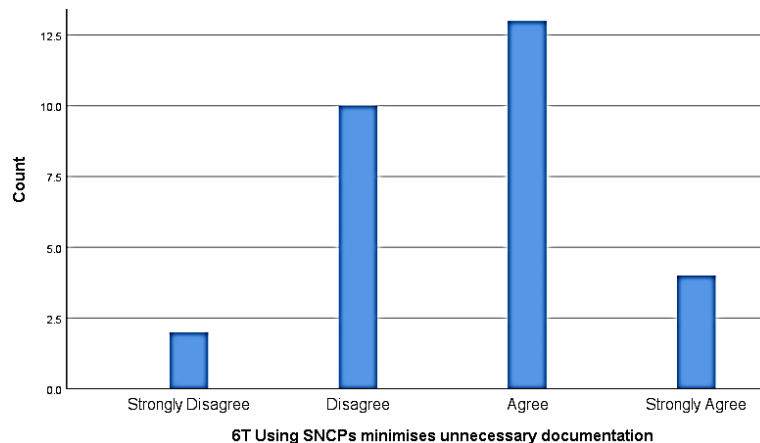


Figure 4.4: Using standardised nursing care plans minimises unnecessary documentation

Virtually all respondents (86.2%) agreed (n=7, 24.1%) or strongly agreed (n=18, 62.1%) that the format of the standardised nursing care plan is user-friendly. Regarding the statement that every patient in the unit has a standardised nursing care plan relevant to his/her diagnosis, 48.3% (n=14) disagreed and 10.3% (n=3) strongly disagreed.

The expectation that the meticulous compilation and adaptation of standardised nursing care plans will lead to improved outcomes for personnel and patients is found in the concept of outcome expectancy (Cabana *et al.*, 1999:1462). Factors relating to outcome expectancy will include aspects such as the influence on high-quality care, continuity of care and the nurse-patient relationship.

Nearly all respondents agreed (n=14, 48.3%) or strongly agreed (n=12, 41.4%) that standardised nursing care plans are valuable aids in delivering patient care. Furthermore, virtually the entire sample (89.7%) disagreed (n=4, 13.8%) or strongly disagreed (n=22, 75.9%) that completing standardised nursing care plans had a negative effect on the nurse-patient relationship.

While 41.4% (n=12) disagreed that there is a risk that a patient's individual problems/needs will not be discovered when using standardised nursing care plans, 58.6% either agreed (n=11, 37.9%) or strongly agreed (n=6, 20.7%) with this statement. Moreover, the majority of respondents felt that the use of standardised

nursing care plans increases the nurse's ability to provide high-quality care – 58.6% (n=17) agreed and 17.2% (n=5) strongly agreed with this statement.

Most respondents (72.4%) agreed (n=4, 13.8%) or strongly agreed (n=17, 58.6%) that the use of standardised care plans improves continuity of care.

Self-efficacy signifies the belief that one has the ability to perform a specific behaviour (Cabana *et al.*, 1999:1462), for example: do RNs feel confident to compile and adapt standardised nursing care plans? The majority of respondents agreed (n=18, 62.1%) or strongly agreed (n=3, 10.3%) that RNs feel confident about their knowledge and skills when using standardised nursing care plans. With regard to the statement “we use standardised nursing care plans in a careful manner”, 51.7% (n=15) agreed and 13.8% (n=4) strongly agreed.

Motivation involves the habits and routines one is used to, as well as the will to change one's behaviour. For example, RNs' failure to check and sign care plans compiled by enrolled or auxiliary nurses (Cabana *et al.*, 1999:1462).

Slightly more than half of the respondents (55.2%) either agreed (n=14, 48.3%) or strongly agreed (n=2, 6.9%) that RNs check and sign standardised nursing care plans completed by enrolled or auxiliary nurses. In contrast, 44.8% had a different view – 31.0% (n=9) disagreed and 13.8% (n=4) strongly disagreed with this statement.

Further displaying the aspect of motivation, the largest percentage of respondents (86.2%) either disagreed (n=18, 62.1%) or strongly disagreed (n=7, 24.1%) that the use of standardised care plans is a waste of time. In contrast, the statement “Standardised nursing care plans are completed merely because they are a requirement”, produced the following results: 55.2% (n=16) agreed and 6.9% (n=2) strongly agreed with the statement. Those who disagreed comprised 31.0% (n=9) and those who strongly disagreed 3.4% (n=1). This supposes that even though standardised care plans are only completed because it is a requirement, it is still not seen as a waste of time.

The most reported barriers and facilitators relating to attitude are displayed in Table 4.7.

Table 4.7: Most reported barriers and facilitators regarding attitude

BARRIERS	FACILITATORS
Standardised nursing care plans are completed merely because it is a requirement	Standardised nursing care plans are seen as valuable aids in the delivery of patient care.
	Using standardised nursing care plans increase the nurses' ability to provide high-quality care.
	The use of standardised nursing care plans is not seen as a waste of time.
	The use of standardised nursing care plans reportedly improves continuity of care.
	The format of the current standardised nursing care plan is user-friendly.
	The use of standardised nursing care plans do not have a negative effect on the nurse-patient relationship.
	Standardised care plans are used in a careful manner.

Utilising the Kruskal-Wallis test for more than two independent groups, it was determined whether there were any associations between demographic variables with more than two categories and the scale items related to attitude.

The Kruskal-Wallis test indicated a significant association between type of qualification and the statement that standardised nursing care plans were used in a careful manner ($p=0.013$), as displayed in Table 4.8. The respondents in possession of a 2-year Bridging programme qualification showed the highest mean rank (21.56) to the null hypothesis, while the mean rank of respondents holding a 4-year diploma (11.69) implies that they do not use standardised nursing care plans in a careful manner. Further research is required to gain a clear understanding of why this is the case.

Table 4.8: Kruskal-Wallis test for qualification type versus scale item 6GG

NULL HYPOTHESIS	QUALIFICATION TYPE	N	MEAN RANK	p-value	Alpha	DECISION
"We use standardised nursing care plans in a careful manner" is the same across categories of "Basic nursing qualification"	2-Year Bridging programme	8	21.56	0.013	0.05	Reject the null hypothesis
	4-Year Diploma	16	11.69			
	4-Year Degree	5	15.10			
TOTAL		29				

A significant association was evidenced between the type of qualification and the statement that the use of standardised nursing care plans increases the nurse's ability to provide high-quality care ($p=0.002$). The highest mean rank (21.50) to the null hypothesis was that of respondents who completed the 2-year Bridging programme, while those in possession of a 4-year diploma had the lowest mean rank (10.75). This low mean rank implies that those with a 4-year diploma do not view the use of standardised nursing care plans as a tool to enhance the provision of quality care (Refer to Table 4.9).

Table 4.9: Kruskal-Wallis test for qualification type versus scale item 6HH

NULL HYPOTHESIS	QUALIFICATION TYPE	N	MEAN RANK	p-value	Alpha	DECISION
"Using standardised nursing care increases the nurse's ability to provide high-quality care" is the same across categories of "Basic nursing qualification"	2-Year Bridging programme	8	21.50	0.016	0.05	Reject the null hypothesis
	4-Year Diploma	16	10.75			
	4-Year Degree	5	18.20			
TOTAL		29				

Furthermore, the Kruskal-Wallis test suggested a significant association between type of qualification and the statement that the use of standardised nursing care plans improves continuity of care (Refer to Table 4.10). The highest mean rank (20.94) to the null hypothesis was those with a Bridging programme qualification. Those with a

4-year diploma displayed the lowest mean rank (11.53), implying that they do not view the use of standardised nursing care plans as a means to improve continuity of care.

Table 4.10: Kruskal-Wallis test for qualification type versus scale item 6EE

NULL HYPOTHESIS	QUALIFICATION TYPE	N	MEAN RANK	p-value	Alpha	DECISION
"Using standardised nursing care plans improves continuity of care" is the same across categories of "Basic nursing qualification"	2-Year Bridging programme	8	20.94	0.013	0.05	Reject the null hypothesis
	4-Year Diploma	16	11.53			
	4-Year Degree	5	16.60			
TOTAL		29				

A significant association also existed between the type of qualification and whether the RNs check and sign standardised nursing care plans compiled by enrolled or auxiliary nurses ($p=0.016$). As displayed in Table 4.11, those with a 4-year degree had the lowest mean rank (6.10) to the null hypothesis. This result implies that these respondents do not agree that standardised nursing care plans compiled by enrolled or auxiliary nurses are checked and signed by RNs as they should be.

Table 4.11: Kruskal-Wallis test for qualification type versus scale item 6H

NULL HYPOTHESIS	QUALIFICATION TYPE	N	MEAN RANK	p-value	Alpha	DECISION
"RNs check and sign standardised nursing care plans compiled by Enrolled Nurses or Auxiliary Nurses" is the same across categories of "Basic nursing qualification"	2-Year Bridging programme	8	18.63	0.002	0.05	Reject the null hypothesis
	4-Year Diploma	16	15.97			
	4-Year Degree	5	6.10			
TOTAL		29				

After analysis of data relating to attitude, it has been deduced that RNs displayed mostly positive attitudes towards standardised nursing care plans, despite the fact that they completed these plans only because it was seen as a requirement.

4.3.1.3 Behaviour

According to Cabana's Framework for Improvement, behavioural elements include care plan characteristics, organisational factors, and environmental factors (Cabana *et al.*, 1999:1458-1463).

Specific care plan characteristics (Refer to Table 4.12) may influence the behaviour of RNs with regard to the compilation and adaptation thereof. The ease with which care priorities can be identified, as well as the adaptability of the plans for specific patients, are instances of this element. The majority of respondents (79.3%) either agreed (n=17, 58.6%) or strongly agreed (n=6, 20.7%) with the statement that it is easy to adapt the current standardised nursing care plans to the needs of individual patients. Nevertheless, 93.1% either agreed (n=22, 75.9%) or strongly agreed (n=5, 17.2%) that care planning is done on an individual care plan when the standardised nursing plan is deemed inadequate for a specific patient.

Almost all of the respondents (96.5%) agreed (n=21, 72.4%) or strongly agreed (n=7, 24.1%) that standardised nursing care plans make it easy to identify priorities with regard to care. However, as an attitudinal aspect, 58.6% either agreed (n=11, 37.9%) or strongly agreed (n=6, 20.7%) with the statement that there is a risk that a patient's individual problems/needs will not be discovered when using standardised nursing care plans.

Table 4.12: Results of scale items related to specific care plan characteristics

SCALE ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
It is easy to adapt the current standardised nursing care plans to the needs of individual patients.	20.7% (n=6)	58.6% (n=17)		

SCALE ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
Care planning is done on an individual care plan when the standardised nursing plan is inadequate for a specific patient.	17.2% (n=5)	75.9% (n=22)		
With standardised nursing care plans it is easy to identify priorities with regard to care.	24.1% (n=7)	72.4% (n=21)		

Organisational factors (Refer to Table 4.13), like the interrelation between multidisciplinary team members, performing of regular audits, and unit routines, also play a role in how the preferred behaviour will be performed (Cabana *et al.*, 1999:1462). It was evident that other members of the multidisciplinary team, e.g. doctors, do not look at the standardised nursing care plans while doing their rounds. Seventy-five per cent (n=22) of respondents strongly disagreed and 20.7% (n=6) disagreed with the statement that other members of the multidisciplinary team look at the standardised nursing care plans when doing their rounds.

Seventy-two per cent of respondents either agreed (n=17, 58.6%) or strongly agreed (n=4, 13.8%) that the hospital performs regular audits to evaluate whether standardised care plans meet the requirements for legal documentation.

Table 4.13: Results of scale items related to organisational factors

SCALE ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
Other members of the multidisciplinary team, e.g. doctors, do not look at the standardised nursing care plans while doing their rounds.			20.7% (n=6)	75.9% (n=22)
The hospital performs regular audits to evaluate whether standardised care plans meet the requirements for legal documentation.	13.8% (n=4)	58.6% (n=17)		

Environmental factors (Refer to Table 4.14) that influence behaviour include lack of time, workload, and availability of care plans (Cabana *et al.*, 1999:1462). Just more

than half of the respondents agreed (n=15, 51.7%) and 13.8% (n=4) strongly agreed that progress reporting is done according to the health problems stated on the patients' standardised nursing care plans. However, 69% of respondents either disagreed (n=16, 55.2%) or strongly disagreed (n=4, 13.8%) with the statement that objectives set in the standardised nursing care plans are evaluated daily. Furthermore, 79.3% either disagreed (n=18, 62.1%) or strongly disagreed (n=5, 17.2%) that standardised nursing care plans of all patients are updated at least daily.

Regarding the statement that every patient in the unit has a standardised nursing care plan relevant to his/her diagnosis, 48.3% (n=14) disagreed and 10.3% (n=3) strongly disagreed. Related to these responses are the results of the statement regarding the availability of a care plan for each diagnosis – 48.3% (n=14) disagreed that there is a standardised nursing care plan available for every diagnosis, and 24.1% (n=7) strongly disagreed with this statement. Therefore, it appears as though standardised care plans were not developed for all diagnoses. Additionally, it seems like the number of copies that are available is not the problem, since 51.7% (n=15) agreed and 13.8% (n=4) strongly agreed that there are enough standardised nursing care plans available in the units.

Slightly more than half of the respondents (55.1%) either agreed (n=13, 44.8%) or strongly agreed (n=3, 10.3%) that there is enough time available to compile and adapt standardised nursing care plans. However, 44.8% either disagreed (n=8, 27.6%) or strongly disagreed (n=5, 17.2%) with this statement. This result may be due to various organisational factors, for instance, the number of staff available per unit, bed-occupancy rate and acuity levels of patients. Another possible explanation can be found in the responses to the statement “The workload in the unit allows RNs to complete standardised nursing care plans carefully”. Here 41.4% (n=12) disagreed with the statement and 24.1% (n=5) strongly disagreed. Interestingly, as an attitudinal aspect, 65.5% of respondents felt that they use standardised nursing care plans in a careful manner, although, with regards to environmental factors, they responded that the workload does not allow them to complete standardised nursing care plans carefully. In the questionnaire the term “meticulously” was replaced by the term “carefully” in order to increase understanding of the statement (in this study “meticulously” and “carefully” were used as synonyms).

Table 4.14: Results of scale items related to environmental factors

SCALE ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
Progress reporting is done according to the health problems stated on the patients' standardised nursing care plans.	13.8% (n=4)	51.7% (n=15)		
Objectives set in the standardised nursing care plans are evaluated daily.			55.2% (n=16)	13.8% (n=4)
Standardised nursing care plans of all patients are updated at least daily.			62.1% (n=18)	17.2% (n=5)
Every patient in the unit has a standardised nursing care plan relevant to his/her diagnosis.	6.9% (n=2)	34.5% (n=10)	48.3% (n=14)	10.3% (n=3)
There are enough standardised nursing care plans available in the units.	13.8% (n=4)	51.7% (n=15)		
There is enough time available to compile and adapt standardised nursing care plans.	10.3% (n=3)	44.8% (n=13)	27.6% (n=8)	17.2% (n=5)
The workload in the unit allows RNs to complete standardised nursing care plans carefully.			41.4% (n=12)	24.1% (n=7)

The most reported barriers and facilitators relating to behaviour are displayed in Table 4.15.

Table 4.15: Most reported barriers and facilitators regarding behaviour

BARRIERS	FACILITATORS
Objectives set in standardised nursing care plans are not evaluated daily.	The current standardised nursing care plans in use are easy to adapt to the individual needs of patients.
Other members of the multidisciplinary team, e.g. doctors, do not look at the standardised nursing care plan when doing their rounds.	Individual nursing care plans are utilised when standardised nursing care plans are deemed inadequate for specific patients.
Some diagnoses do not have standardised nursing care plans available for use.	There is a sufficient quantity of standardised nursing care plans available for use in all units.

BARRIERS	FACILITATORS
The workload in the units do not allow RNs to complete standardised nursing care plans carefully.	Standardised nursing care plans meet the legal requirements for documentation.
Standardised care plans of all patients are not updated at least daily.	Regular audits are performed to evaluate whether standardised nursing care plans meet the requirements for legal documentation.

As presented in Table 4.16, the Kruskal-Wallis test established a significant association between the age category and the statement that there is a standardised nursing care plan available for every diagnosis ($p=0.009$). The age category 26 to 30 years reveals the lowest mean rank (6.10) to the null hypothesis, implying that this group experiences a deficiency in the availability of standardised nursing care plans for every diagnosis.

Table 4.16: Kruskal-Wallis test for age category versus scale item 6II

NULL HYPOTHESIS	AGE CATEGORY	N	MEAN RANK	p-value	Alpha	DECISION
"There is a standardised nursing care plan available for every diagnosis in the unit" is the same across categories of "Age category"	19 – 25 yrs	3	14.50	0.009	0.05	Reject the null hypothesis
	26 – 30 yrs	5	6.10			
	31 – 35 yrs	7	11.43			
	36 – 40 yrs	2	24.50			
	41 – 50 yrs	5	16.50			
	Over 50 yrs	7	21.36			
TOTAL		29				

As evidenced in Table 4.17, there was a significant association between type of qualification and the statement "Objectives that are set in standardised nursing care plans, are evaluated daily". Respondents with a 4-year diploma displayed the lowest mean rank (12.22) to the null hypothesis, followed by those with a 4-year degree, with a mean rank of 14.70. The results imply that these groups do not believe that objectives are evaluated daily. The reason for these results is unclear and further research is required to clarify it.

Table 4.17: Kruskal-Wallis test for qualification type versus scale item 6B

NULL HYPOTHESIS	QUALIFICATION TYPE	N	MEAN RANK	p-value	Alpha	DECISION
“Objectives that are set in standardised nursing care plans, are evaluated daily” is the same across categories of “Basic nursing qualification”	2-Year Bridging programme	8	20.75	0.038	0.05	Reject the null hypothesis
	4-Year Diploma	16	12.22			
	4-Year Degree	5	14.70			
TOTAL		29				

From the analysis of the three elements (knowledge, attitude and behaviour), the behavioural factors present the most barriers to the meticulous compilation and adaptation to standardised nursing care plans, while attitudinal elements offer the most facilitators.

Accordingly, the most reported barriers are presented in Table 4.18.

Table 4.18: Most reported barriers

BARRIER	PER CENT
Other members of the multidisciplinary team, e.g. doctors, do not look at the standardised nursing care plan when doing their rounds.	96.6% (n=28)
Standardised nursing care plans for all patients are not updated daily.	79.3% (n=23)
Developers do not include nursing personnel from all units when developing new standardised nursing care plans.	72.4% (n=21)
Some diagnoses do not have standardised nursing care plans available for use.	72.4% (n=21)
Objectives set in standardised nursing care plans are not evaluated daily.	69.0% (n=20)
The workload in the units does not allow RNs to complete standardised nursing care plans carefully.	65.5% (n=19)

Table 4.19 depicts the most reported facilitators.

Table 4.19: Most reported facilitators

FACILITATOR	PER CENT
Standardised nursing care plans make it easy to identify priorities with regard to care.	96.5% (n=28)
Individual nursing care plans are utilised when standardised nursing care plans are deemed inadequate for specific patients.	93.1% (n=27)
Standardised nursing care plans are seen as valuable aids in the delivery of patient care.	89.7% (n=26)
Standardised nursing care plans meet the legal requirements for documentation.	89.7% (n=26)
The use of standardised nursing care plans do not have a negative effect on the nurse-patient relationship.	89.7% (n=26)
The use of standardised nursing care plans is not seen as a waste of time.	86.2% (n=25)
The format of the current standardised nursing care plan is user-friendly.	86.2% (n=25)
The current standardised nursing care plans in use are easy to adapt to the individual needs of patients.	79.3% (n=23)
RNs receive training on the nursing process and nursing care plans during their formal nursing education.	75.8% (n=22)
RNs are familiar with the content of the standardised nursing care plans they use.	75.9% (n=22)
Using standardised nursing care plans increase the nurses' ability to provide high-quality care.	75.8% (n=22)
RNs feel confident about their knowledge and skills when using standardised nursing care plans.	72.4% (n=21)
RNs have the necessary knowledge and skills to formulate standardised nursing care plans meticulously.	72.4% (n=21)
Regular audits are performed to evaluate whether standardised nursing care plans meet the legal requirements for documentation.	72.4% (n=21)
Standardised nursing care plans help to orientate new nurses to the unit.	72.4% (n=21)
The use of standardised nursing care plans reportedly improves continuity of care.	72.4% (n=21)
There is a sufficient quantity of standardised nursing care plans available for use in all units.	65.5% (n=19)
Progress reporting is done according to health problems stated on the patient's standardised nursing care plan.	65.5% (n=19)
Standardised nursing care plans are used in a careful manner.	65.5% (n=19)

4.3.2 Section 3 – Open-ended question

This section consisted of one open-ended question for RNs to identify how they feel possible barriers may be meliorated or facilitators may be supported in the meticulous compilation and adaptation of standardised nursing care plans. Five respondents did not provide any response to this question.

Table 4.20: Common themes with regard to reported barriers

COMMON THEMES	RESPONDENT QUOTES
<p>Environmental factors related to behaviour (for example, lack of time, heavy workload, staff shortage and availability of standardised care plans for every diagnosis)</p>	<p><i>“Hoë werklading en tyd nie altyd daar.”</i> (High workload and time not always available – GB1001)</p> <p><i>“Most nurses in my opinion, are so pressured to complete a thousand tasks at once that they cannot pay as much attention to care plans as they would like.”</i> (GCN004)</p> <p><i>“Werklading is te veel vir die hoeveelheid personeel daarom versuim ons om meer voldoende sorgplanne op te stel.”</i> (Workload is too heavy for the number of staff and because of that we neglect to compile proper care plans – GCN006)</p> <p><i>“Personeel tekort. Hoë bedbesetting en akuutheidsvlakke van pasiënte.”</i> (Staff shortage. High bed occupancy and acuity levels of patients – GB2001)</p> <p><i>“The biggest hurdle to overcome is definitely staff shortage.”</i> (GCN004)</p> <p><i>“Daar is ook nie voldoende planne vir alle siektetoestande nie”</i> (There are also not enough plans for all diagnoses – GA1001)</p>
<p>Factors related to knowledge (For example, language barriers, lack of knowledge)</p>	<p><i>“Baie verpleegpersoneellede skryf of vul sorgplanne in Afrikaans in wat dit moeilik maak vir ander wat Engelssprekend is”</i> (A lot of nurses complete care plans in Afrikaans, which makes it difficult for those nurses who are English – GCN002)</p> <p><i>“Verpleegsters het nie voldoende kennis om die sorgplanne te voltooi nie.”</i> (Nurses do not have sufficient knowledge to complete care plans – GB2005)</p> <p><i>“Nuu aangestelde verpleegkundiges ontvang nie nodige opleiding ten opsigte die opstel van verpleegsorgplanne – verpleegproses in geheel nie.”</i> (Newly</p>

COMMON THEMES	RESPONDENT QUOTES
	<p>appointed nurse practitioners do not receive the necessary training regarding nursing care plans and nursing process as a whole – GB2004)</p> <p><i>Alle VK's is nie op hoogte met die nuwe formaat van sorgplanne opstel nie.</i>” (All RNs are not familiar with the new format to compile care plans – GA1004)</p>
<p>Factors related to attitude (for example, negative attitude towards standardised nursing care plans, lack of validation of plans)</p>	<p><i>Hulle is baie negatief daarteenoor en rammel dit dikwels af, net dat dit gedoen is.</i>” (They are very negative towards it and usually rush just to finish it – GND001)</p> <p><i>“Most registered nurses don't control care plans that are setup by nurses or staff nurses.”</i> (GA1005)</p> <p><i>“Verpleegster kyk nie na sorgplanne wat opgestel is nie.”</i> (Nurses do not refer to care plans that were compiled – GB2002)</p>

The most prominent barriers evident from responses supplied (Refer to Table 4.20), were lack of time, heavy workload and staff shortages. Other barriers that became apparent through an analysis of responses to the open-ended question, were language barriers (some care plans were completed in Afrikaans, causing difficulties for English speaking staff), a perceived general lack of knowledge regarding care plans, lack of evaluation of care plans, negative attitudes towards standardised nursing care plans, and the fact that standardised nursing care plans are not available for every diagnosis. Although respondents stated here that negative attitudes towards standardised nursing care plans were a problem, these statements are in contrast to the results of the data analysis of the scale items related to attitude discussed in Section 2. Furthermore, respondents also responded in this section that a lack of knowledge regarding care plans was evident but, once again, the results obtained from the analysis of knowledge-related factors in Section 2 are in contrast to these statements.

One respondent made the interesting comment that staff are so used to completing the plans, that they include the same information for every patient, without thinking about the patient's individual needs.

The strategies RNs offered as ways to minimise the most reported barriers are summarised (Refer to Table 5.1) and discussed in Chapter 5.

4.4 Summary

The research findings identified the most reported barriers and facilitators to the meticulous compilation and adaptation of standardised nursing care plans, with the use of frequency tables and graphs. Furthermore, significant associations between certain demographic variables and scale items were identified through the use of non-parametric tests. However, no significant associations were found between years' experience as an RN and any scale items. Similarly, no significant associations were found between nursing category and any scale items.

The responses to the open-ended question were relayed, identifying barriers as reported by RNs. Chapter 5 will provide a detailed discussion of the results in the context of the relevant literature. Moreover, recommendations will be proposed, including those recommendations suggested by respondents in the open-ended question. The limitations of the study will also be discussed and the dissemination of study results will be described.

CHAPTER 5

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The results drawn from the study data were presented in Chapter 4. In Chapter 5, these results are discussed according to the specific study objectives, with consideration of relevant literature, to draw conclusions and offer recommendations. The limitations of this work and opportunities for further research are also identified.

5.2 Discussion

The aim of the study was to describe the particular barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised nursing care plans as part of their patient care activities. In order to achieve this aim, data were collected from RNs working in medical or surgical units of a public hospital in the Eden District. Of the 43 possible respondents, 29 respondents completed the questionnaire. Thus, the response rate was 67% (n=29).

Four study objectives were formulated enabling the researcher to fulfil the aim of the study. These objectives were:

- To describe the barriers influencing RNs in the meticulous compilation and adaptation of standardised nursing care plans.
- To describe the facilitators influencing RNs in the meticulous compilation and adaptation of standardised nursing care plans.
- To determine if there are associations between demographic data and the most reported barriers and facilitators.
- To identify the strategies suggested by RNs to reinforce the most reported facilitators or minimise the most reported barriers.

The following discussion builds from the data presented in Chapter 4. Firstly, a concise overview of respondents' demographic data is provided, and then a discussion of results related to each study objective follows.

5.2.1 Respondent demographic profile

Respondents' demographic characteristics, namely gender, age, years' experience as an RN, basic nursing qualification, and nurse category may impact on their knowledge, attitudes and behaviour regarding standardised nursing care plans. The demographic characteristics of the respondents in the final dataset are discussed next.

The majority of respondents (93.1%) were female (n=27), and 6.9% were male (n=2). This gender distribution is similar to the profile of the total population of the hospital's RNs, where there are 142 (97.9%) female RNs and 3 (2.1%) male RNs (Pietersen, 2018). This establishes that, as far as gender is concerned, the sample is a reasonable reflection of the total population identified for this study. The respondent gender profile data is congruent with data reflected in the 2017 statistics released by the South African Nursing Council, where female RNs totalled 92.2% and males totalled 7.8% in the Western Cape (South African Nursing Council, 2018a:1).

The respondents' age ranged from 22 years to over 58 years. Each age category (see Table 4.1, page 60) comprised approximately similar numbers of respondents – 10.3% (n=3) of the respondents were between 19 and 25 years, 17.2% (n=5) were between 26 and 30 years, 24.1% (n=7) were between 31 and 35 years, 6.9% (n=2) were between 36 and 40 years, 17.2% (n=5) were between 41 and 50 years, and 24.1% (n=7) were over the age of 50 years. This means that there is a more heterogeneous viewpoint depicted in the data across different generations as no single age category dominated the sample. Almost half (41.3%) of the respondents were over 40 years of age. Added to this, 91.6% of those older than 40 years had more than 11 years' experience as an RN. The combination of their age and work experience implies greater maturity and insight into their role and function as RNs.

The larger percentage of study respondents younger than 30 years old may be due to the community service practitioners being allocated to the general medical and

surgical wards where standardised nursing care plans are mostly used, rather than in the specialised areas. Furthermore, the medical and surgical wards only comprise a third of the total hospital units – the rest of the units are specialised units (9) and day care units (2). Since specialisation requires further study, the age of RNs in these units may be higher than in the general medical and surgical wards. A significant association was found between age and the awareness of available policies regarding the use of standardised nursing care plans, as well as the availability of standardised care plans for every diagnosis. These results are discussed in Section 5.2.3.

Two-thirds (n=18, 62.1%) of respondents responded that standardised care plans were only completed because these are a requirement. This could imply that completion of the plans is a habit done without much thought or motivation. Motivation involves the habits and routines one is used to, as well as the will to change one's behaviour (Cabana *et al.*, 1999:1462). Older age and more years' experience could, therefore, possibly have a negative influence on meticulous care planning and fulfilling of the RNs' duty to care, although results from this study found no significant associations between years' experience and any of the scale items. Kalisch *et al.* (2009:1513) suggest that habits become so deeply embedded in nurses' internal processes that they thoughtlessly carry out certain actions, particularly if no detrimental effect to the patient is witnessed, or if the actions go unnoticed. Furthermore, research evidence demonstrates that older nurses with more experience are less likely to implement the nursing process, which includes the nursing care plan (Ngao, 2015:35).

The findings related to nursing category showed that 24.1% (n=7) of respondents were community service practitioners, 58.6% (n=17) were RNs and 17.2% (n=5) were operational managers. These results are a true reflection of the larger population, as the facility currently employs 9 community service practitioners, each unit has one operational manager (16), and the majority of the total population are RNs (125). This implies that the nursing categories in the study hospital are adequately represented in the study sample, increasing the portrayal of reliable data.

Most of the respondents (55.2%) completed a 4-year diploma programme as basic nursing qualification (n=16). A further 27.6% (n=8) completed the 2-year Bridging

programme for Enrolled Nurses leading to registration as a General Nurse. Only 17.2% (n=5) held a 4-year bachelor's degree as a basic nursing qualification, and all five were in their community service year. Entry requirements for the Bridging programme and diploma programme are lower than that of the degree programme. For the Bridging programme a National Senior Certificate or equivalent, and enrolment as a nurse, are the only requirements. The diploma programme requires a National Senior Certificate meeting the requirements for admission to diploma studies. The degree programme, however, requires a National Senior Certificate meeting the requirements for admission to bachelor's degree study, which requires higher levels of academic achievement (Roets, Bothma & Grobler, 2016:423-424; South African Qualifications Authority, 2014:n.p.; South African Nursing Council, 1985:1; South African Nursing Council, 1989:1; Wedekind, 2013:14). This leads to the supposition that entry into the degree programme requires a certain level of academic proficiency which may not be achievable for all prospective nursing students. The Bridging programme provided enrolled nurses who did not qualify for study at formal higher education institutions with an opportunity to upgrade their qualification to General Registered Nurses (Breier, Wildschut & Mgqolozana, 2009:1).

Furthermore, the diploma and Bridging programmes are pitched at a lower National Qualifications Framework (NQF) level than the degree programme. The NQF is a comprehensive system which provides for the classification, registration and publication of quality-assured national qualifications and part-qualifications (South African Qualifications Authority, 2014). Level descriptors set by the South African Qualifications Authority determine the outcomes for various course levels. According to these descriptors, the Bridging programme outcome level lies at NQF level 6, the diploma programme at NQF level 7, and the degree programme at NQF level 8 (Roets *et al.*, 2016:423-424; South African Qualifications Authority, 2014:n.p.). RNs with a lower level qualification may have trouble with knowledge uptake, application and evaluation, which will, in turn, influence their attitudes and finally their behaviour regarding the meticulous application of standardised nursing care plans and the use of the nursing process as a whole (see discussion under Section 5.2.3).

The reason for the low number of respondents with degree qualifications may be that currently, only two higher education institutions in the Western Cape present the 4-

year undergraduate degree course. The results are congruent with the national picture, where less than 20% of RNs are trained through a 4-year degree programme as reported by the South African Nursing Council statistics of 2017: 13% RNs received their 4-year degree at a university during 2017, whereas 31.9% obtained a 4-year diploma at nursing colleges during the same time period, and 40.7% obtained the Bridging programme qualification (South African Nursing Council, 2018b:1). The number of RNs obtaining Bridging qualifications is dwindling as the programme is being phased out (South African Nursing Council, 2018c:n.p.). The low number of graduate RNs is concerning since there is evidence that graduate RNs are more systematic when seeking information. They generally demonstrate superior care planning, they are more directed towards continuity of care and outcomes, and they tend to accomplish higher quality nursing. Furthermore, graduate RNs commonly display better critical thinking, reflection, creativity and leadership skills (Roets *et al.*, 2016:423-424).

Seven respondents (24.1%) had less than 1-year experience – these respondents were all community service practitioners. The largest proportion of respondents had less than 5 years' experience (44.8%), while 31% had more than 21 years' experience. The larger number of respondents with less than 5 years' experience may be due to the fact that there is a nursing college situated in the same town as the study hospital; a large number of local students attend this college and are placed in the study hospital for practical training and education, which may result in a preference to apply for work at this hospital. Knowledge gained through formal education regarding the nursing process, and specifically nursing care plans, may still be relatively fresh in the minds of these RNs, which could facilitate the meticulous application of standardised nursing care plans. Conversely, their lack of experience could influence the confidence with which they approach the care planning process and the development of standardised nursing care plans. However, the results of this study found that the majority of RNs (n=21, 72.4%) were confident that they have the necessary knowledge and skills to use standardised nursing care plans.

5.2.2 Study objective 1 and 2: barriers and facilitators

The aim of study objectives 1 and 2 was to identify and describe the barriers and facilitators influencing RNs in the meticulous compilation and adaptation of standardised nursing care plans. Barriers and facilitators were classified according to the three categories mentioned in Cabana's Framework for Improvement, namely knowledge, attitude, and behaviour (Cabana *et al.*, 1999:1458-1459). A 'most reported facilitator' was identified when the combined responses of "Agreed" and "Strongly Agreed" totalled more than 65%. Similarly, when the combined responses of "Disagreed" and "Strongly Disagreed" totalled more than 65%, it was classified as a 'most reported barrier'. Six main barriers and 19 facilitators were identified according to the aforementioned criteria (Refer to Tables 4.18 and 4.19) and are discussed next.

The greatest reported barrier experienced by more than 95% of RNs was that other members of the multidisciplinary team do not look at the nursing care plans when doing their rounds. This provides evidence that standardised nursing care plans are only used by nursing staff in the planning and delivery of nursing care, resulting in fragmentation of care between members of the health team. Similarly, one of the barriers to patient-centred and quality care has been identified as the lack of coordination between all members of the health team (Esmaeili, Cheraghi & Salsali, 2014:2-8). Using multidisciplinary care plans as an alternative to the standardised care plan may provide a solution to the lack of an integrated approach in patient care (Van Rooyen *et al.*, 2009:329-330). Furthermore, proper coordination of care is essential in order to prevent duplication and omission of required nursing care (Carpenito-Moyet, 2008:45). When there is no coordination between nursing practitioners and other members of the health team, care planning cannot be accomplished effectively. Consequently, standardised care plans may not be appropriate for a specific patient, or may be incomplete.

In contrast to the lack of coordination between members of the multidisciplinary team implied in the reported barrier and discussed, more than 70% of respondents viewed the use of standardised nursing care plans as a vehicle to improve continuity of care as a strong facilitator. Likewise, another strong facilitator (75.8%) was associated with the use of standardised nursing care plans in increasing the nurse's ability to provide

high-quality care. According to literature, one of the functions of the nursing care plan is to facilitate continuity of care, through communicating the patient's documented plan of care to nurses and other members of the multidisciplinary team (Cook *et al.*, 2012:89). In this study, the continuity and quality of care experienced by respondents may, however, only be related to the nursing team and not the multidisciplinary team as a whole, since the plans are not consulted by other members of the multidisciplinary team. A possible way to include all members of the health team in the planning process, may be a change of the current nursing oriented care planning process, to a multidisciplinary care planning process and accompanying document for recording of the planned care (Dellefield, 2006:128-133; Olsson *et al.*, 2009:820-825).

A further strong barrier reported by more than 70% of respondents was that they were not involved when new standardised nursing care plans were developed. However, two-thirds of respondents agreed that standardised care plans in use were based on the latest research. It is unclear how they know that plans are based on new research when they are not involved in the development process – it appears as though it may be a perception only, not based on facts. This barrier to the meticulous compilation of standardised care plans is concerning, as accurate, relevant standardised nursing care plans, based on the latest research and utilised by the whole multidisciplinary team, is essential to promote consistent, evidence-based care for patients with the same problems (Barret *et al.*, 2009:107; Olsson *et al.*, 2009:820-825). Furthermore, there is evidence that the involvement of nursing staff in the development of nursing care plans and fostering ownership favourably impacts on their use (Mason, 1999:380-387).

Two of the most reported barriers related to the daily use of standardised nursing care plans, these were plans not being updated daily (79.3%), and the objectives set in the care plans not being evaluated daily (69.0%). These results imply a lack of ownership as a hindrance to the meticulous application of standardised nursing care plans. These barriers are comparable to results of international studies on documenting care: a qualitative meta-synthesis regarding the documentation of individualised care, found that nursing care plans (in any format) were not regularly used in the provision of patient care (Kärkkäinen, Bondas & Eriksson, 2005:123-131). Furthermore, the mentioned study showed evidence that the plan may have been compiled, but was not

used to guide care delivery. Moreover, plans were also not modified even though the patient's condition changed (Kärkkäinen *et al.*, 2005:123-131). Another study on variations in nursing care quality across hospitals also concluded that 41% of RNs on average did not develop or update nursing care plans (Lucero *et al.*, 2009:2304).

Despite the barriers of plans and objectives not being reviewed every day, it was identified as a facilitator that patients' progress reporting was done according to the health problems listed on the patient's standardised nursing care plan, by more than two-thirds of respondents. It therefore seems that although progress reporting is done according to health problems stated on the standardised nursing care plan, outdated information is used when reporting progress, since plans and objectives are not updated daily. This infers that report writing is a habitual practice done without insight and without the use of critical thinking skills. Furthermore, RNs may not be aware of changes in the patient's condition, or of new priorities of care, resulting in poor quality nursing care and potential harm to the patient, which negates this reported facilitator.

Another barrier reported by more than 70% of respondents points to a lack of care plans being available for all diagnoses. However, it seems that the physical number of copies of available standardised nursing care plans is not the problem, since more than half of the respondents agreed that there are enough (quantity-wise) standardised nursing care plans available in the units. While the literature has revealed that there are instances where the lack of stationary resulted in the non-implementation of the nursing process (Ofi & Sowunmi, 2012:354-362), this does not seem to be the case in this study. It rather appears as though standardised care plans for all diagnoses were not developed, or that inappropriate plans are used in the absence of a suitable plan just to ensure that a plan is available in the patient file. Reviewed literature did not report on this particular trend.

Workload and perceptions of available time was perceived as a barrier to the RNs' attention to care planning. Only slightly more than half of the respondents responded that there is enough time available to compile and adapt standardised nursing care plans. Workload and lack of time, as reported, may be due to various organisational factors, for instance, the number of staff available per unit, bed-occupancy rate and acuity levels of patients. These barriers are comparable to several studies that also

concluded that heavy workload, staff shortage and lack of time negatively impacted on the meticulous application of the nursing process, and nursing care plans in particular (Asertie *et al.*, 2014:1; Blair & Smith, 2012:161; Martin *et al.*, 1994:35-40; Mutshatshi, Mamogobo & Mothiba, 2015:445-455; Okaiso *et al.*, 2014:n.p.). There were some incongruences identified in the responses where, although the majority of respondents indicated they use standardised nursing care plans in a careful manner (facilitator), they also responded that the workload does not allow them to complete standardised nursing care plans carefully (barrier).

Although evidence in literature suggests that nursing care plans are seen as a laborious nuisance and left until last (Blair & Smith, 2012:164; Cheevakasemsook *et al.*, 2006:368; Jooste *et al.*, 2010:93), more than 80% of respondents in the current study did not view the use of standardised care plans as a waste of time, which was identified as a facilitator. Identifying another strong facilitator, respondents indicated that the use of standardised nursing care plans did not affect the nurse-patient relationship negatively (89.7%). This is very encouraging, since evidence in literature suggests that a caring relationship between patients and health care providers contribute to better patient outcomes (Ervin, 2006:126-130). However, there is a risk that nurses may be too focussed on the execution of the plan, and not paying attention to the patient's real needs or involving them in decisions regarding their care (Andreae, Ekstedt & Snellman, 2011:1-7).

More than 70% of respondents viewed using standardised nursing care plans to orientate new personnel in the unit as a facilitator. This result is similar to results obtained in other studies where it was found that the use of standardised nursing care plans smoothed the task of new employees, and that the plans are useful teaching tools (Geyer *et al.*, 2009:205; Jakobsson & Wann-Hansson, 2013:945-952).

Almost all of the respondents reported that standardised nursing care plans make it easy to identify priorities with regard to care as a very strong facilitator. This result is promising, since it is essential for any plan of care to clearly articulate and document the priorities of care (Cardwell *et al.*, 2011:1382). Another related facilitator reported by respondents concluded that it was easy to adapt the standardised care plans according to the individual needs of patients, despite the fact that one of the

documented disadvantages of standardised nursing care plans is that individual needs are not necessarily taken into account (Barret *et al.*, 2009:107). The deficiency of standardised care plans to consider the individual needs of the patient was also described in the findings of a study by Dahm and Wadenstein (2008:2137-2145). As a very strong facilitator, more than 90% of respondents reported that individual nursing care plans were developed when standardised nursing care plans were deemed to be inadequate for specific patients. Literature suggests that this is a positive practice, as a standardised care plan should not exclude a supplementary individual care plan when required for thorough care planning (Olsson *et al.*, 2009:820-825). In contrast, Dahm and Wadenstein (2008:2142) found that only 18% of participants in their study developed individual nursing care plans when necessary. Respondents further identified the user-friendly nature of the plans (86.2%), and the plans being a valuable aid in patient care (89.7%) as very strong facilitators, although in contradiction respondents stated that plans are not updated daily (79.3%). The aforementioned results imply that the majority of respondents display a positive attitude towards standardised nursing care plans and that they find the plans to be useful in practice, although they do develop individualised care plans when necessary. In the context of the conceptual framework of this study, positive attitudes towards standardised nursing care plans will foster positive behaviour relating to the meticulous application of these plans.

Further facilitators reported were that standardised nursing care plans meet the legal requirements for documentation and that regular audits are performed to evaluate whether the plans meet these legal requirements. This supposes the presence of clear, legible, accurate, complete, relevant, timely written entries, which define meticulous documenting and compiling of standardised nursing care plans for this study. However, in the open-ended question several respondents expressed a need for more audits and audits specifically aimed at the content and relevance of the standardised nursing care plans.

Several aspects regarding respondent knowledge were identified as facilitators. Most respondents reported that they received training on the nursing process and nursing care plans during their formal education, that they have the necessary knowledge and skills to formulate standardised nursing care plans meticulously, and that they feel

confident in using these skills. They are also familiar with the content of the plans in use. This implies that their knowledge and skills related to standardised care plans can be viewed as a facilitator to meticulous application of these plans. Similar results were obtained by Dahm and Wadensten (2008:2142), where most nurses relayed satisfaction with the level of their theoretical and technical knowledge regarding the use of standardised nursing care plans. However, other studies identified a lack of knowledge regarding the nursing process and nursing care plans as a barrier to meticulous application (Afolayan *et al.*, 2013:34-43; Heidari & Mardani Hamooleh, 2016:101-104; Mahmoud & Bayoumy, 2014:300-315; Mamseri, 2012:71-102; Mutshatshi *et al.*, 2015:445-455). Despite data evidence that respondents in the current study were satisfied with their level of knowledge, they perceived a lack of knowledge regarding various aspects of standardised nursing care plans as barrier when answering the open-ended question. Several respondents also expressed a need for regular training on the nursing process and care plans (as discussed under the findings of study objective 4).

In summary, more facilitators than barriers were identified in all three categories described in the conceptual framework, namely knowledge, attitude, and behaviour. Reported barriers related almost exclusively to behavioural aspects, specifically environmental factors, which could impact negatively on the meticulous application of standardised care plans. Results are comparable to results of international studies on daily updating of plans, satisfaction with knowledge levels, documenting care and environmental barriers, like lack of time and workload. However, the results of the study concluded that respondents do not view the use of standardised care plans as a waste of time, which is in contrast with the findings of several other studies. Overall, results indicate sufficient knowledge regarding the nursing process, and standardised nursing care plans in particular, as well as positive attitudes towards standardised nursing care plans. However, several behavioural barriers pose a challenge to the meticulous application of standardised nursing care plans.

5.2.3 Study objective 3: Discussion of findings

The intent of study objective 3 was to determine whether there were any statistically significant associations between the demographic variables of gender, age, nurse

category, basic nursing qualification, and years' experience as an RN and the scale items. The Kruskal-Wallis Test and the Mann-Whitney U test were employed to obtain findings for this objective. Significant associations were shown between age and availability of a policy regarding standardised nursing care plans, as well as age and availability of plans for every diagnosis. A significant association was also found between gender and the completion of plans being a waste of time. Furthermore, type of basic qualification showed significant associations with RNs checking and signing standardised nursing care plans, care plans minimising unnecessary documentation, care plans being used in a careful manner, increasing the nurse's ability to provide high-quality care and improving continuity of care.

Respondents ranging from 19 to 25 years of age, and those between 41 to 50 years of age, were not aware of a policy to describe the correct compilation and adaptation of standardised nursing care plans (Refer to Table 4.5). The younger age group could be less aware of available policies than older RNs due to a shorter span of experience and some, like the community service practitioners, are relatively newly appointed. Further to this, it may also imply a lack of orientation with regard to operational systems and guidelines. However, the disagreement of those 41 to 50 years old cannot be explained without further investigation. It is expected that this group should be aware of and familiar with all policies in the institution, since almost all of these respondents have more than 11 years' experience as an RN. If this age group is unaware of available policies, it will follow that younger RNs may not be made aware of these policies during orientation.

Respondents between the ages of 26 and 30 years, experience a deficiency in the availability of standardised nursing care plans for every diagnosis (Refer to Table 4.13). The reason for this result is unclear and requires further investigation.

Males perceived the use of standardised nursing care plans as a waste of time (Refer to Table 4.6). However, this result is not practically significant, since only 3 male RNs are employed in the study hospital, of which 2 were included in the study. A larger sample size is necessary to determine whether this association is, in fact, authentic. Literary evidence shows that men generally prefer to work in "low-touch" technical speciality areas such as intensive care units or emergency centres (Juliff, Russell &

Bulsara, 2017:45-52). The aforementioned findings could possibly explain why males deem the use of standardised nursing care plans to be a waste of time – it may be seen as too routine a task, or boring and not technically specialised enough.

Several significant associations were found between type of basic qualification and certain scale items. Respondents with a 4-year degree perceived a deficit regarding the validation of standardised nursing care plans by RNs (Refer to Table 4.11). Respondents in possession of a 2-year Bridging programme qualification were the most prone to agree that they use standardised nursing care plans in a careful (meticulous) manner. Respondents holding a 4-year diploma indicated that they do not use standardised nursing care plans in a careful manner (Refer to Table 4.8). Furthermore, respondents who completed a 4-year diploma programme feel standardised nursing care plans do not minimise unnecessary documentation (Refer to Table 4.4). Further research is necessary to gain a clear understanding of the aforementioned results.

Respondents who completed the 2-year Bridging programme perceived standardised nursing care plans as a means to assist in the provision of high-quality care, while those in possession of a 4-year diploma appeared not to view standardised nursing care plans as a tool to increase provision of high-quality care (Refer to Table 4.9). This may imply that respondents who completed the Bridging programme rely more heavily on the standardised nursing care plans to guide them in the provision of high-quality care, possibly due to the shorter period of their formal education. Furthermore, results imply that those with a 4-year diploma feel the use of standardised nursing care plans do not improve continuity of care, whereas those with a Bridging programme qualification reported that continuity of care is improved with the use of standardised nursing care plans (Refer to Table 4.10). This result may be linked to the previous result – if respondents with a Bridging programme qualification rely more heavily on the standardised nursing care plan to guide them in the provision of high-quality care, it is possible that they will also view standardised care plans as a means to improve continuity of care.

It is clear that the type of qualification strongly impacts how RNs view and use standardised nursing care plans, specifically with regard to those with a 4-year

diploma. Results show that diplomats feel they do not use standardised care plans in a careful manner and they do not view it as a tool to increase continuity or quality of care, or to decrease unnecessary documentation. The South African NQF determines outcomes for education programmes based on certain level descriptors (South African Qualifications Authority, 2014:n.p.). According to these level descriptors, diplomat RNs (NQF exit level 7) should demonstrate integrated knowledge of a study domain, whereas a graduate RN (NQF exit level 8) is expected to demonstrate, apply and evaluate knowledge, and show an understanding of the underpinning theory. Moreover, degree programmes are more academically oriented, with a focus on research (Subedar, s.a.:92). This implies that the amount and quality of theory-practice integration, as well as variations in curriculum content between the different programmes, may influence RNs' knowledge, attitude and behaviour related to the meticulous application of standardised nursing care plans and delivery of high-quality nursing care. As previously discussed, the academic proficiency and lower level qualification of diplomats could also contribute to the results. There is also evidence of an association between the proportion of graduate RNs and increased patient safety, decreased patient mortality and provision of high-quality nursing care (Roets *et al.*, 2016:424; Aiken, Sloane, Bruyneel, Van den Heede, Griffiths, Busse, Diomidous, Kinnunen, Kózka, Lesaffre & McHugh, 2014:1824-1830). It can thus be conjectured that the converse will be true for diplomat RNs.

5.2.5 Study objective 4: Discussion of findings

Study objective 4 was aimed at identifying strategies suggested by RNs to reinforce the most reported facilitators or minimise the most reported barriers, in the form of an open-ended question. In the open-ended question, RNs proposed strategies to meliorate barriers to the meticulous compilation and adaptation of standardised nursing care plans. These strategies were organised into common themes as displayed in Table 5.1.

Table 5.1: Common themes with regard to strategies to meliorate barriers

COMMON THEMES	RESPONDENT QUOTES
<p>Specific care plan characteristics related to behaviour</p> <p>For example:</p> <ul style="list-style-type: none"> • Rather use specific care plans for each patient instead of standardised nursing plans. • Combine standardised nursing plans and individual nursing care plans into one document. 	<p><i>"...having a general standard care plan with problems frequently observed in patients attending the unit, e.g. wounds, pain, dyspnea, anxiety and adding another page or two in the format of the specific care plan so that individual, unique problems could be added..."</i> (GBG001)</p> <p><i>"I would prefer all patients be evaluated individually and specific problem-orientate care plans be used instead."</i> (GBG001)</p> <p><i>"Deur sorgplanne op te stel wat op individuele behoefte voorsien. Deur die individuele en standaardsorgplanne te kombineer..."</i> (To compile care plans that focus on individual needs. To combine the individual and standardised nursing care plans – GB2005)</p>
<p>Environmental factors related to behaviour</p> <p>For example:</p> <ul style="list-style-type: none"> • Ensure that there is a standardised nursing plan for every diagnosis. 	<p><i>"Daar is ook nie voldoende planne vir alle siektetoestande nie... herstel deur meer spesifieke planne op te stel."</i> (There are not appropriate plans for all diagnoses...correct by compiling more specific plans – GA1001)</p>
<p>Organisational factors related to behaviour</p> <p>For example:</p> <ul style="list-style-type: none"> • More audits, specifically on the content of standardised nursing plans. • Alleviate organisational issues, e.g. staff shortages. 	<p><i>"Gereelde oudits sal ook help om 'compliance' te monitor"</i> (Regular audits will also help to monitor compliance – GA1001)</p> <p><i>"The regular audits that are done in hospital are not specifically for care plans, but for the whole patient's file, A care plans audit would also help a lot."</i> (GA1005)</p> <p><i>"...more staff → less workload → will not cause staff to neglect the standardized car plan."</i> (GCN004)</p>
<p>Factors related to knowledge</p> <p>For example:</p>	<p><i>"Gereelde indiensopleiding of gereelde refresher werksinkels moet aangebied word."</i> (Regular in-service training or refresher workshops should be presented – GCN002)</p>

COMMON THEMES	RESPONDENT QUOTES
<ul style="list-style-type: none"> Regular training and or refreshers regarding the use of standardised nursing plans; preferably compulsory. 	<p><i>"...should receive regular training regarding setting of standardise care plans e.g. 2 -3 monthly."</i> (GA1005)</p>

Although 65.5% of respondents referred to staff shortages and workload as a barrier to careful completion of standardised care plans, they nevertheless viewed individual care plans or a combination of standardised and individual care plans as a solution to inadequate care plan characteristics and the lack of availability of standardised care plans for every diagnosis. A review of the literature indicated that both standardised and individual nursing care plans have advantages and disadvantages. However, a combination of the two types of plans has not been supported in the reviewed literature. Alternative care plan options have been explored, for example, electronic health records and multidisciplinary care pathways (Barret *et al.*, 2009:108-109; Jansson & Törnvall, 2013:51; Kärkkäinen *et al.*, 2005:129; Prideaux, 2011:1453; White *et al.*, 2011:10-11).

The majority of respondents (72.4%) agreed that regular audits are performed to evaluate whether standardised nursing care plans meet the legal requirements of documentation. However, they propose more audits and audits that are specifically aimed at the content of the standardised nursing care plans; not just relating to the legal requirements for documentation. The importance of accurate and complete care plan documentation as a measure to improve continuity and quality of care, is emphasised throughout the reviewed literature (Blair & Smith, 2012:163; Griffiths, Debbage & Smith, 2007:1324-1327; Jansson *et al.*, 2011:66). Regular audits of care plans and other nursing documentation should be performed to raise and maintain the standards of documentation practices by nursing practitioners, but there is a danger of becoming document-centred, rather than focussing on the actual patient and his/her care (Griffiths *et al.*, 2007:1324-1327; Keenan *et al.*, 2008:175; Prideaux, 2011:1453). As evidenced by results related to knowledge mentioned earlier, RNs are aware of and familiar with the standardised nursing care plans in use. Furthermore, they mostly perceive the knowledge component as an enabling factor in the meticulous compilation and adaptation of standardised nursing care plans. However, these results

are in contrast to the barriers reported in the open-ended question, which highlight a lack of knowledge regarding several aspects of the standardised care plan. Interesting too is that several respondents proposed regular training as a strategy to meliorate barriers, although they perceive their knowledge regarding the compilation and adaptation of standardised care plans as adequate.

5.3 Limitations of the study

The study was conducted in the medical/surgical units of a single regional public hospital in the Eden District. The findings can therefore not be generalised to district public hospitals or private hospitals in the Eden District. Additionally, the findings are not generalisable to other nursing disciplines or categories of nurses, as the population consisted only of RNs working in medical/surgical units in the study hospital. Since the study was only conducted in the Eden District of the Western Cape, the findings can also not be generalised to all RNs working in medical/surgical units in South Africa. However, this study provides a starting point of establishing what RNs perceive as barriers and facilitators to the meticulous application of standardised nursing care plans and which broad areas need attention. These results can be used for conversations with staff as to what would be the most useful place to start remedial actions to meliorate reported barriers.

Due to the constraints placed on the study in terms of permission granted for access to study hospitals, the sample size was small, even though the total population was used as the sample ($n=43$). Adding to this constraint was the response rate of 67% ($n=29$), even though a response rate of 60% is deemed adequate (Fincham, 2008:1). The small sample size may have influenced the power of the study, increasing the possibility of a Type II error. Power is defined as the ability of a study to distinguish actual differences in a population, resulting in the rejection of the null hypothesis. A Type II error occurs when no significant differences between groups are identified, even though they exist, resulting in a false acceptance of the null hypothesis (Burns & Grove, 2009:357, 367, 712). A quantitative design was chosen for this study, since the population initially would have been larger. As mentioned previously, researcher access to certain hospitals was denied. Time constraints prevented the researcher from changing the research design to a qualitative approach.

Even though measures were employed to increase the validity and reliability of the researcher-developed questionnaire, the questionnaire was not subjected to statistical reliability testing, since the questionnaire did not measure a single concept like 'attitude', and the scale items measured different constructs.

Respondents were free to choose a convenient time to complete the questionnaire, thus ensuring that there was minimal interruption to patient care and that the study did not interfere with respondents attending to patient needs. However, this practice may have influenced the findings, since it is not known whether responses of those who completed the questionnaire immediately differed from responses of those who completed the questionnaire later or at home.

5.4 Conclusions

The question posed for this study was "What do RNs experience as the particular barriers and facilitators to the meticulous compilation and adaptation of standardised nursing care plans?"

Six barriers were identified and described: More than 95% of respondents perceived the fact that other members of the multidisciplinary team did not consult the standardised care plans of patients, as a barrier. The second largest barrier identified by 79% of respondents, was that standardised care plans were not updated daily. Linked to this, nearly 70% of respondents also perceived a barrier in that objectives set in the plans were not evaluated daily. More than 70% of respondents reported barriers regarding not being included in the development of standardised nursing care plans, and the lack of developed plans for all diagnoses. Lastly, two-thirds of respondents experienced workload as a barrier to the meticulous use of standardised care plans.

The facilitators reported by more than 90% of the respondents were that standardised care plans made it easy to identify priorities of care, and that individual care plans were developed when deemed necessary. This offers a reasonable starting point from which well established and positive practices may be reinforced while the barriers are attended to. The other facilitators related to various care plan characteristics (e.g. ease

of use), positive attitudes towards standardised care plans, and sufficient knowledge and skills to meticulously compile and adapt these plans.

Significant associations were found between age and availability of a policy regarding standardised nursing care plans, as well as age and availability of plans for every diagnosis. A significant association was also found between gender and the completion of plans being a waste of time. Furthermore, type of basic qualification showed significant associations with RNs checking and signing standardised nursing care plans, care plans minimising unnecessary documentation, care plans being used in a careful manner, increasing the nurse's ability to provide high-quality care and improving continuity of care. It became clear that type of qualification, specifically the 4-year diploma, impacts on how RNs view and experience the use of standardised nursing care plans.

The strategies that RNs proposed to meliorate the indicated barriers mainly concentrated on rather using individual care plans or a combination of standardised and individual care plans, regular refresher training, as well as doing more audits and audits that are specifically aimed at the content of the standardised nursing care plans, not just relating to legal requirements for documentation. These strategies assisted in the formulation of the proposed recommendations discussed next.

A schematic representation of the most reported barriers and facilitators, as incorporated into Cabana's Framework for Improvement (Cabana *et al.*, 1999:1458-1459), which was used as the conceptual framework for this study, is depicted in Figure 5.1.

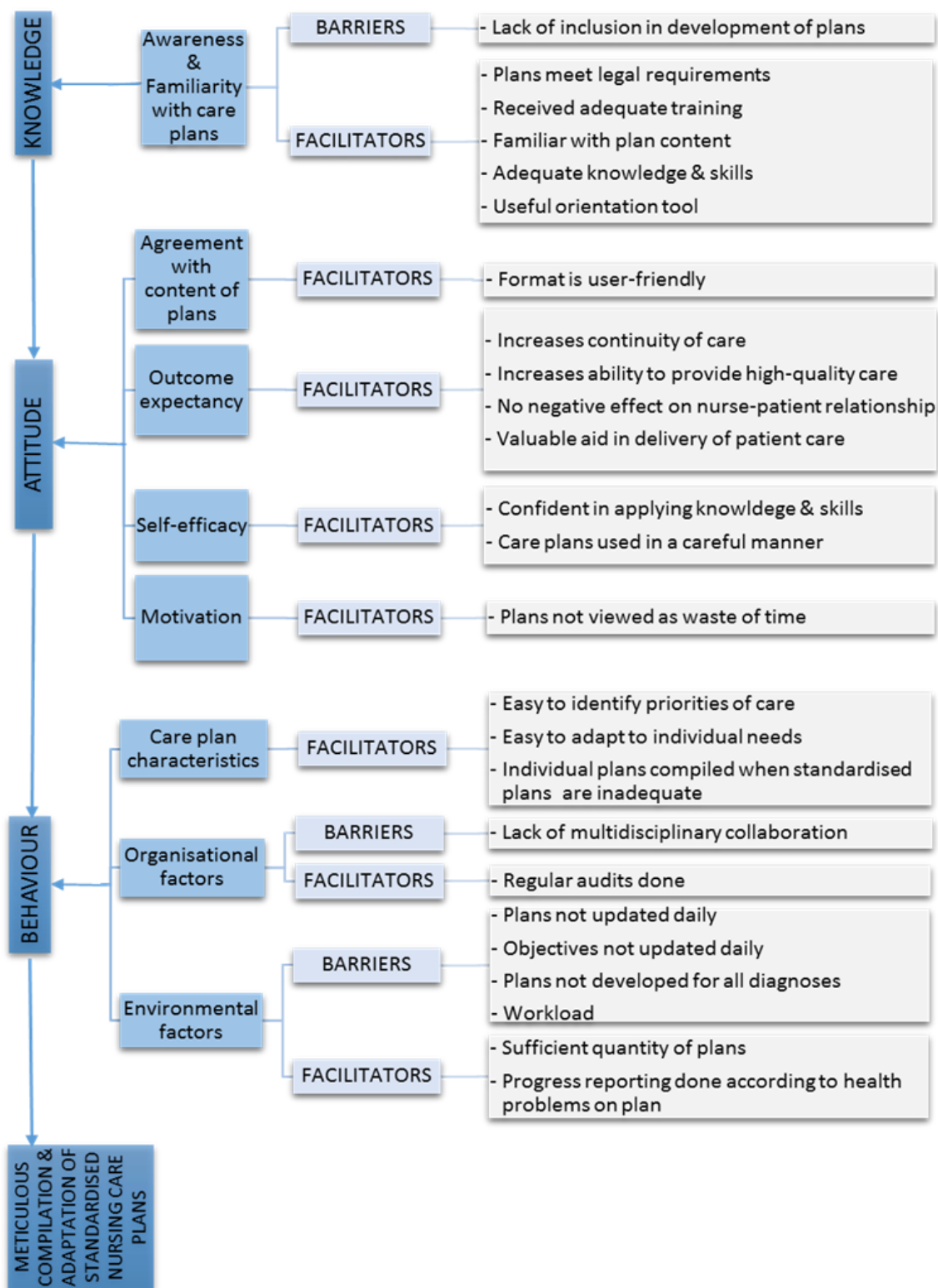


Figure 5.1: Conceptual framework: Barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans (Adapted from Cabana *et al.*,1999:1458-1463)

5.5 Recommendations

Based on the evidence presented in the study, the following recommendations are suggested:

- Implementing training programmes regarding the nursing process, specifically care planning
- Developing an audit tool specifically for evaluating standardised nursing care plans
- Establishing a care plan committee to address the identified barriers
- Investigating alternative methods and practices of care planning

A discussion of these proposed recommendations follows.

5.5.1 Implementing training programmes regarding the nursing process, specifically care planning

RNs responded that they received training on the nursing process and nursing care plans during their formal education ($n=22$, 75.8%), that they were familiar with the content of the plans they used ($n=22$, 75.9%), that they have the necessary knowledge and skills to formulate these plans ($n=21$, 72.4%), and that they felt confident about this knowledge and skills when using standardised nursing plans ($n=21$, 72.4%).

Despite this, respondents still voiced a need for recurrent reinforcement of knowledge and skills related to the nursing process and care plans. It is suggested that a needs assessment is undertaken prior to implementation of training, to ensure that the training is useful and aimed at specific knowledge gaps as identified by RNs. Regular training in the form of refreshers and workshops may assist in raising awareness and familiarity regarding nursing care plans and the nursing process as a whole. For example, how to write a progress report while taking the standardised nursing care plan objectives into account, how to use the plans as a guide in the provision of high quality, continuous patient care, what the requirements for meticulous documentation regarding these plans are, and how to perform efficient document audits. Training programmes can also be used to orientate new nursing staff in order to equip them

with the knowledge and skills necessary for the meticulous compilation and adaptation of standardised nursing care plans.

5.5.2 Developing an audit tool specifically for evaluating standardised nursing care plans

Regular file audits are conducted by a core group of operational managers and statistical personnel. However, the current audit tool encompasses the whole patient file. It is suggested that an audit tool is developed specifically for the evaluation of standardised and individual nursing care plans. Elements that can be included in the audit tool are: legal requirements for documentation, presence of care plan in patient file, standards for completeness and accuracy, applicability of the care plan to patient diagnosis, adequate identification of priorities of care, evidence of adaptation to changing needs, progress reporting done according to care plan, and validation of care plan by the RN. It is advised that audits are performed monthly on a random sample of patient files from each unit. It is further suggested that RNs from each ward take part in the auditing process on a rotational basis. In this way, the process can be utilised as a learning experience that can provide insight and understanding of what is required.

5.5.3 Establishing a care plan committee to address the identified barriers

It is recommended that a care plan committee is established, who will meet at least every quarter. It is suggested that the committee consists of a representative member of each discipline of the multidisciplinary team. This committee could ensure that standardised nursing care plans are based on the newest scientific evidence and best practices, as well as to develop care plans for the most common diagnoses in the hospital, with the inputs and participation of all RNs (who can attend meetings on a rotational basis to foster a learning environment). Furthermore, the committee could regularly review the content and format of the standardised care plans for ease of use and relevance to patient care, with the assistance and input of all RNs. To the researcher's knowledge, standardised care plans were developed by the Department of Health – the committee can be tasked to determine exactly who developed the plans and whether these plans can be adapted and updated to suit the context of the specific

hospital. It is also proposed that all care plans are translated into English to prevent language barriers from interfering with the provision of patient care.

5.5.4 Investigating alternative methods and practices of care planning

Several respondents proposed a change to using individualised care plans instead of standardised care plans. Some proposed that the two types of plans should be combined. Other methods and best practices regarding care planning and the development of care plans may be investigated in order to assist with the meticulous planning and documenting of patient care in the presence of staff shortages and high workloads, for example, multidisciplinary care plans, computerised care plans and care bundles (Berman & Snyder, 2014:237). This investigation can form part of the terms of reference of the care plan committee. Developing a single document (multidisciplinary care plan), with shared contributions of all the members of the multidisciplinary team in order to provide an integrated approach to care, may foster a better understanding of the role and responsibilities of each member of the team. Furthermore, evidence suggests that this type of plan will be beneficial to the patient who ultimately receives higher quality care, as well as to the institution, by reducing costs and length of hospital stay (Barret *et al.*, 2009:109-111; Van Rooyen *et al.*, 2009:329-330).

5.5.5 Future research

The study identified and described the barriers and facilitators RNs experienced in the meticulous compilation and adaptation of standardised care plans in medical/surgical units in a public hospital in the Eden District. Since the study took place in a single setting, with a small sample size, more value could be added to the study by extending research to more public and private hospitals in a larger area, and by including more nursing disciplines utilising standardised nursing care plans.

The associations between demographic variables and scale items could form the basis for further research in order to gain a thorough understanding of these relationships and their possible causes.

The nature of a quantitative questionnaire limits the data collected regarding the study topic. The development of a statistically validated, reliable questionnaire on the study topic could strengthen further research on the topic. Furthermore, a qualitative study on the barriers and facilitators RNs experience in the meticulous compilation and adaptation of standardised care plans may uncover more in-depth data.

5.6 Dissemination

A summary of the study results and recommendations will be provided to the management of the study hospital once the thesis is finalised.

5.7 Conclusion

The discussions in Chapters 4 and 5 focussed on the achievement of the four study objectives outlined in Chapter 3. The study results confirmed that RNs experience various barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans. These barriers and facilitators were identified and discussed. The study respondents only experienced a few barriers and almost all of these were related to behavioural aspects as outlined in the conceptual framework. The results further established that associations exist between demographic variables and the identified barriers and facilitators. Study respondents also offered suggestions as to possible meliorating strategies regarding the most reported barriers, and these suggestions were incorporated into the proposed recommendations.

Although further research may provide more in-depth information on the study topic, it can be concluded that the research question “What do RNs experience as the particular barriers and facilitators to the meticulous compilation and adaptation of standardised nursing care plans?” has been answered.

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APPENDICES

Appendix 1: Ethical approval from Stellenbosch University



Ethics Reference #: 0610

Title: Barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans in public hospitals of the Eden District, South Africa: A nursing perspective.

Dear Saria Van As

The **New Application** received on 12/07/2017 13:52, was reviewed by members of the **Health Research Ethics Committee 1** via Minimal Risk Review procedures on 31 August 2017 and was approved.

Please note the following information about your approved research protocol:

Protocol approval period: This project has been approved for a period of one year from the date of this approval letter.

Please remember to use your **protocol number** (0610) on any documents or correspondence with the HREC concerning your research protocol.

Please note that this decision will be ratified at the next HREC full committee meeting. The HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:

Please note a template of the progress report is obtainable on <https://applyethics.sun.ac.za/Project/Index/673> and should be submitted to the Committee before the year has expired. The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Translation of the consent document to the language applicable to the study participants should be submitted.

Federal Wide Assurance Number: 00001372

Institutional Review Board (IRB) Number: IRB0005239

The Health Research Ethics Committee complies with the SA National Health Act No.61 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 Part 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2015 (Department of Health).

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Contact persons are Ms Claudette Abrahams at Western Cape Department of Health (healthres@pgwc.gov.za Tel: +27 21 483 9907) and Dr Helene Visser at City Health (Helene.Visser@capetown.gov.za Tel:+27 21 400 3981). Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.

For standard HREC forms and documents please visit: <https://applyethics.sun.ac.za/Project/Index/673>

If you have any questions or need further assistance, please contact the HREC office at 0219389207.

Sincerely,

Franklin Weber

HREC 1 Coordinator

INVESTIGATOR RESPONSIBILITIES

Protection of Human Research Participants

Some of the responsibilities investigators have when conducting research involving human participants are listed below:

1. Conducting the Research: You are responsible for making sure that the research is conducted according to the HREC approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research.
- Participant Enrolment: You may not recruit or enrol participants prior to the HREC approval date or after the expiration date of HREC approval. All recruitment materials for any form of media must be approved by the HREC prior to their use. If you need to recruit more participants than was noted in your HREC approval letter, you must submit an amendment requesting an increase in the number of participants.
 - Informed Consent: You are responsible for obtaining and documenting effective informed consent using **only** the HREC approved consent documents, and for ensuring that no human participants are involved in research prior to obtaining their informed consent. Please give all participants copies of the signed consent documents. Keep the originals in your secured research files for at least fifteen (15) years.
 - Continuing Review: The HREC must review and approve all HREC approved research protocols at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period**. Prior to the date on which the HREC approval of the research expires, it is **your responsibility to submit the continuing review report in a timely fashion to ensure a lapse in HREC approval does not occur**. If HREC approval of your research lapses, you must stop new participant enrolment, and contact the HREC Office immediately.
 - Amendments and Changes: If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, number of participants, participant population, informed consent document, instruments, surveys or recruiting material), you must submit the amendment to the HREC for review using the current Amendment Form. You **may not initiate** any amendments or changes to your research without first obtaining written HREC review and approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the HREC should be immediately informed of this necessity.
 - Adverse or Unanticipated Events: Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research-related injuries, occurring at this institution or at other performance sites must be reported to the HREC within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the HREC's requirements for protecting human research participants. The only exception to this policy is that the death of a research participant must be reported in accordance with the Stellenbosch University Health Research Ethics Committee Standard Operating Procedures www.sun25.sun.ac.za/portal/page/portal/Health_Sciences/English/Centres%20and%20Institutions/Research_Development_Support/Ethics/Application_package. All reportable events should be submitted to the HREC using the Serious Adverse Event Report Form.
 - Research Record Keeping: You must keep the following research-related records, at a minimum, in a secure location for a minimum of fifteen years; the HREC approved research protocol and all amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence from the HREC.
 - Reports to the MCC and Sponsor: When you submit the required annual report to the MCC or you submit a required report to your Sponsor, you must provide a copy of that report to the HREC. You may submit the report at the time of continuing HREC review.
 - Provisions of Emergency Medical Care: When a physician provides emergency medical care to a participant without prior HREC review and approval, to the extent permitted by law, such activities will not be recognized as research nor will the data obtained by any of such activities be used in support of research.
 - Final Reports: When you have completed (no further participant enrolment, interactions, interventions or data analysis) or stopped work on your research, you must submit a Final Report to the HREC.
 - On-Site Evaluations, MCC Inspections, or Audits: If you are notified that your research will be reviewed or audited by the MCC, the Sponsor, any other external agency or any internal group, you must inform the HREC immediately of the impending audit/evaluation.

Appendix 2: Permission obtained from Department of Health/ institution



STRATEGY & HEALTH SUPPORT

Health.Research@westerncape.gov.za
tel: +27 21 483 6857; fax: +27 21 483 9895
5th Floor, Norton Rose House,, 8 Riebeeck Street, Cape Town, 8001
www.capegateway.gov.za

REFERENCE: WC_201709_001
ENQUIRIES: Ms Charlene Roderick

Stellenbosch University

Francie Van Zyl Drive

Tygerberg Hospital

Cape Town

7505

For attention: Mrs Saria Van As, Dr Janet Bell

Re: Barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans in public hospitals of the Eden District, South Africa: A nursing perspective.

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research. Please contact following people to assist you with any further enquiries in accessing the following sites:

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of research. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).

3. In the event where the research project goes beyond the *estimated completion* date which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely



As instructed.

DR A HAWKRIDGE

DIRECTOR: HEALTH IMPACT ASSESSMENT

DATE: 12/10/2017



██████████
OFFICE OF THE CHIEF EXECUTIVE OFFICER
Reference: 13/10/2017_ Research_S van As
Enquiries: Mr ██████████

Mrs S van As

Dear Mrs Van As

RESEARCH: BARRIERS AND FACILITATORS IN THE METICULOUS COMPILATION AND ADAPTATION OF STANDARDISED NURSING CARE PLANS IN A PUBLIC HOSPITAL OF THE EDEN DISTRICT, SOUTH AFRICA: A NURSING PERSPECTIVE

I am pleased to inform you that your application to conduct research at ██████████ Hospital has been approved.

Yours faithfully

A handwritten signature in black ink, consisting of a series of loops and flourishes, positioned above a black redaction bar.

██████████
Chief Executive Officer
Date: 13 October 2017

WC_201709_001

Josh-Lee Kroukamp

2017-10-17 09:22 AM

To: sariavanas@polka.co.za;

Cc: Health Research;

Dear Saria

Please note that the following facilities have declined access due to the heavy work load on nursing staff.

- [REDACTED] Hospital
- [REDACTED] Hospital
- [REDACTED] Hospital
- [REDACTED] Hospital
- [REDACTED] Hospital

Please indicate if there are any alternative facilities that you would like access, I would suggest any facilities outside the Eden district.

If not I will be closing your application as 'Approved' as you received one approval.

Kind Regards

Josh-lee Kroukamp

Health Research

Directorate: Health Impact Assessment

Western Cape Government : Department of Health

Address : 5th Floor, 8 Riebeeck Street, Cape Town

Tel: (021) 483 9319

Email : Josh-lee.Kroukamp@westerncape.gov.za

Website : www.westerncape.gov.za



Appendix 3: Participant information leaflet and declaration of consent by participant

PARTICIPANT INFORMATION LEAFLET

TITLE OF THE RESEARCH PROJECT:

Barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans in public hospitals of the Eden District, South Africa: A nursing perspective.

REFERENCE NUMBER: 0610

PRINCIPAL INVESTIGATOR: Saria van As

ADDRESS: Department of Nursing and Midwifery
Faculty of Medicine and Health Sciences
Stellenbosch University
PO Box 241
Cape Town
8000

CONTACT NUMBER: 082 775 3076

Dear Colleague

My name is Saria van As and I am a student in the Master of Nursing programme at Stellenbosch University. I would like to invite you to participate in a research project that aims to investigate the different barriers (obstacles) and facilitators (aids) that registered nurses experience in accurately compiling and adapting standardised nursing care plans. The results of the study may inform strategies to minimise the most reported barriers and to support the most reported facilitators so that effective care planning practices are facilitated.

Please take some time to read the information presented here, which will explain the details of this project and contact me if you require further explanation or clarification of any aspect of the study. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the **Health Research Ethics Committee (HREC) at Stellenbosch University** and will be conducted according to accepted and applicable National and International ethical guidelines and principles, including those of the international Declaration of Helsinki October 2008.

The study will be conducted in the medical/surgical wards of 6 hospitals in the Eden District, Western Cape, South Africa. All registered nurses, community service practitioners and operational managers in the 6 study hospitals, who work in medical/surgical wards where standardised nursing care plans are used, will be invited to participate in the study.

Permission has been obtained from each operational manager to conduct the research in this medical/surgical unit and for the researcher to invite participation and disseminate the questionnaires at a convenient time while participants are on duty.

You have been invited to participate because you are a registered nurse, community service practitioner or operational manager, who works in a medical/surgical ward where standardised care plans are used. As you use standardised care plans regularly, you are qualified to complete a questionnaire regarding the barriers and facilitators registered nurses experience in the precise, accurate compilation and adaptation of standardised nursing care plans.

Please seal your completed questionnaires and consent forms in the provided envelope, and place the envelope into the sealed collection box in the unit. The collection box will be available for 2 days.

There are no risks involved for participants in this study. You will not be paid to take part in the study and there will be no costs involved for you, if you do take part.

Participants and all information collected will remain anonymous and confidential. Only the researcher will have access to the completed questionnaires – the fieldworker will only collect the sealed boxes and hand it to the researcher. Completed questionnaires will be kept in a locked safe to which only the researcher has access.

Once you have read through the information sheet, you will need to sign the informed consent form. Thereafter you need to complete the whole questionnaire. Your open and honest responses are appreciated. The questionnaire will take you about 10 – 15 minutes to complete. After completion of the questionnaire, you should place this and the signed consent form in the envelope provided, seal it and place it in the sealed box in the unit where you work.

If you are willing to participate in this study please sign the attached Declaration of Consent and place it in the envelope with the completed questionnaire and then place it in the sealed box available in the unit where you work.

Yours sincerely

Principal Investigator

Declaration by participant

By signing below, I agree to take part in a research study entitled: **Barriers and facilitators in the meticulous compilation and adaptation of standardised nursing care plans in public hospitals of the Eden District, South Africa: A nursing perspective.**

I declare that:

- I have read the attached information leaflet and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) On (*date*) 2017.

.....

Signature of participant

Appendix 4: Questionnaire

STANDARDISED NURSING CARE PLAN QUESTIONNAIRE

The careful preparation and adaptation of standardised nursing care plans entail understandable, accurate, complete and timely compilation of these plans.

The purpose of this study is to describe the obstacles and facilitators (or aids) that registered nurses encounter in the careful preparation and adaptation of standardised nursing care plans.

Instructions:

- Please complete the following questionnaire by reading each statement and placing a cross (X) in the block next to the statement which best describes your opinion on the matter.
- Rest assured that your identity will be kept confidential. Your responses are anonymous and only the researcher will review the completed questionnaire.
- It will take approximately 10 – 15 minutes to complete the questionnaire.
- We will appreciate your honest and candid answers
- Please place the completed questionnaire, together with your signed consent form in the envelope provided to you. Seal the envelope and put it in the sealed box provided in your unit.

SECTION 1

1. Gender

<input type="checkbox"/>	Male	1
<input type="checkbox"/>	Female	2

2. Age

<input type="checkbox"/>	19 – 25	1
<input type="checkbox"/>	26 – 30	2
<input type="checkbox"/>	31 – 35	3
<input type="checkbox"/>	36 – 40	4
<input type="checkbox"/>	41 – 50	5
<input type="checkbox"/>	Over 50	6

3. How many years of experience do you have as a registered nurse?

<input type="checkbox"/>	Less than 1 year	1
<input type="checkbox"/>	1 – 5 years	2
<input type="checkbox"/>	6 – 10 years	3
<input type="checkbox"/>	11 – 20 years	4
<input type="checkbox"/>	21 – 25 years	5
<input type="checkbox"/>	More than 25 years	6

4. Basic nursing qualification

- 2 Year Bridging Course Diploma | 1
- 4 Year Diploma | 2
- 4 Year Degree | 3
- Other, please specify _____ | 4

5. Nursing category

- Community Service Practitioner | 1
- Registered Nurse | 2
- Operational Manager | 3

SECTION 2

6. Please indicate your opinion on the following statements in the context of your current clinical environment and experience

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
		4	3	2	1
A	The standardised nursing care plans we currently use are based on the latest research evidence				
B	Objectives that are set in the standardised nursing care plans are evaluated daily.				
C	Using standardised nursing care plans help to orientate new nurses to the unit				
D	Registered nurses have the necessary knowledge and skills to formulate standardised nursing care plans meticulously				
E	Using standardised nursing care plans involves unnecessary paperwork				

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
		4	3	2	1
F	Standardised nursing care plans are completed merely because it is a requirement				
G	Other members of the multidisciplinary team, e.g. doctors, look at the standardised nursing care plans of patients when they do rounds				
H	Registered nurses check and sign standardised care plans compiled by enrolled or auxiliary nurses				
I	Standardised nursing care plans are valuable aids in delivering patient care				
J	It is easy to adapt the current standardised care plans to the needs of individual patients				
K	There are opportunities in the hospital for registered nurses to update their knowledge on compiling and adapting standardised care plans				
L	With the standardised nursing care plans, it is easy to identify priorities with regard to care				
M	The standardised nursing care plans in patient files meet the legal requirements for documentation				
N	We do patient progress reporting according to the health problems stated on the patient's standardised nursing care plan				

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
		4	3	2	1
O	When new standardised nursing care plans are developed, the developers involve the nursing personnel of all units				
P	Completing standardised nursing care plans has a negative effect on the nurse-patient relationship				
Q	Every patient in the unit where we work has a standardised nursing care plan that is relevant to his/her diagnosis				
R	There is a policy available to describe the correct compilation and adaptation of standardised nursing care plans				
S	There is sufficient time available to compile and adapt standardised nursing care plans				
T	Using standardised nursing care plans minimises unnecessary documentation				
U	Registered nurses feel confident about their knowledge and skills when they use standardised nursing care plans				
V	Registered nurses are familiar with the content of the standardised nursing care plans in medical/surgical units				
W	Using standardised nursing care plans are a waste of time				
X	There are enough standardised nursing care plans available in the unit where we work				
Y	Registered nurses receive training on the nursing process and nursing care plans during their formal nursing education				

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
		4	3	2	1
Z	There is a risk that a patient's individual problems/needs will not be discovered when using standardised nursing care plans				
AA	Care planning is done on an individual care plan when the standardised nursing care plan is inadequate for a specific patient				
BB	The hospital performs regular audits to evaluate whether standardised nursing care plans meet the requirements for legal documentation				
CC	The workload in the unit allows registered nurses to complete standardised nursing care plans carefully				
DD	We update the standardised nursing care plans of all patients at least daily				
EE	Using standardised nursing care plans improves continuity of care				
FF	The format of the standardised nursing care plan is user friendly				
GG	We use standardised care plans in a careful manner				
HH	Using standardised nursing care plans increase the nurse's ability to provide high-quality care				
II	There is a standardised nursing care plan available for every diagnosis in the unit where we work				

Appendix 5: Permission for use of an instrument

SV: Permission to use questionnaire in research follow-up

Marie Fogelberg Dahm (marie.fogelberg.dahm@akademiska.se) [Add contact](#)

2017-05-30 01:27 PM

To: Saria Van As;

Dear Saria

You have my permission to use the adapted version of your questions.
Good Luck

Sincerely

Marie Fogelberg Dahm

Vårdvalletsavdelningen
Akademiska sjukhuset
Besöksadress: Ingång 15, 2 vågor
Postadress: 751 85 Uppsala
Telefon: 018-611 31 89, 070-611 60 73
www.akademiska.se



**AKADEMISKA
SJUKHUSET**

Från: Saria Van As [<mailto:sariavanas@polka.co.za>]

Skickat: den 27 maj 2017 14:58

Till: Marie Fogelberg Dahm <marie.fogelberg.dahm@akademiska.se>

Ämne: Permission to use questionnaire in research follow-up

Prioritet: Hög

Dear Marie

I have made use of some of the questions in your questionnaire, but I had to adapt them to suit the format of my questionnaire, my study topic and the South African context. I attach the adaptations for you to review and to ask your permission to use the adapted version of your questions. I give you and your questionnaire full credit in my thesis.

I am at the point of submitting the proposal for ethics review and approval, so your soonest response will be sincerely appreciated.

Kind regards

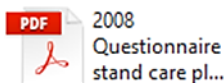
Saria

SV: Permission to use questionnaire in research

Marie Fogelberg Dahm (marie.fogelberg.dahm@akademiska.se) [Add contact](#)

2017-03-03 09:20 AM

To: Saria Van As;



Dear Saria van As

Thank you for your question! I am happy to give you permission to use the questionnaire.

I wish you good luck with your Master Degree in Nursing.

Sincerely

Marie Fogelberg Dahm

Vårdkvalitetsavdelningen

Akademiska sjukhuset

Besöksadress: Ingång 15, 2 trappor

Postadress: 751 85 Uppsala, Sweden

Telefon 018-611 31 89, 070-611 60 73

www.akademiska.se



**AKADEMISKA
SJUKHUSET**

Från: Saria Van As [<mailto:sariavanas@polka.co.za>]

Skickat: den 27 februari 2017 16:32

Till: Marie Fogelberg Dahm <marie.fogelberg.dahm@akademiska.se>

Ämne: Permission to use questionnaire in research

Prioritet: Hög

Good day Me Fogelberg Dahm

My name is Saria van As. I am currently busy with my Masters Degree in Nursing at the University of Stellenbosch in South Africa. My research topic has to do with the barriers and facilitators Registered Nurses experience in the application of standardized nursing care plans. It is a quantitative study and I plan to use a questionnaire as a data collection instrument. I cannot find a questionnaire that contains the exact information I need, so I will need to combine several. In my literature search I found your research article on "Nurses' experiences of and opinions about using standardised care plans in electronic health records – a questionnaire study". Will you please permit me to use that questionnaire in my study? If you are willing to provide permission for the use of your questionnaire, will you please send me an electronic copy?

Thanking you in advance,

Yours sincerely

Saria van As

Appendix 6: Declarations by language/technical editors



TAALSENTRUM
LANGUAGE CENTRE
IZIKO LEELWIMI



UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

12 June 2017

Ms Saria van As
13 Keurboom Street
Camphersdrift
George
6529

Dear Ms Van As

Questionnaire: Standardised Nursing Care Plan

Stellenbosch University Language Centre hereby confirms that we translated your questionnaire *Standardised Nursing Care Plan Questionnaire* into Afrikaans. The Afrikaans version then was back-translated into English, and the two English texts compared. Finally, the Afrikaans translation was reconciled according to the compared versions.

Please contact me should you have any queries.

Regards

MvdWaal

Marguerite van der Waal
Head: Language Service
Stellenbosch University Language Centre
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To whom it may concern:

I hereby confirm that I have edited the thesis of SARIA VAN AS, entitled: "BARRIERS AND FACILITATORS IN THE METICULOUS COMPILATION AND ADAPTATION OF STANDARDISED NURSING CARE PLANS IN A PUBLIC HOSPITAL OF THE EDEN DISTRICT, SOUTH AFRICA: A NURSING PERSPECTIVE". Any amendments introduced by the author or supervisor hereafter, is not covered by this confirmation. The author ultimately decided whether to accept or decline any recommendations made by the editor, and it remains the author's responsibility at all times to confirm the accuracy and originality of the completed work.

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Appendix 7: Example of data capture sheet

Standardised Nursing Care Plan Questionnaire.sav [DataSet1] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Graphs Utilities Extensions Window Help

Visible: 41 of 41 Variables

	Refno	Q1Gender	Q2Agecat	Q3Experience	Q4Qualification	Q5NursCategory	Q6AResearch	Q6BObjectives	Q6COrientation	Q6DSkills_Formulate	Q6EPaperwork	Q6FRequirement	Q6GMulti team	Q6HSign	Q6IValuable	Q6J
1	GA1001	2	5	5	2	3	2	2	3	3	4	2	1	3	3	
2	GA1003	2	5	5	2	2	3	2	2	4	2	2	1	3	3	
3	GA1004	1	5	4	2	2	2	2	3	2	2	2	2	2	2	
4	GA1005	2	5	2	1	2	3	2	3	2	4	3	1	2	4	
5	GA2003	2	3	4	2	2	3	2	3	3	2	1	1	4	4	
6	GB1001	2	6	5	1	3	4	4	4	4	1	2	2	3	3	
7	GB1002	2	6	6	2	2	2	2	2	2	3	2	2	2	2	
8	GB1005	2	4	3	2	2	3	2	3	3	3	3	2	3	3	
9	GB2001	2	6	6	1	3	2	2	3	2	3	3	1	2	3	
10	GB2002	2	6	6	2	2	3	2	4	3	3	2	1	2	4	
11	GB2003	2	2	2	2	2	999	1	1	4	3	999	1	3	4	
12	GB2004	2	2	2	1	2	3	2	2	3	3	3	1	3	4	
13	GB2005	2	2	1	2	2	3	1	3	4	3	2	1	2	3	
14	GB2006	2	3	1	3	1	3	1	2	3	3	2	1	3	4	
15	GB2007	2	4	1	3	1	3	2	3	1	2	2	1	1	4	
16	GBG001	1	3	3	2	3	2	2	3	3	2	3	1	3	3	
17	GBG004	2	2	2	1	2	3	3	4	3	2	2	1	3	3	
18	GBG005	2	6	6	1	2	4	4	4	4	1	3	4	4	4	
19	GBG006	2	3	4	2	2	2	2	3	3	3	3	1	3	3	
20	GBG007	2	3	1	2	1	4	4	4	4	4	4	2	3	4	
21	GBG008	2	6	4	1	2	4	4	4	4	1	3	1	3	3	
22	GBG009	2	6	5	1	2	2	2	2	2	4	2	2	2	4	

Data View Variable View

IBM SPSS Statistics Processor is ready Unicode:ON

Appendix 8: Example of standardised nursing care plan

STANDARD CARE PLAN FOR THE MANAGEMENT OF A PATIENT WITH DIABETES MELLITUS

Name:
 Folder Number:
 Date of Birth:

WARD:

STANDARD CARE PLAN FOR THE MANAGEMENT OF A PATIENT WITH DIABETES MELLITUS					
DATE	PROBLEM STATEMENT	EXPECTED OUTCOME(S)	EVALUATION AND ASSESSMENT	PRESCRIPTIONS	SIGNATURE AND DESIGNATION
	<p>PROBLEM: Potential Hypo / Hyperglycaemia</p> <p>CAUSE:</p> <ul style="list-style-type: none"> * Disturbed glucose metabolism precipitated by:- - non-compliance with medication and diet - Increased metabolic rate <p>DATA BASE/REVERSIBLE FACTORS:</p> <ul style="list-style-type: none"> * blood glucose * urine SG glucose ketones * neurological status: orientation to time, place, space and event: * mass * skin colour temperature turgidity 	<p>Evidence of stabilization of blood glucose levels, inclusive of:</p> <ul style="list-style-type: none"> * blood glucose * urine SG glucose ketones * orientation with regard to time, place, space and event * mass * soft, warm, elastic skin 	<p>E: DAY:</p> <p>DATE:</p> <p>A: TIMES:</p>	<ol style="list-style-type: none"> 1. Monitor, record and report on blood glucose 2. Test urine for glucose and ketones, record and report findings 3. Administer hypoglycaemic agents as prescribed by doctor i.e. 4. Monitor, record and report on neurological status 5. Monitor, record blood pressure and report any significant change 6. Monitor, record and report on temperature, pulse and respiration 7. Monitor, record and report on fluid balance, i.e. intake and output. 8. Monitor, record and report on hydration status. 9. Administer intravenous fluids as prescribed by doctor. 	

Page 1 of 3

STANDARD CARE PLAN FOR THE MANAGEMENT OF A PATIENT WITH DIABETES MELLITUS					
DATE	PROBLEM STATEMENT	EXPECTED OUTCOME(S)	EVALUATION AND ASSESSMENT	PRESCRIPTIONS	SIGNATURE AND DESIGNATION
	<ul style="list-style-type: none"> * polydipsia * polyphagia * polyuria * change in bowel habits * abdominal pain * nausea / vomiting * weakness * blood pressure * pulse rate rhythm * respiratory rate rhythm * temperature 	<ul style="list-style-type: none"> * fluid balance intake output * verbalization of and evidence of no nausea, vomiting or abdominal pain * stabilization of blood pressure at * pulse rate and of regular rhythm * respiratory rate and of regular rhythm * temperature 36 - 37°C 		<ol style="list-style-type: none"> 10. Provide special diet as prescribed by doctor 11. Weigh patient 12. Monitor, record and report on nausea and vomiting. 13. Monitor, record and report on abdominal pain. 14. Monitor, record and report any weakness. 15. Demonstrate to, and educate patient re. testing of urine, the determination of blood glucose level and interpretation of results. 	

Page 2 of 3

STANDARD CARE PLAN FOR THE MANAGEMENT OF A PATIENT WITH DIABETES MELLITUS					
DATE	PROBLEM STATEMENT	EXPECTED OUTCOME(S)	EVALUATION AND ASSESSMENT	PRESCRIPTIONS	SIGNATURE AND DESIGNATION
	<p>PROBLEM: Potential skin breakdown</p> <p>CAUSE:</p> <ul style="list-style-type: none"> * Impaired circulation * Loss of sensation * Decreased resistance to infection <p>DATA BASE/REVERSIBLE FACTORS:</p> <ul style="list-style-type: none"> * skin condition * sensation * reaction to painful stimuli 	<p>Evidence of a healthy, intact skin, inclusive of:</p> <ul style="list-style-type: none"> * no areas of skin breakdown * normal sensation and positive reaction to peripheral painful stimuli 	<p>E: DAY:</p> <p>DATE:</p> <p>A: TIMES:</p>	<ol style="list-style-type: none"> 1. Monitor, record and report on condition of skin. 2. Care to pressure areas. 3. Educate patient and significant others re: <ul style="list-style-type: none"> - necessity for a high standard of personal hygiene; - early detection of, and treatment of local areas of skin irritation or infection; - verbalization of changed skin sensation; - prevention of Impaired circulation. 4. Instruct patient re. correct methods of manoucre and pedicure. 	
	<p>PROBLEM: Potential inability to cope with the disease process</p> <p>CAUSE:</p> <ul style="list-style-type: none"> * Altered lifestyle * Fear of the unknown <p>DATA BASE/REVERSIBLE FACTORS:</p> <ul style="list-style-type: none"> * emotional status * Insight into, and understanding of nature of the condition by patient * Insight into, and understanding of nature of the condition by significant others 	<p>Evidence of increasing participation in self-help program, inclusive of:</p> <ul style="list-style-type: none"> * verbalization of, and demonstration of an attitude of acceptance * verbalization of understanding of condition * verbalization of the need for, and the action of medication * verbalization and demonstration of acceptance of condition, and understanding of the nature of the condition, by significant others * demonstration of the ability to: <ul style="list-style-type: none"> - test urine - determine blood glucose level - interpret results - administer self-medication 	<p>E: DAY:</p> <p>DATE:</p> <p>A: TIMES:</p>	<ol style="list-style-type: none"> 1. Educate patient and significant others, in consultation with the doctor, re: <ul style="list-style-type: none"> - diabetes mellitus and its course, - importance of regular medical follow-up - indications for seeking medical aid, - importance of accurate calculation and correct administration of insulin, - recognition of early signs of hypo/hyperglycaemia, - value of medic-alert disc. 2. Educate patient and significant others re. importance of correct dietary habits. 3. Liaise closely with dietitian. 4. Encourage patient and significant others to ask questions, voice doubts and fears. 5. Encourage patient and significant others to interact with other diabetics and make contact with the diabetic association. 	
CHECKED BY:		SIGNATURE			
DATE:		NAME IN BLOCK LETTERS:			
		DESIGNATION:			