UNIVERSITY OF CAPE COAST

ASSESSING HANDOVER PROCESS AND COMMUNICATION AMONG REGISTERED NURSES AT CAPE COAST TEACHING HOSPITAL, CAPE COAST

CHARLAINE AMA MENSAH

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BY

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Thesis submitted to the Department of Adult Health of the School of Nursing and Midwifery, College of Health and Allied Sciences, University of Cape Coast, in partial fulfillment of the requirements for the award of the Master degree in Nursing

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DECLARATION

Candidate's Declaration

I, hereby declare that this thesis is the result of my own original research and that no part of it has been submitted to this University or elsewhere for the award of a degree. It is done according to the suggested guidelines for research work in school of graduate studies of the University of Cape Coast. Work of others which serve as references have been duly acknowledged.

Candidate's Signature:…… Date……

Name:……

Supervisors' Declaration

We hereby declare that the preparation and presentation of this thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature:……Date:……

Name:……...

Co-Supervisor's Signature: …… Date:…….

Name:……

ABSTRACT

Effective handover within health care setting is vital to patient safety as it helps in preventing errors and reducing risks. However, nursing handovers appears to be an area that has received limited research focus. This study explored handover process and content of communication among registered nurses at Cape Coast Teaching Hospital (CCTH). Specifically, it assessed handover process among registered nurses using the Nursing and Midwifery Council (NMC) of Ghana handing over protocol as a guide, described the content of communication in handover from one nurse to the other and identified factors influencing the types of information outgoing nurses' handover to incoming nurses. A descriptive qualitative case study design was employed. Thirty-three inter-shift handovers were assessed using an observational checklist developed from the Nurses and Midwifery Council handing over protocol and ten shift ward in-charges were interviewed using a semi-structured interview guide developed. The observational checklist was analysed using percentages and frequencies, whilst the transcribed data from the interview was coded and analyzed thematically which generated three categories and eleven subcategories. The study showed there was limited adherence to the handover process by the registered nurses as directed by the Nurses and Midwifery Council's protocol on handover. Key content of the communication component included patient identification information, nursing information, medical information and clinical state. It was recommended that the CCTH nursing management will adopt a communication tool or checklist such as SBAR to enhance effective communication during handover.

KEYWORDS

Handover

Process

Communication

Registered nurses

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DEDICATION

To my husband Rev. Albert Adotey Mensah and daughter Nessa Aku-Shika Mensah.

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LIST OF ACRONYM

ACSQHC	The Australian Commission on Safety and Quality in Health Care
AIHW	Australian Institute of Health and Welfare
ARCHI	Australian Resource Centre for Healthcare Innovations
CCTH	Cape Coast Teach Hospital
CINAHL	Cumulative Index to Nursing and Allied Health Literature
GHS	Ghana Health Service
GRMNA	Ghana Registered Nurses and Midwives Association
HINARI	Health InterNetwork Access to Research Initiative
IRB	Institutional Review Board
ISBAR	Identify, Situation, Background, Assessment and Recommendation
iSoBAR	Identification of patient, Situation and status, Observations, Background and history, Assessment and Action, Responsibility and risk management
ISBARR	Introduction, Situation, Background, Assessment, Recommendations, Readback
I PASS the BATON	Introduction, Patient, Assessment, Situation, Safety concerns, Background, Actions, Timing, Ownership, Next
JCAHO	Joint Commission on Accreditation of Healthcare Organisations
LMIC	Low and Middle Income Countries

MEDLINE	Medical Literature Analysis and Retrieval System Online
MoH	Ministry of Health
NMC	Nurses' and Midwifery Council
NMTC	Nurses' and Midwives Training College
NO	Nursing Officer
OPD	Out Patient Department
5Ps	Patient, plan, purpose of plan, problem, precaution or Patient, precautions, plan of care, problems, purpose
P-Vital	Present patient, Vital signs, Input/output, Treatment/diagnosis, Admission/discharge, and Legal/documentation
SBAR	Situation, Background, Assessment, Recommendation
SN	Staff Nurse
SNO	Senior Nursing Officer
SRN	State Registered Nurse
SSN	Senior Staff Nurse
PUB MED	Public MEDLINE
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

Handover is one of the key actions in nursing practice. In nursing and health literature, handover is argued as important in promoting patients' transfer, continuity of quality of care, and patients safety (Chalke, 2014; Scovell, 2010). At the end of every shift nurses who have completed their duties or shifts are required to handover the ward to the incoming nurses. The term handover has other synonymous words that are used in a variety of contexts and clinical settings including; "handoff", "sign-out", "sign-over", "signoff", "cross-coverage", "shift report", "end-of-shift report", "change of shift report", and shift or inter-shift report (Friesen, White, & Byers, 2008; Marutyan, 2016; Rolling, Pauley, & Hoyt, 2015&Scovell, 2010). In Ghana, handing over is mostly used hence, for the purpose of this study, the term "handover" is used.

This study assesses the nursing handover process and communication content among registered nurses in Cape Coast Teaching Hospital (CCTH). This introductory chapter will cover: background information, problem statement, purpose of study, specific objectives, research questions, significance of the study, delimitation, limitations and organization of the thesis.

Background to the Study

Shift work in most health facilities globally depends greatly on effective information transfer to ensure patient safety. This essential information which is communicated during every shift change, offers incoming nurses with a 'picture' of the ward and thereby impacts the care

which is delivered by workers during the entire shift and the overall quality of patient care to promote continuity of care (Maxson, Derby, Wrobleski, & Foss, 2012; Tang &Carpendale, 2007). The process through which information is transferred from outgoing shift workers to incoming group is called handover(Ayala, 2017).

Clinical handover is the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or groups of patients, to another person or professional group on a temporary or permanent basis (The Australian Commission on Safety and Quality in Health Care (ACSQHC), 2010; The Joint Commission, Joint Commission International, 2007). It is claimed that approximately one in five patients have been identified to experience an adverse event as a result of poor clinical handover (ACSQHC, 2011; Joint Commission on Accreditation of Healthcare Organizations (JCAHO), 2012). Inconsistent communication at clinical handover is a key contributing factor to patient harm and one of the five priority areas for patient safety improvement worldwide (Spooner, Aitken, Corley, Fraser, & Chaboyer, 2016).

There are three types of clinical handovers namely; interdisciplinary, Intradisciplinary and Interfacility clinical handover (Chalke, 2014; Friesen, et al., 2008; Marutyan, 2016). Interdisciplinary handover is usually between two disciplines; for instance, between a nurse and a doctor, nurse and radiologist, nurse and physiotherapist. Intradisciplinary handover is between individuals of the same discipline; either among physicians or nurses. Interfacility handover is between the acute care environment and the community or another health facility.

Nursing handover which is a type of intradisciplinary handover has traditionally been the method of handing over information about patient care from one shift of nurses to the next in an inpatient ward (inter-shift) or nurses from one unit to another (interdepartmental handover). The information handed over during inter-shift handovers can include patient name, age, diagnosis, treatment plan and a variety of information pertaining to the patient and families and their care such as signs and symptoms the patient presented, laboratory investigations, outcome of care, assessment findings, state of the patient and nursing procedures (Wallis, 2010). The main function of nursing handover is to ensure communication between nurses regarding patient information for the continuity of care (Kerr, Lu, & McKinlay, 2013; Marutyan, 2016). Moreover, it serves as an opportunity for nurses' group cohesion, professional socialization, education, interaction, and emotional support (Athanasakis, 2013; Griffin, 2010; Marutyan, 2016; Mayor & Bangerter, 2015). Poor handover practices results in increased patient harm, increased risks of litigation, delays in medical diagnosis, treatment and redundant activities such as, additional procedures and tests, reduced job satisfaction among nurses, higher costs, longer hospital stays, more hospital admissions and less effective training for health care providers (Birmingham, Buffum, Blegen, & Lyndon, 2015; Eggins & Slade, 2015; Marutyan, 2016; Principe, 2017; Wong, Yee, & Turner, 2008). The Joint Commission (2012) estimated that 80% of serious medical errors in the United States involved miscommunication between caregivers at the time of handover.

Nursing handover comes in various forms such as verbal, written reports or audio-taped and can occur at nurses' office or a designated place or at the patient's bedside (Friesen, et al., 2008; Scovell, 2010; Smeulers, Lucas, & Vermeulen, 2014; Wallis, 2010). However, in Ghana, bedside handover is the common practice. Internationally, a number of tools have been developed to standardized and guide the performance of nursing handover which include Situation, Background, Assessment, Recommendation (SBAR)(Cook, 2015), Identification of patient, Situation and status, Observations, Background and history, Assessment and Action, Responsibility and risk management (iSoBAR)(Yee, Wong, & Turner, 2009), Introduce, Story, History, Assessment, Plan, Error Prevention, Dialogue (ISHAPED) (Friesen et al., 2008), Identify, Situation, Background, Assessment and Recommendation (ISBAR)(Mannix, Parry, & Roderick, 2017), Introduction, Patient, Assessment, Situation, Safety concerns, Background, Actions, Timing, Ownership, Next (I PASS the BATON), Patient, Plan, Purpose of plan, Problem, Precaution or Patient, Precautions, Plan of care, Problems, Purpose (5Ps)(Kear, 2016) and Present patient, Vital signs, Input/output, Treatment/diagnosis, Admission/discharge, and Legal/documentation(P-Vital)(Ewing, 2015). These formats have been seen to improve the quality of inter-shift information communication in different hospital units worldwide (Malekzadeh, Mazluom, & Etezadi, 2013).In Ghana, there is a standard nursing protocol on nursing handing and taking over. Professional nurses are taught this protocol per the NMC curriculum for nursing practice for trainees and this guide nursing handovers practice.

Statement of the Problem

Effective handover within the health care setting is vital to patient safety as it helps in preventing errors and reducing risks by coordinating a 24-hour cycle of clinical care in which the nursing, medical, and technical knowledge relevant to each patient are transferred to incoming nurses as they work to maintain safety (Birmingham et al., 2015;Gordon & Findley, 2011).

However, nursing handovers appears to be an area that has received limited research focus internationally and it's often not part of the official education programme in nursing schools (Athanasakis, 2013; Malekzadeh et al., 2013; Pace, 2015; Scovell, 2010; Wallis, 2010). Existing research has mainly focused on developing and testing standardized tools including checklists (Delrue, 2013; Ibrahim, 2014; Kumar, Jithesh, Vij, & Gupta, 2016; Malekzadeh et al., 2013; Mannix et al., 2017; Manser, Foster, Gisin, Jaeckel, & Ummenhofer, 2010; Smith, 2016). Few research studies have also been conducted on the communication content of handovers (Abraham et al., 2016; Chalke, 2014; Cook, 2015) or the process of handover (Adams & Osborne-McKenzie, 2012; Roslan & Lim, 2016; Wakefield, Ragan, Brandt, & Megan Tregnago, 2012). Limited number of research has been conducted on both the process and communication in nursing handover in a single study (Pace, 2015; Poot, Bruijne, Wouters, Groot, & Wagner, 2014). Most of these researches tended to be conducted in single hospital unit or ward rather than multiple units or wards (Lawrence, Tomolo, Garlisi, & Aron, 2008; Popovich, 2011; Silva, Anders, Rocha, Souza, & Burciaga, 2012). Therefore, there is limited knowledge on handovers that are conducted in multiple locations in the same institution. Moreover, several of these research studies have been done on

interdepartmental nursing handover (Johnson, 2015; Kowitlawakul et al., 2015; Lorinc, Roberts, Slagle, Tice, & France, 2014; Marutyan, 2016) with few done on inter-shift handovers (Sarvestani, Moattari, Nasrabadi, Momennasab, &Yektatalab, 2015). Furthermore, almost all studies in nursing handovers are conducted in developed countries such as United States of America, Canada, United Kingdom and Australia (Abraham et al., 2016; Birmingham et al., 2015; Bradley & Mott, 2009; Maxson et al., 2012; Poh & Parasuram, 2013; Poot et al., 2014). In low and middle income countries (LMICs) handover research has only been reported in Iran (Malekzadeh et al., 2013), South Africa (Mamalelala, 2017), Mauritius (Kassean & Jagoo, 2005), Brazil (Silva et al., 2012), India (Kumar, et al, 2016), Egypt (Mekawy & El-mola, 2016), Turkey (Kilic, Ovayolu, Ovayolu, & Mehmet, 2017) and Ghana (Kumah, 2019).

Few of these studies conducted in Ghana considered improving structured communication tool in nursing handover (Kumah, 2019). However, the study was limited to nurses working at four surgical blocks of 37 Military Hospital and used interventional sequential explanatory mixed-method design. Using only the surgical blocks was a limitation because handover practices may be different from other wards such as medical wards. Also, the use of SBAR communication tool is a limitation because SBAR as a communication tool is not taught in the Nurses and Midwives Training Colleges (NMTC) in Ghana; hence most Ghanaian nurses are not familiar with it but the NMC handover protocol which is rather taught in the schools and is widely available for nursing practice in Ghana.

The paucity of research in nursing handovers in Ghana has been noted by the researcher despite it being a daily activity among nurses and the CCTH is no exception. An audit by the pharmacy department at CCTH indicated that about 45.9% of patients' medications doses were missed (Incoom, 2017). Also Nursing Unit Head's at CCTH have raised concerns about poor handover practice among nurses in the hospital during their periodic meetings.

Hence, the present study was limited to assessing handing over practice in CCTH to understand the current practices in Ghanaian setting in order to contribute in bridging the gaps identified in literature to improve the performance of nursing hand over in the facility.

Purpose of the Study

The purpose of this study was to explore handover process and content of communication among registered nurses at CCTH.

Research Objectives

1. To assess handover process among registered nurses at CCTH
2. To describe the content of communication in handover from one nurse to the other.
3. To identify factors that influences the types of information outgoing nurses' handover to incoming nurses

Research Questions

1. How well do registered nurses at CCTH follow the NMC handover protocol?
2. What is the content of the communication that occurs during nursing handover?

3. What influences the type of information outgoing nurses handover to incoming nurses?

Significance of the Study

The findings of this study will provide valuable information on the status of nurses' inter-shift handover at the CCTH. It is hoped that, this information will be utilized to design programmes that will improve nurses understanding and practices of handover process as well as the information needed to be communicated. Furthermore, the findings will be made available to the schools of nursing to be utilised to improve teaching of handover in nursing schools. Recommendations will be made to the NMC based on the findings of the study regarding areas of handover that needs to be amended in the existing protocol to improve handover practices in Ghana. The findings will again contribute to the international literature on nursing handover especially from the perspectives of developing countries. Consequently, it is expected that nurses in countries with health systems similar to Ghana may utilise the findings of the study to inform the handover practices.

Delimitation

The work was limited to inter-shift handover between nurses at the end of a shift in a ward setting and excludes other types of handovers such as interdepartmental handovers, interdisciplinary handovers and interfacility handovers. It also included all wards in the hospital except theatre because nurses in this unit usually perform interdepartmental handovers which is not the focus of this work. Finally, it included all practicing male and female nurses who have undergone a three or four-years training to attain either a

diploma or degree in nursing and is between 20-60 years of age. The age limit was consistent with the age range of staffs available in the institution. It excluded nurses working at the Out Patient Department (OPD) and theatres because nurses in these departments are mainly involved in interdepartmental handover which is not the focus of this study. It also excluded the Health Assistant Clinicians (HAC) and the Rotation nurses because the facility does not allow these categories of staff to lead handing over and taking up wards. The study used qualitative descriptive case study design.

Limitations

Though due diligence was applied to validate all methods and data, this study had some limitations. One limitation was with the tool for the collection of data (observation). There is a possibility for Hawthorne effect where individuals modify an aspect of their behaviour in response to their awareness of being observed. To reduce this effect, the researcher trained two assistants to help in the collection of data. Secondly, the presence of the interviewer can influence responses of participant. To curtail this, the participants were not told the components of the checklist or what would be observed during handover, but only the purpose of the study in general. Thirdly to limit biases in assessing handover, structured checklist was used. Again, the two trained assistants involved in collecting data assessed the handover individually to ensure inter-rater reliability with the usage of the checklist. Lastly, this study was a qualitative case study hence the results usually may not be generalised. To lessen this, study's characteristics and processes are clearly written so that others can determine whether they are applicable to their setting.

Definition of Terms

Handover: Handover is the transfer of responsibility and accountability from one nurse to another temporarily in the same ward at the end of a shift to ensure continuity of care. In this study handover is when a nurse transfers the care of a patient to an incoming nurse when his or shift ends in a hospital ward.

Handover Process: The process in this study will be the steps in the NMC of Ghana handover protocol.

Handover Communication: Communication in this study is the transfer of any information pertaining to a particular patient or group of patients in an inpatient ward. This information may include name, age, diagnosis, bed number, changes done on the management, outcome of treatment, and procedures etc.

Registered Nurse: Is a nurse who holds a SRN, Diploma or a Degree in nursing and has completed rotation or intenship.

Organization of the Study

The study was organized into three main parts; conceptualization, core or Operationalization, and synthesis.

Conceptualization

This section provided the background to the study and gave an orientation on the concept understudy (handover). The problem statement settled on handover in the study area. Literature review was done to bring out the state of knowledge in terms of studies that have been done and identified

some gaps that existed in published works. It was captured in chapters one and two.

Operationalization

This describes how the study was conducted to achieve the set objectives and it comprises the chapter three.

Synthesis

This is the final part and it includes analysis and discussion of results. It was captured in the chapters four and five of the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The literature review presents and discourses findings of studies that explored handover process and communication among nurses. The purpose of the review was to examine existing related research to provide a context for situating the current study. In addition, this chapter reviews the literature related to both the process and content of nursing handover. A search of the literature regarding handover process and communication was conducted using electronic databases such as CINAHL, Pub-Med, Cochrane Database of Systematic Review, HINARI, and Google Scholar. The search was conducted through the University of Cape Coast academic online and database library. The searches were conducted using key words in the topic being investigated such as handover, handover process, handover communication, handover tools, patient safety and nursing handover. Both basic and advance searches were conducted in the data bases where necessary. Booleans such as 'AND' and 'OR' were used as necessary. The search was limited to the nursing articles and narrowed to only articles in the English language published within the past ten years.

Other related literature on handover was sought from nursing textbooks, protocols and guidelines and grey materials such as hospital reports and other health documents as well as personal communication from colleagues. Foot note search was also done from other references of related articles to seek for additional information. The findings derived from the literature was synthesized and written in the narrative based on themes that

emerged in the literature. The reference lists from retrieved papers were also checked for other relevant studies. Literature review covers

1. **Conceptual Review**
    a. Concept of handover and handover communication in nursing
    b. Theoretical foundation and Conceptual framework
2. **Empirical Review**
    a. How well nurses follow handover protocol
    b. Content of the communication that occurs during nursing handover
    c. Factors that influence handover information among nurses

Conceptual Review

This review presents an in-depth analysis of the various concepts that are involved in such study. It deals with the concept of handover, process of handover, content of communication, barriers to handover, importance and problems associated with handover communication. It also examines how the concepts in the study are related and connected to each other.

Concept of Handover

Handover has become essential part of the health care practice during the era of disease where patient is potentially being treated by a number of health care practitioners and specialists in multiple setting (WHO, 2007). Patients are often move between areas of diagnosis, treatment and care on a regular basis and may encounter three shifts of staff each day. This introduces a safety risk to the patient at each interval and making handover a crucial process in the health care settings. Chaboyer et al., (2009)defined handover as

"the transfer of responsibility for patient care from one provider or team of providers to another". Handover has become a repetitive medium of nursing communication during change of shifts in which nurses take breaks and following patient transfers across ward spaces (Liu, Manias, & Gerdtz, 2012). The nurses' handover has been reported as complex and comprises of process and content of communication (Johnson, Jefferies, & Nicholls, 2012a). The handover is done at particular times within the shift and staying within the allotted time is one of the most challenges for nursing professionals, with an average time for shift changes ranging between 15 to 45 minutes, depending on the number and condition of the patients(Alberta, Idang, & Jane, 2018).

Handover Process

The handover process is a fundamental aspect of nurses' daily clinical practice. It is entered into by oncoming and outgoing health care providers to communicate patient-related information and transfer responsibility (Ayala, 2017). The handover process comprises of the method or format and location of the hand over (Johnson et al 2012a).A body of literature reflects five basic method of handovers; the verbal handover which takes place in a designated location; audio-tape recording, written handover in which the incoming nurses access existing documentation to ascertain essential information, handover at bedside and computerised or electronic handing over system (Chaboyer et al., 2010; Johnson &Cowin, 2013; Scovell, 2010;Smeulers et al., 2014). In practice, the method of handover relies on the patient, the shift (morning, evening, or night shift), and the model of service delivery (Sarvestani et al., 2015). The location component refers to where the handover takes place, for example, in a designated room, nurses' station, in the back

hallway or even at the patient bedside (Chalke, 2014). The location of handovers varies from country to country and also depends on the needs of each specialty. It also has impact on what information is transferred during the handover process. Location of handover has a great effect on the accuracy of the information that is passed on during this procedure and one of the major identified barriers to effective and efficient handover is interruptions (Welsh, Flanagan,&Ebright,2010).

According to Chaboyer et al. (2010) and Aguda (2017), the handover process has three phases; the pre-handover, inter-shift handover and post-handover. During the pre-handover phase, patient information is reviewed from patient's charts, health team members, patient and family. The incoming nurse takes note of very important patient's information then patients are informed about the commencement of handover. The nurse may ask visitors to wait at the waiting area or remain on request of the patient. The inter-shift phase comprises of giving of oral report to the incoming nurse, completing a safety checklist or safety assessment at the patient's bedside, reviewing of patient records and receiving of sensitive information away from the bedside. The giving of confidential information can be done in the pre-handover phase to encourage confidentiality (Chaboyer et al., 2010; Roslan& Lim, 2017; Scovell, 2010). The post-handover phase is a planning phase that guides the incoming nurses' action and promotes continued provision of care (Aguda ,2017; Chaboyer et al., 2010). At this stage, nurses are assigned to patients, handover sheet is used as a guide and new staffs are integrated to work with the team (Chaboyer et al., 2010).

Content of Handover Communication

Content of nursing handover is defined by literature as patient data, information, and clinical knowledge that is communicated from one nurse to another (Galatzan & Carrington, 2018). The content of nursing handover addresses the "what and how" aspect of handover (Cowan, Brunero, Luo, Bilton, & Lamont, 2018; Smeulers et al., 2014). Current studies reveal that, the handover content is irrelevant to patient care and that the content did not clarify issues regarding patient care, treatment or management (McCloughen, O'brien, Gillies, & McSherry,2008) and it is based on this reason that such study is being undertaken. The contents usually included in handover are: demographic data (patient name, age, sex and date of birth), previous medical and surgical history and allergies, present medical or surgical history. Observations such as vital signs input and output, medications administered are considered as content in handover. It also comprises of investigations and procedures, activities of daily living and discharge planning (Bakon, Wirihana, Christensen, & Craft, 2017; Johnson et al., 2012a; McFetridge, Gillespie, Goode, & Melby, 2007). According to Vinu (2015) discussion on safety related issues during the shift must be included in the handover. Information that can be exchanged verbally may include statement connecting patient status, assessments, interventions, and outcome (Matney, Maddox, & Staggers, 2014; Matic, Davidson, &Salamonson, 2011). According to Alghenaimi, (2012), the main goal of a handover is to provide the incoming nurse with accurate, relevant, and up-to-date clinical information about the patient such as current condition, anticipated changes, treatments, pending procedures, and other services. The content of handover communication

between health care professionals should be accurate, complete, specific, relevant, timely, up to date, subjective, and objective (Ahonen, 2017; Chaboyer, 2011). Compiling comprehensive information about the patient and communicating that information in a way that is clearly understood by the incoming staff are two critical steps in any nursing handover process(Poh& Parasuram, 2013).

The handover content can be unstructured or structured by the use of checklist and mnemonic (Johnson et al., 2012a; Smeulers et al., 2014) depending on the facility's handover policy. The use of checklists in healthcare has been recommended by The Joint Commission and others as a means to standardize and organize steps of a process to improve performance and safety (Wright, 2013). Several researches have endorsed the use of standardised tools for handover (Matic et al, 2011; Royal College of Physicians, 2011; Tucker & Fox, 2014). Nurses use several tools such as SBAR, isoBAR,5Ps etc. and sources of patient information to support both the sending and receiving of patients during the handover process (Elkins, 2009; Vinu, 2015).

Barriers to Handover

Clinical handover is perceived to be a beneficial form of communication among health team members. However, it has been observed to be influence by numerous factors. Aguda, (2017) identified five factors that are barriers to complete, safe, and effective handover. These factors were standardization processes (insufficient training, lack of evidence-based research to guide training, staff resistant to change, lack of leadership, poor understanding of the tool); communication (omissions, errors, or

misunderstandings; documentation errors); system factors (multitasking during a report, lack of privacy, time constraints, environmental distractions) ; clinical factors (too many patients, change in patient status during handoff) and human factors (fatigue, stressful shifts, high staff turnover).Similarly, Machaczek, Whietfield, Kilner, &Allmark, (2013) identified three categorized factors that influence handover: the performance of individuals; environmental factors and system factors. According to Riesenberg (2010), individual performance such as lack of communication skills and diligence in completing handover or patient records is a serious barrier to handover process. Inexperience on the part of the health care provider may play an important role in determining handover effectiveness. Bruce and Suserud (2005) noted that a less experienced clinician may convey different information during handover than more experienced clinicians.

Physical environmental factors such as distractions, interruptions like phone calls or call lights, (Birmingham, et. al., 2015; Friesen, et. al., 2008), not enough time, high background noise level (Dracup & Morris, 2008), chaotic environment (Solet, et al., 2005; Riesenberg et al., 2010) arising from busy periods in the department have been found to be obstacles encountered during handover process. Environmental barriers are often determined by the organization and system within which handover is conducted. System related factors to handover include a lack of standardization (Riesenberg, Leitzsch& Little, 2009; Borowitz, Bass, & Sledd, 2008) and inadequate technological support (Pezzolesi et al. 2010; Bomba, & Prakash, 2005). Again as cited by Marutyan (2016), lack of supportive infrastructure, work overload, and difference in department or ward culture, emotional and physical pressure has

become significant barriers hindering the handover process (Siemsen, Andersen &Ostergaard, 2012).

Importance of Handover

The main function of nursing handover is to ensure communication between nurses regarding patient information for the continuity of patient care (Kerr, 2013). Other functions of the handover include education, safety briefs and debriefing, multidisciplinary team communication, social interaction and networking (Gu, Andersen, Madsen, Itoh, &Siemsen, 2012). With nursing handover, the nurse/nurses transfer(s) responsibility of patients to other colleagues (Friesen, et al., 2008). Good information transfer between nurses constitutes the basis for continuity of patient care and security (Kerr et al., 2013). Furthermore, it has been found that nursing handover gives an opportunity to transfer information related to the patient's condition (Chaboyer et al., 2009; McMurray, Chaboyer, Wallis, Johnson, &Gehrke, 2011). Research has shown that, handover increases patient satisfaction and ensures that patients are better informed and enabled to make more contribution to their own care; develops the relationship between patient and nurse (Sand-Jecklin & Sherman, 2013). This has helped to facilitate patient discharge time by improving patient education.

Problems Associated with Patient Handover Communication

Issues with patient handover are of international concern and at present, there are no best practices for improving handover communication (WHO, 2007). Communication breakdown, either by verbal or written, has been identified as the root cause of 70% of all sentinel events according to The

Joint commission report (Mujumda& Santos, 2014). In recent times, health facilities have been bombarded by the public on some of the issues arising from their line of work. One of such pressures is the high rate of avoidable patient harm in hospitals, which stands at 10% in developed countries and is significantly higher in developing nations(WHO, 2014). In some developed countries patients are 40 times more likely to die as a result of being admitted to an acute care hospital than in a traffic accident(Eggins& Slade, 2015). It is anticipated that in Australia alone, 500,000 people per year suffer from avoidable harm in hospitals (Australian Institute of Health and Welfare (AIHW), 2015).

Ineffective communication is now a well-recognised contributor to patient harm in hospitals. For some years, research has been suggesting that clinical handover is a critical site for communication problems. For example, a recent large scale European Commission project has found that, handover communication is responsible for 25% to 40% of adverse events(Eggins& Slade, 2015). The texts directly link handover to sentinel events. In New South Wales, a clinical management root cause analysis of 300 incidents showed that many were attributed to poor communication and insufficient handover (Australian Resource Centre for Healthcare Innovations (ARCHI), 2010). It was recognised that shift to shift handover was one of ten types of handover that need to be assessed and evaluated (ARCHI). Another review in Australia showed poor communication as a causative factor in approximately 20-25% of sentinel events (O'Connell, MacDonald, & Kelly, 2008). Miscommunication or inadequate information during handover can endanger patient's care (Scovell, 2010) and put the patient at risk of errors and unwanted outcomes

such as medication errors, falls, increased hospital-acquired infections, delay in patient treatment, avoidable readmissions, increased hospital bills, increase time of stay in health care facilities or even death (Beckett & Kipnis, 2009; Chaboyer et al., 2010; Halm, 2013; Kutney- Lee & Kelly, 2011; Vinu, 2015).

Language problems resulting from a heavy reliance on health care professionals from other countries can also lead to communication difficulties ((Mgoqi, 2017; WHO, 2007). The consequences of inadequate handover communication include missing information, near miss situations and adverse events (Mackaczek et al., 2013). Incompetent handover may result in a situation where the nurse taking over the care does not have broad knowledge of the episode of care, and hereafter interventions may be missed, misinterpreted or not appreciated creating the potential for errors (Gephart, McGrath, Effken, Halpern, & Ikuta, 2012). Studies over the years show that handover report could threaten patient safety. Patterson & Wears, (2010) state that poor communication handovers have ensued in redundancies that influence efficiencies and effectiveness, delays in treatment, adverse events, low patient and healthcare provider satisfaction, and more admissions.

Theoretical / Conceptual Framework of the Study

This study is underpinned by the Osgood-Schramm's Circular Model of Communication (Keepanasseril, 2012).Osgood-Schramm's model of communication is a widely adopted model of communication. It is also known as circular model because it shows that messages travel back and forth between the sender and the receiver (Mcquail, &Windhall, 2015). In this way, the sender can deliver one message and then become the receiver, getting a message. Therefore, once an individual decodes a message, then they can

encode and send a message back to the sender. The advantage of this model is that, it illustrates feedback is cyclical. It also demonstrates that communication is complex because it accounts for interpretation. This model also showcases the fact that we are active communicators, and we are active in interpreting the messages that we receive. The model comprises of sender, message, receiver and semantic barriers (Arnold & Boggs, 2011). The sender is the person who encodes (converts) and sends the message. The Message is the content being shared between the parties. Receiver is the person who decodes (interprets) the message. Semantic barriers are the things that influence how the sender conveys a message and how the receiver interprets it.

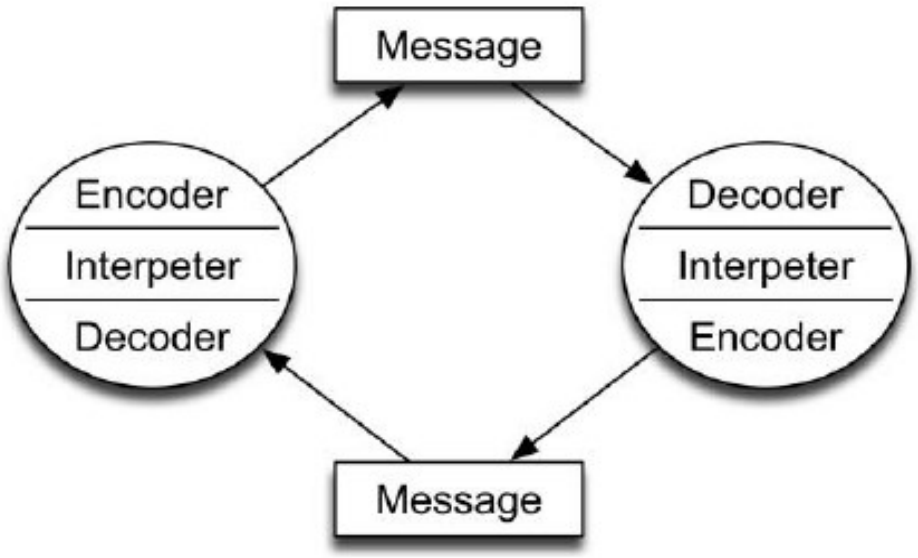

Figure 1: Osgood-Schramm's Circular Model of Communication

It can be deduced from the model that in this study, there will be a sender, receiver, message and barriers. The sender (source of information) in this work is the out-going nurse, receiver is the in-coming nurse, message is the content of communications and barriers are the factors influencing

handover. As the initiator of communication, the out- going nurse who is handing over uses verbal and non-verbal language, interpretations and field of experience to assure the message is understood by the receiver (in-coming nurse). The model stresses the two-way flow of dyadic communication, which is as the in-coming nurse receives the information, it is decoded and feedback is given; the out-going nurse then encodes the information provided as feedback. This is done to resolve ambiguities and to understand the management of the patient well. It depicts that communication is a circular process and that both nurses are the encoder and decoder. The receiver who is the recipient of the information also decodes the information so that it can be understandable within her field of experience. The in-coming nurse encodes the information provided to them during handover of the patients and in turn will decode it according to their educational background, work experiences, values, and beliefs. Message which is the content being shared includes information on patient's identification, clinical state, medical and nursing information. The sharing of the message (content of communication) between the outgoing nurses (sender) and incoming nurses (receiver) was guided by the NMC of Ghana handover process. Barriers in this study are things that influence effective sending and receiving of information and they include human, environmental and organizational factors.

Conceptual Framework

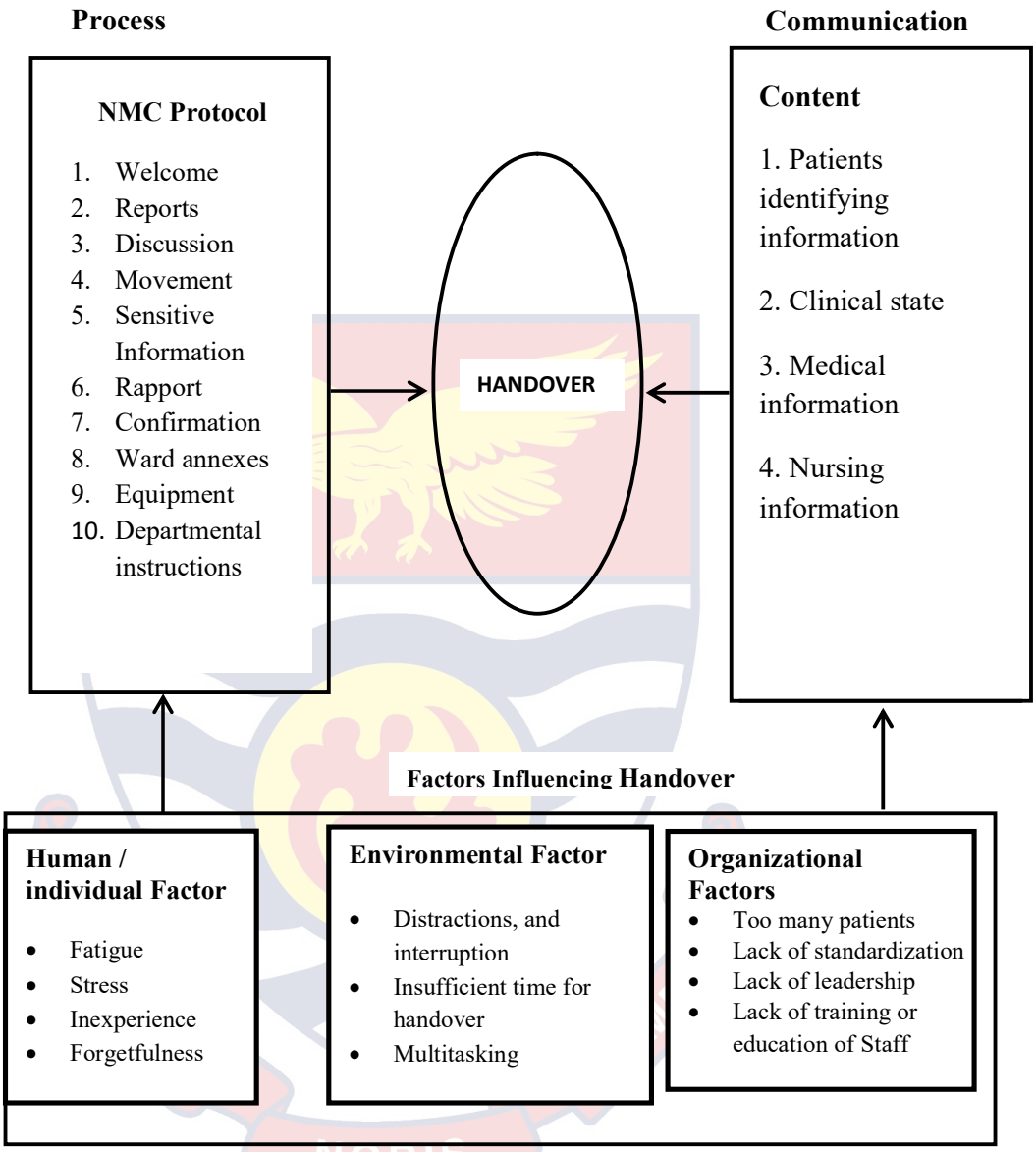

Figure 2: A Conceptual framework for assessing the handover process and communication at the CCTH

Figure 1 illustrates the conceptual framework that was used to access handover process and communication content at CCTH. The handover process was informed by the NMC Ghana handing over standard protocol(Appendix G) whilst the communication content and factors influencing handover was informed by seven publications on handover content and communication

(Athanasakis, 2013; Ayala, 2017; Halm, 2013;Nagammal & Nashwan, 2017; Randell, Wilson, & Woodward, 2011; Riesenberg, Leitzsch, & Cunningham,2010; Wong, 2011). The frame consists of four parts namely process, handover, content (communication) and factors affecting handover.

Handover Process

Handover process is an integral aspect of nurses' daily clinical practice through which information about patient, client or resident care is communicated from one health care provider to another in a consistent manner" (Nagammal & Nashwan, 2017). The process is at the left side of the frame and it consists of the steps in the NMC Ghana handing over protocol. The steps include;

Step 1: Welcome

Welcome the incoming staff.

Step 2: Reports

Gives ward report on patients to incoming nurse to read.

Step 3: Discussion

Enquires from incoming nurse if she needs further explanation on occurrences on the ward.

Step 4: Movement

Moves around from bed to bed to handover patients.

Step 5: Sensitive Information

Handover sensitive information about patient at the nurse's office e.g. condition of patient.

Step 6: Rapport

Establishes rapport with patients during handing over.

Step 7: Confirmation

Checks and confirms information about patient charts and notes. Checks with incoming staff that gadgets on patients are functioning e.g. cardiac monitor, intravenous line, oxygen apparatus and suction machine, drainage tubes, Ryle's tubes, urinary catheters, chest tubes and intra-abdominal tubes etc. Check and handover-controlled drugs and any other relevant resources available.

Step 8: Ward annexes

Handover ward annexes for incoming nurse to ensure they are clean.

Step 9: Equipment

Report on any defects on equipment and requests made for urgent repairs.

Step 10: Departmental instructions

Report on departmental instructions and other important information, for example clinical lectures and departmental conferences.

Communication

The second component is the communication that nurses use during handover. This is at the right side of the frame. Basically, information transmitted on handovers focused on what happened in the previous shift, the information nurses should know for the current shift and the information that needed to be transferred to the nurse of the next shift (Randell et al, 2011). Mostly, information transmitted on handovers is grouped into four major categories namely patient identification information, clinical state, medical

and nursing information (Athanasakis, 2013). The patient identification information is made of name, age, bed number of the patient. The clinical state gives information on the signs and symptoms the patient presented. The medical interventions consist of laboratory investigations, changes in medication, primary and secondary diagnosis, and outcome of care which could be discharges, referrals or death (Ayala, 2017). Nursing information on other hand is compose of assessment findings, nursing procedures such as vital signs, fluid monitoring, feeding, and drug administration etc. (Ayala, 2017). Nursing information also includes giving information on the state of the gadgets used on the patients and also in the line of the nurse's works such as oxygen cylinders, thermometers, feeding tubes and urethral catheter. Lastly information about major events in the ward and the hospital is also given to the incoming nurse. Other information include; previous shift information, current shift information and information about the next shift.

Factors Influencing Handover

This is the last part of the framework and it consists of factors that influence handover. It is classified into three main groups namely, organisational, individual and environmental factors (Halm, 2013; Riesenberg, et. al., 2010; Wong, 2011).Organisational factors are the various factors that are associated with the health-care facility in question. It covers issues such as high number of patients, lack of standardization, lack of leadership as well as lack of education and training for staff. Individual (human) factors are the issues that affect handover but are directly related to the particular nurse. They may include: fatigue**, s**tress**, i**nexperience**,** forgetfulness among other factors that are solely on the part of the nurse involved. Environmental factors are the

issues that are found in the context of the handover. These factors are normally related extraneous events that are not associated with the individuals or the organisation. Environmental factors include: distraction and interruptions from others insufficient time for handover and multi-tasking.

Application of the Framework to the Current Study

In the current study, the conceptual framework investigates the process and content of communication that occurred during nursing inter-shift handover at CCTH. The process was described through the stages in the NMC of Ghana handing over protocol. This was used to develop a checklist which was used to observe the nursing handover process. Nurses were observed performing the handover process. The content of information was used to lead the development of questions in the semi-structured interview guide to conduct nurses' interview.

Empirical Review

This section of the review deals with various empirical studies that have been conducted on the research area. The empirical review pulls together studies conducted in other jurisdiction and how they are consistent with this study. The empirical review examines where researchers are in agreement as well as areas where there are inconsistencies in the research findings. The empirical review was done in relation to the objective that guided this study.

How well Nurses Follow Handover Protocol

Nagpal et al. (2010) aimed to identify the information transfer and communication problems in postoperative handover and to develop and validate a novel protocol for standardizing this communication. A qualitative

semi-structured interview study was conducted with 18 healthcare professionals to uncover the problems with postoperative handover and to identify solutions, including components of a postoperative handover protocol. The study identified that the postoperative handover is informal, unstructured and inconsistent with often incomplete information transfer. Also, the researchers revealed that although nurses practiced some form of handover procedure, they hardly follow the laid down protocol. Based on end-user input, a handover protocol was successfully developed and validated. Use of this may facilitate standardization of this critical activity and thereby improve the quality of patient care.

Wong (2011) also explored shift-to-shift clinical handover and clinical handover improvement using a user-centred approach at the Royal Hobart Hospital, Tasmania, Australia in a study. Wong (2011) found that clinical handover is a complex, dynamic and evolving clinical system and its status needs to be viewed from a contextual, clinical and user perspective. Also, Wong (2011) observed that in most circumstances' nurses follow laid down procedures during handover while in some cases nurses do not follow handover protocol. The study helps develop a conceptual understanding of clinical handover from three perspectives: a contextual perspective, clinical perspective and a user perspective. This conceptual understanding of clinical handover opens up new areas for future research.

A qualitative study to explore the conditions for oral handovers between shifts in a hospital setting, compliance to handover protocol and how these impact patient safety and quality of care conducted by Giske, Melås &Einarsen (2018). The study found that mostly, nurses comply with the

various steps that have been outlined for nurses to follow during patient handover. The researcher recommended that developing a familiar structure for oral handovers and minimising the use of abbreviations and unfamiliar medical terms promote clarity and understanding. Limiting disturbances during handovers helps nurses focus on the content of the report. Awareness of one's attitudes and the use of verbal and nonverbal communication can enhance the quality of a handover. Time allocated for an oral handover should allow for professional discussions and student supervision. Involving nurse leaders in promoting the quality of oral handovers can impact the quality of care (Giske, et al., 2018).

In a related study, Malfait, Eeckloo, Van Biesen, Deryckere, Lust and Van Hecke (2018) also determine the compliance with a structured bedside handover protocol following ISBARR (Introduction, Situation, Background, Assessment, Recommendations, Readback) and if there were differences in compliance between wards. In their work, individual patient handovers between nurses from the morning and afternoon shift in 12 nursing wards in seven hospitals in Flanders, Belgium were observed. The tailored and structured bedside handover protocol following ISBARR was developed, and nurses were trained accordingly. The average compliance rate to the structured content protocol during bedside handovers was found to be high (83.63%; SD 11. 44%). Length of stay, the type of ward and the nursing care model were influencing contextual factors identified. Items that were most often omitted included identification of the patient (46.27%), the introduction of nurses (36.51%), hand hygiene (35.89%), actively involving the patient (34.44%), and using the call light (21.37%). Items concerning the exchange of clinical

information (e.g., test results, reason for admittance, diagnoses) were omitted less (8.09%-1.45%). Absence of the patients (27.29%) and staffing issues (26.70%) accounted for more than half of the non-executed bedside handovers. On average, a bedside handover took 146 seconds per patients. Malfait et al. (2018) concluded that when the bedside handover was delivered, compliance to the structured content was high, indicating that the execution of a bedside handover is a feasible step for nurses. The compliance rate was influenced by the patient's length of stay, the nursing care model and the type of ward, but their influence was limited. However, according to the nurses, there was however a high number of situations where bedside handovers could not be delivered, perhaps indicating a reluctance in practice to use bedside handovers.

Content of the Communication that Occurs During Nursing Handover

A study to assess information content of the nurse change of shift report was conducted by Lamond (2000). The study examined the role which the nursing change of shift report may have in aiding nurses to process information and plan care. It also aims to identify whether any of the information found in the shift report can be considered as 'forceful feature' information, the key features of a situation which allow an individual to access appropriate knowledge within their long-term memory store. In general, Lamond (2000) found that more information was recorded in the patients' notes than communicated during the shift report. However, both the frequency data and the MSA plots indicated that particular types of information (identified here as global judgments) were often communicated in the shift report but not recorded in the patient notes. The results suggest that there is

evidence that the change of shift report contains `forceful feature' information. The presence of such `forceful features' may facilitate the processing of patient information during the shift report communication, leading to more efficient care planning (Lamond, 2000).

Thompson et al. (2011) assess the effect of the ISBAR handover tool on junior medical officer (JMO) handover communication in an Australian hospital. The study found that hand over information that was shared included all the elements of the ISBAR; thus, showing that detailed information was provided. The researcher concluded that the use of the ISBAR tool improves JMO perception of handover communication in a time neutral fashion.

Braaf, Rixon, Williams, Liew and Manias (2015) also studied medication communication during handover interactions in specialty practice settings. Because effective communication about patients' medications between health professionals and nurses at handover is vital for the delivery of safe continuity of care, the researchers aimed to investigate what and how medication information is communicated during handover interactions in specialty hospital settings. Health professionals in the study were found to communicate partial details of patients' medication regimens, by focusing on auditing the medication administration record, and through the handover approach employed. Gaps in medication information at handover were evident as shown by lack of communication about detailed and specific medication content. Incoming nurses rarely posed questions about medications at handover. In conclusion, the researchers stated that handover interactions contained restricted and incomplete medication information. Improving the transparency, completeness and accuracy of medication communication is

vital for optimising patient safety and quality of care in specialty practice settings. Braaf et al. (2015) recommended that for nurses to make informed and rapid decisions regarding appropriate patient care, information about all types of prescribed medications is essential, which is communicated in an explicit and clear way. Disclosure of structured medication information supports nurses to perform accurate patient assessments, make knowledgeable decisions about the appropriateness of medications and their doses, and anticipate possible adverse events associated with medications (Braaf et al., 2015).

Factors that Influence Handover Information among Nurses

The aims of a study by Bost, Crilly, Patterson and Chaboyer (2012) were to explore the clinical handover processes between ambulance and ED personnel of patients arriving by ambulance at one hospital and identify factors that impact on the information transfer to ascertain strategies for improvement. The researchers identified two types of clinical handover: for non-critical patients and for critical patients. Quality of handover appears to be dependent on the personnel's expectations, prior experience, workload and working relationships. Lack of active listening and access to written information were identified issues. Bost et al. (2012) concluded that clinical handover between two organisations with different cultures and backgrounds may be improved through shared training programmes involving the use of guidelines, tools such as a whiteboard and a structured communication model such as MIST. Bost et al., (2012). Again, a research by Siemsen et al. (2012) studied factors that impact on the safety of patient handovers. The primary aim of this interview study is to explore healthcare professionals' attitudes and

experiences with critical episodes in patient handover in order to elucidate factors that impact on handover from ambulance to hospitals and within and between hospitals. The secondary aim is to identify possible solutions to optimise handovers. The study found eight central factors to have an impact on patient safety in handover situations: communication, information, organisation, infrastructure, professionalism, responsibility, team awareness, and culture. The eight factors identified indicate that handovers are complex situations. The organisation did not see patient handover as a critical safety point of hospitalisation, revealing that the safety culture in regard to handover was immature. Work was done in silos and many of the handover barriers were seen to be related to the fact that only few had a full picture of a patient's complete pathway (Siemen et al., 2012).

Machaczek, et al., (2013) in a study also examined doctors' and nurses' perceptions of barriers to conducting handover in hospitals in the Czech Republic. The study was an exploratory study using a researcher-administered questionnaire survey. The questionnaire evaluated clinicians' perceptions of barriers to handover, including individual performance-related, organisational and environmental factors. They found that social relationships and hierarchy seemed to have a negative impact on handover. The environmental factors negatively influenced handover included: not enough time, poor workforce planning, busy periods in the department, and interruptions. Handover emerged as a complex process negatively influenced by the work environment and social relationships. Nursing handover emerged as being conducted in a more standardised manner than handover between doctors; however, standardisation did not enhance the quality of information

conveyed. Improvements in handover practices require organisational changes such as a reduction in workload and training for staff in conducting handover (Machaczek et al., 2013).

Lee, Phan, Dorman, Weaver and Pronovost (2016) studied handoffs, safety culture, and practices. The purpose of the study was to analyze how different elements of patient safety culture are associated with clinical handoffs and perceptions of patient safety. The researchers examined the statistical relationships between perceptions of handoffs and transitions practices, patient safety culture, and patient safety. The main findings were that the effective handoff of information, responsibility, and accountability were necessary to positive perceptions of patient safety. Feedback and communication about errors were positively related to the transfer of patient information; teamwork within units and the frequency of events reported were positively related to the transfer of personal responsibility during shift changes; and teamwork across units was positively related to the unit transfers of accountability for patients. In summary Lee et al. (2016) stated that staff views on the behavioural dimensions of handoffs influenced their perceptions of the hospital's level of patient safety. Given the known psychological links between perception, attitude, and behaviour, a potential implication is that better patient safety can be achieved by a tight focus on improving handoffs through training and monitoring.

Finally, Richter, McAlearney and Pennell (2016) conducted a study to determine whether perceptions of organizational factors that can influence patient safety are positively associated with perceptions of successful patient handoffs, to identify organizational factors that have the greatest influence on

perceptions of successful handoffs, and to determine whether associations between perceptions of these factors and successful handoffs differ for management and clinical staff. Richter et al. (2016) found that perceived teamwork across units was the most significant predictor of perceived successful handoffs. Perceptions of staffing and management support for safety were also significantly associated with perceived successful handoffs for both management and clinical staff. For management respondents, perceptions of organisational learning or continuous improvement had a significant positive association with perceived successful handoffs, whereas the association was negative for clinical staff. Perceived communication openness had a significant association only among clinical staff. The researchers recommended that hospitals should prioritize teamwork across units and strive to improve communication across the organization in efforts to improve handoffs. In addition, hospitals should ensure sufficient staffing and management support for patient safety. Different perceptions between management and clinical staff with respect to the importance of organizational learning are noteworthy and merit additional study (Richter et al., 2016).

Chapter Summary

This chapter reviewed related literature on empirical studies, and conceptual framework. With the empirical review, handover was seen to be an essential component of shift work in health care settings, during which patient's care responsibility and information are transferred to the incoming nurse. The main function of clinical handover is to ensure communication between nurses regarding patient information for the continuity of patient care. In literature, the content of handover which is important in ensuring continuity

of care and safety of the patient cannot be over emphasized. Communication among health care professionals in handover should be accurate, complete, specific, relevant, timely, up to date, subjective, and objective. However, the, the exchange of information can be influenced by certain factors which have been by categorized into three; namely the performance of individuals; environmental factors and system factors.

The study used Osgood-schramm's circular model of communication and a conceptual framework developed from NMC of Ghana handing over protocol (process) and six articles (content of communication and factors influencing) to guide this study.

CHAPTER THREE

RESEARCH METHODS

Introduction

The study explores the handover process and communication among registered nurses in the Cape Coast Teaching Hospital; and how well registered nurses comply with NMC protocol for the handover process. The previous chapter dealt with literature review which primarily focuses on theoretical, conceptual and empirical reviews. This chapter presents an evaluation of the research methodology that guides this study. It focuses on the study design, profile of the study area, study population, sampling procedure, data collection instrument, trustworthiness, pretest, ethical consideration, data collection procedures and data processing and analysis.

Research Design

There are three main research traditions that inform the choice of research design. They are the quantitative approach, which deals with numbers and statistics, the qualitative approach which covers human experience, and are mostly narrative in nature (Creswell, 2013). The third approach is the mixed approach which combines both quantitative and qualitative approaches in a pragmatic way.

A study is classified as qualitative if the purpose of the study is primarily to describe a situation, phenomenon, problem or event. According to Kumar (2011, p.103), the main focus of qualitative research is to understand, explain, explore, discover and clarify situations, feelings, perceptions, attitudes, values, beliefs and experiences of a group of people. There are four main traditional designs of qualitative research which are phenomenology,

grounded theory, historical and ethnography research. These traditions are being applied all the time more by researchers in the health and social sciences, including nursing studies (Hunt, 2009). In nursing literature, other qualitative designs such as descriptive qualitative studies, exploratory descriptive, qualitative case study and phenomenological designs are mostly used.

According to Burns and Grove, (2009), an appropriate design must be chosen to commensurate with the topic investigated in order to answer the specific aims and objectives that the research question poses. This study employed the use of descriptive qualitative case study approach. A qualitative case study is an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources (Baxter & Jack, 2008). This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood. As noted by Baxter & Jack, (2008), there are two key approaches that guide case study methodology; one proposed by Stake (1995) and the second by Yin (2003). Both seek to ensure that the topic of interest is well explored, and that the essence of the phenomenon is revealed, but the methods that they each employ are quite different and are worthy of discussing. According to Yin (2003) a case study design should be considered when: the focus of the study is to answer "how" and "why" questions. It is also used when the researcher cannot manipulate the behaviour of those involved in the study. Again, qualitative case studies are used when there is the need to cover contextual conditions because you believe they are relevant to the phenomenon under study. Finally, when the boundaries are not clear

between the phenomenon and context then qualitative case studies are applicable. There are different types of case study designs and the choice of a specific type of case study design is guided by the overall study purpose. Yin (2003) categorizes case studies as explanatory, exploratory, or descriptive. He also differentiates between single, holistic case studies and multiple-case studies. Stake (1995) identifies case studies as intrinsic, instrumental, or collective.

A descriptive case study design was adopted because the researcher wanted to systematically study and describe a phenomenon (nursing handover). The collection of data through various methods helped in providing more detailed information on nursing handover than what could have been obtained via either interviews or observations alone, as the focus was more on quality and richness of information. Generally, case studies are very suitable for serving the heuristic purpose of inductively identifying additional variables and new hypotheses (Starman, 2013) and it was based on this purpose this design was selected.

Study Area

The Cape Coast Teaching Hospital is a tertiary health facility and provides specialised medical and nursing care to the people mainly of the central and western regions of Ghana. Some of the services rendered in the facility include paediatric, gynaecological, surgical, medical, and radiological and laboratory services. There are twelve wards apart from the Out Patient Department (OPD) and the dialysis unit. It has a 363-bed capacity and 584 nurses of which the population of registered nurses working there is 476. Admissions to the various wards in the hospital were 798 cases in 2016, 943 in

2017 and 842 cases in 2018. This facility was used because it is a tertiary facility and has different categories of nurses.

Population

A population in research refers to those elements that make up the focus of the study that fit in the fixed criteria (LoBiondo-Wood & Haber, 2010). All individuals in a particular research population generally have a shared, requisite trait. Study population is fundamentally separated into two: the target population and the accessible population. The target population for a study is the complete set of elements for which the study data are to be used to make inferences. Hence, the target population defines the units which the conclusions of the survey are to be generalised (Cohen et al., 2011). The accessible population on the other hand is the population in research to which the researchers can apply the conclusions of the study. This population is a subgroup of the target population (Cohen et al., 2011). It is from the accessible population that the sample for the study is obtained.

The target population in this study included all professional nurses who have undergone three or four years of training to attain State Registered Nurse Certificate, diploma or degree. The accessible population includes male or female nurses in the Cape Coast Teaching Hospital who are working in wards. It also included nurses between 20-60 years of age. This age limit was consistent with the age range of staffs available in the institution. It excluded nurses working at the OPD and theatre because the staffs in these units usually practice interdepartmental handover. The study also excluded Rotation nurses and Health Assistants Clinicians. These categories of staffs were excluded because CCTH does not allow this category of staffs to lead handovers.

Sampling Procedure

Research requires that if the entire population cannot be studied, some members of the accessible population are selected and studied; and generalisation and inferences are made to the population. This subset is carefully chosen from the accessible population and which is representative of the population is known as the sample and the technique for selecting the sample is the sampling procedure (Cohen et al., 2011). Creswell (2013) states that there are various sampling procedures; however, they have been grouped into two basic methods: probability and non-probability sampling methods. In probability sampling, all units of the population have an equal chance of being chosen in the sample (Creswell, 2013). Widely used probability sampling methods include: simple random sampling, systematic sampling, stratified sampling and cluster sampling (Kothari, 2004). In non-probability sampling, some elements of the population have no chance of selection, or where the probability of selection cannot be accurately determined (Creswell, 2013). Non-probability sampling involves the selection of elements based on expectations concerning the population of interest, which forms the standards for selection (Saunders &Thornhill, 2007). Some non-probability sampling methods are: convenience sampling, snowballing, quota sampling and purposive sampling.

Purposive sampling was used to select the wards and handover sessions. The purposive sampling procedure was used because purposive sampling is the commonly used sampling method for qualitative research. Besides purposive sampling was chosen because the research sought to focus on a particular group of people, study them and make conclusion about them.

The study purposively focused on registered nurses. Firstly, 11 wards out of the 12 wards in the hospital were selected for the study. The theatre was excluded in this study because it mainly concerned with interdepartmental handover which is not the focus of this study. Secondly, three handover sessions (morning, afternoon, evening) were selected purposively on each ward for the observation. Finally, a total of 33 nursing handovers were observed (three from each of the participating wards). The researcher intended to interview 11nurses out of the 33 nurses who led the observed handover. Purposive sampling technique was used to select these 11 nurses (one from each of the participating wards). Nonetheless the final sample size (10) was determined by attaining data saturation which occurred with the 10th participants. Data saturation occurred when no new finding was generated during the data collection process (Brink, Van der Walt, & van Rensburg, 2012). Saturation was achieved with the 9th participant and additional one was conducted to confirm the saturation.

Data Collection Instruments

The development of the data collection tools was informed by the research questions. Two data collection tools were used in this study which includes a structured observational checklist and a semi-structured interview guide. The item on both the observational and the semi-structured interview guide was determined by the research objectives. Observations were done before interviews in order to ascertain whether nurses are doing the appropriate handover procedures according to the NMC guidelines in order to answer research question one. The first method which was used to collect the data was structured observation. According to Bentley, Boot, Gittelsohn, &

Stallings, (1994), structured observation is a process used to quantify or measure a behaviour or behaviours. A structured observation is when an observation list is used with a fixed number of points to notice, and this list is applied in a pre-determined number of situations, or with a pre-determined number of people. Structured observations are particularly useful when one wants to collect information about the extent to which particular health behaviour occur, including information about the frequency, intensity, and duration of the behaviour. One advantage of structured observation is that it provides information on what people actually do, rather than on what they say they do or did. However, one weakness with structured observation is that, data generated are usually not detailed and some behaviour the investigator records may not be important. An observational checklist was developed from the NMC Ghana handover protocol to assess the handover process in all the selected wards. The checklist was categorised into two parts: Part A captured demographic information of nurses such gender, age, ward, shift, rank, educational background, number of years in service, number of years one has been on current ward, place of handover, format of handover, number of nurses present at the bedside handover, number of patients on the ward and time spent at each bedside handover. Part B enquired about the handover procedure. It has the steps in the NMC protocol and "Yes" or "No" options were assigned to each step.

Secondly a semi-structured interview was used to collect information from the nurses. Semi-structured interviews are guided by a list of questions that are asked in the exact wording and order as they have been written down. The answers, however, are still open-ended, and the respondent is free to give

his or her own words, view and insights in answering the questions. The advantage is easy coding and analysis of the answers. According to Adams (2015), semi-structured interviews allow participants the freedom to express their views in their own terms and confirm what is already known but also provides the opportunity for learning. Mostly, the information received from semi-structured interviews provides not just answers, but the reasons for the answers. Nevertheless, it requires interviewing skills and its data analysis demands skills and is also time consuming. A semi-structured interview guide which was developed out of the concepts in the conceptual framework and the research question was used to inquire about the communication contents of the handovers. The semi-structured interview guide was only used as a template and the participants were not bound to follow exactly how the questions were arranged on it. The interview guide was grouped into three sections in order to achieve the stated objectives. 'Section A' collected data on current handover process, 'Section B' collected data on content of communication during handover, and finally, 'Section C' looked at factors influencing nursing handover.

Trustworthiness

For a qualitative study to ensure quality and methodological rigour, the term trustworthiness is often used as an alternative to validity (Kullberg, 2019). Methodological rigour in qualitative study is ensuring that the study is conducted strictly, using acceptable standards and rational interpretation (Yang, Chang, & Chung, 2012). Trustworthiness varies according to the degree of freedom from biases that are introduced in the research and the rigour by which investigators stick to the methodology used to reduce the

biases (Hadi & Closs, 2016; Yang et al., 2012). Lincoln and Guba (1985) proposed four criteria for determining the rigour of a qualitative study, these are: credibility, dependability, confirmability and transferability (Nowell, Norris, White, & Moules, 2017).

Credibility in research refers to the believability or truth value of a study; that is the extent to which the researcher account is faithful to the experiences of the respondents (Carnevale, 2016). This implies strategies that foster proximity of the researcher to the respondents while taking measures to guard against having the researcher inadvertently influence the manner in which the participants' experiences are recorded (Carnevale, 2016).To ensure credibility of the study, recruited participants must hold a state registered nursing or diploma in nursing certificate because they have an understanding of nursing handover. Again, the participants were supposed to have practiced nursing for at least a year since rotational (interns) nurses were not allowed to lead handover performance in the wards. Triangulation which involves using several methods for data collection was used in this study to ensure credibility; data was collected by both observation using a checklist and interview using a semi-structured interview guide. The observational checklist was developed from the NMC Ghana handover protocol. The interview questions were derived from the conceptual framework of the study and were critically studied with both supervisors to ensure the questions were essential for the study. The semi-structured interview was transcribed verbatim and peer debriefing was done to provide an external check on the research process.

Dependability refers to how stable the data are and the potential to be replicated in other Studies (Houghton, Casey, Shaw, & Murphy, 2013). In

order to ensure dependability, the research method, data collection procedures and analysis were reported in details. In addition, all interviews were performed by the same person, to enhance dependability. Nevertheless, the interviewer adapted each interview to the participant depending on the flow of the dialogue; hence no interview was exactly like the other.

Confirmability refers to the assurance that data were collected and analysed in a neutral manner, whereby the researcher's potential distortion of participants accounts is minimized (Carnevale, 2016). To check confirmability; two research assistants were recruited to collect data on the observations.

Transferability refers to the generalisability of inquiry (Nowell et al., 2017). Transferability was assured by giving details of the research setting, methodology and background of the sample used in the study. Analysed and transcribed data is being kept for reference purposes, this enable other researchers transfer the conclusion of this study to other similar contexts

Pre-test

I performed pre-test with nurses at the Female's ward of Cape Coast Metropolitan Hospital which was randomly selected. A pre-test is a trial of the tools to verify whether the tools are understood by participants and do not bias participants' contribution (Polit & Beck, 2014). The pre-test was done on the 24th May, 2018. A total of three handover observations was carried out which comprised of morning, afternoon and nightshift handover. The shift in-charges were interviewed after the observations and a total of three nurses were interviewed. It was also done to ascertain the interview skills of the researcher. The pre-test in this study had objectives that focused on the

research instruments and the processes of using them. The pre-test also considered the interview times. The researcher was able to restructure the interview guide after the pre-test by including certain issues that respondents raised. For example, research questions two which initially sought to describe communication in handover, in general, was modified to be the content of the communication.

Ethical Considerations

Ethics in research relates to questions about how to formulate and clarify a research topic, design research and gain access, collect data, process and store data, analyse data and write up research findings morally and responsibly (Saunders, Lewis &Thornhill, 2012). An ethical consideration in the field is inevitable when the work involves others, whether they are colleagues, respondents, assistants, or people in positions of authority (Perecman& Curran, 2006).

In order to comply strictly with ethical standards in research, an approval was first sought from the Institutional Review Board (IRB) of University of Cape Coast (Appendix D). After this, I obtained permission from the hospital authorities to conduct the study (Appendix F). In view of this, ethical approval was sought from the management of CCTH with the aid of an introductory letter (Appendix E) from the School of Nursing and Midwifery (UCC) and the clearance letter from the University's IRB, prior to data collection at the hospital. The Deputy Director of Nursing Services (DDNS) for the Medical, Surgical, Paediatric and Obstetric and Gyanaecological wards of the hospital and in-charges in the various wards within the departments were also adequately informed and their consent and

approval were sought. For both the checklist and the interview the respect of the participants was kept through informed consent (Appendix A). Prior to the signing of the consent form, the participants were provided with adequate information about the research study. They were made to understand their rights to accept or refuse to participate in the study and the risk and benefits of the study were also explained to them to ensure voluntary participation. Confidentiality and anonymity of participants were maintained as they were made to understand that their names would not be mentioned in the study.

Data Collection Procedures

Data were collected between 29th May, 2018 and 12th June, 2018. Throughout the study, the investigator adopted an 'outsider role'. The 'outsider' researcher stays more physically and emotionally distant from the subjects under study. This enables the subjects to feel free and express themselves freely and build trusting relationship with the researcher and therefore there is less chance of 'going native' (Randall et al., 2008). The investigator put herself in an unbiased position and never interfered with the nurses' work but rather just observed their working environment and listened to what they said. Again she made the effort to distance herself from them and not get emotionally involved with them.

A non-participant observation approach was used to observe the handover sessions on each ward using the observational checklist (Appendix B). The "Yes" or "No" options were ticked to indicate whether a step in the handover process is performed or not performed. After the handover observation, the leader of the team (shift nurse in-charge) was interviewed using a semi-structured interview guide (Appendix C). This was administered through face

to face interview to capture communication content. The interviews were audio-recorded and lasted between 15-20 minutes. Data collection technique which was employed first was observations by the use of observational checklist. This was done to allow the researcher to gain an elementary understanding of how nursing handover is practiced in its natural setting. As cited by Wong (2011), it is vital to explore the variances between what people say they do, what they think they do and what they actually do (Nøhr&Botin, 2007). Again, Wong (2011) cited Atkinson and Hammersley (1994) who differentiated between a participant and non-participant observation by creating four classifications:

1. The complete observer - the researcher remains in the background and watches and listens;
2. The observer as participant - the researcher participates as if an organizational member;
3. The participant as observer - the researcher participates fully but overtly as a researcher;
4. The complete participant - the researcher acts as an organizational member.

The investigator took on the role of a complete observer in thirty-three handover sessions which included morning handover (8 – 8:30am), afternoon handover (1:30pm-2pm) and night handover (9:30 – 10pm). These observation sessions were conducted in two weeks.

Ten semi-structured interviews with an average duration of fifteen minutes were conducted to gather information about the participants' understanding and experiences of nursing handover, what information they

usually give when handing over to their colleagues and what factors influence the kind of information they give during this procedure. The use of open-ended questions made it easier for the participants to share their experiences well in the area understudy as the intentions of the researcher was to encourage participants to discuss issues relating to the research without imposing any limitations or constraints as to how the questions may be answered. The nurses in charge of the staffs who participated in handover sessions in a shift were invited to participate in the semi-structured interviews. A fixed time and location were arranged immediately after the handover session; however, this did not always happen according to plan as nurses were always in a rush to leave the ward after closing. Such interviews were then rescheduled at a time that was convenient to the participant. The researcher also ensured that she was readily available so as not to miss any opportunity to conduct the interviews. At times, the researcher would be contacted at short notice to conduct an interview. All interviews were conducted face-to-face, at a time and venue convenient for the nurses. In most cases, interviews were conducted in the nurses' room. The researcher started the interview by briefing the participants about the aims and objectives of the interview. Permission was then sought from the participants to audio record the interview. All participants agreed to have the interview recorded. The researcher utilized various techniques to extract information from the participants, including pauses and probes. Probes were used only at certain points to redirect the participants to answer the questions the researcher requires. The researcher only moved on to the next question when she was certain that the participants had completed their answers. At the conclusion of each interview, the

researcher reflected on the interview conducted. The researcher attempted to the best of her ability to transcribe all interviews within forty-eight hours of data collection in preparation for data analysis. The challenge that was encountered during data collection was distractions and interruption created by other staffs and emergencies on the ward. To curtail this challenge, interviews were conducted when the ward was less busy and it was held in a designated room at the hospital. The researcher also adhered strictly to the observational checklist.

Data Processing and Analysis

After data collection was complete, the data was subjected to analysis and interpretation in order to unearth the findings of the study. The data collected from the observational checklist were coded and simple frequencies were generated. This was done in order to understand which of the stages in the handover process were performed more, less or omitted by the nurses. The use of quasi-statistics was not to indulge any statistical testing but to show the patterns in the behaviour coded (Kim, Sefcik, & Bradway, 2017; Maxwell, 2010).

The audio-taped interviews were transcribed and read several times to understand patterns in the data. The primary supervisor read through the transcribed data for confirmation. Transcripts were compared with the audio-taped interviews from which they were prepared to obtain accuracy of data. Summative, deductive and inductive content analyses were also used to analyse the interviews. The deductive analysis was done using the conceptual framework as recommended by(Hsieh & Shannon, 2005). Three categories were generated namely: process (e.g. welcoming, Report reading), content of

communication (patient identification, clinical state) and factors affecting communication (organizational, environmental, and human). To further structure the results of the analysis, the categories were classified into subcategories.

Data on the research questions were analysed qualitatively using the thematic analysis approach as suggested by Braun and Clarke (2006). Braun and Clarke (2006) define six steps that can be used in thematic analysis. The first step dealt with immersing oneself in the data. This stage involved transcribing interviews and reading the transcripts repeatedly. Transcribing is a time-consuming process was useful since it helped the researcher to become familiar with the data and offers the opportunity to begin to think about possible codes. While reading transcripts, the researcher actively looked for meanings and patterns. At this point, it was useful to make notes on potential coding categories that could be developed in subsequent analyses. The second stage involved generating initial codes. For example, an initial code generated was how nurses perform their handover duties, I am the shift in charge nurse, irresponsibility on the part of the Nurses, I establish rapport, interruption, and I check controlled drugs. Once the researcher was familiar with the data, the researcher identified an initial list of codes. Generating codes enabled organisation of the data into meaningful units, but they were not yet in themes, which are broader and may capture several codes. It was critical to code for as many potential themes as possible, as the value of some codes became apparent later in the process and once many code applied to portions of the data set. The third stage was where the researcher searched for themes. Once the data was coded and material falling under the same codes had been

brought together, a search for themes began. This stage involved considering how different codes could fit together into one broader theme. Braun and Clarke (2013) recommend that the themes can be organised into major themes and subthemes. For example, I had major themes such as Process (welcoming, report reading, discussions); Content (patients' identification, clinical state). At the fourth stage, the themes that were identified and categorised were reviewed. Once a set of potential themes were identified there was the need to review and redefine the themes. This is because some themes were no relevant to the research questions while others combined into broader ideas or formed separate themes. Braun and Clarke (2013) recommend that reading the entire data set again help to capture data that fit with themes that were omitted in earlier coding. The fifth stage involved defining and naming themes. When a thematic map of the data exists, further refinement of the themes may occur. The important task here was to identify the central idea in each theme and provide a name that concisely captures the idea. Writing detail analysis of each single theme and how it fits into the overall picture of the data set was important (Braun and Clarke, 2013). For example, a major theme that emerged after reviewing and naming of themes was factors affecting handover. Finally, sixth stage dealt with producing the report of the analysis. After the themes and their relationships are identified fully, the research report was written. The report presents the analysis in a way that was meaningful and the reader can see as trustworthy. This involved including data extracts that distinctly illustrate the themes as well as discussions of the decisions that were made during the process of the study. The report of the study needs to go beyond a

simple description of the data to develop and argument (Braun and Clarke, 2013).

Chapter Summary

This Chapter focused on methods that undergird this study. The key areas discussed in this Chapter were overview of qualitative research methods and the study design (descriptive case study design). The next chapter will tackle the presentation of results and discussions.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

This chapter presents results from the analysis of data from the observational handover checklist and the audio recorded interview of nurses. The purpose was to explore handover process and content of communication among registered nurses at CCTH. Descriptive qualitative case study was used in the study. Thirty-three inter-shift nursing handovers were assessed using the observational checklist and ten shifts nurse in-charges interviews were also conducted. Summative, deductive and inductive content analyses were also used to explore the process and communication of nursing handover. Data obtained from the observational checklist were analyzed using simple frequencies and percentages. Audio-taped interviews were transcribed after each section of data collection. Codes were organized and grouped into meaningful clusters.

Results commenced with a summary of descriptive information of the participants observed using the handover checklist followed by the results from the interview analysis.

Descriptive Demographic Information of Participants

A total of 33 handovers were assessed across the 11 wards which were selected purposively. Data was taken during the entire three (3) main shift (morning, afternoon and night) in each of the ward. Majority of the participants (n=19, 57.6%) were females. The participants' ages ranged from 26 to 30 years (n=24, 72.7%). Majority (n=24, 72.7%) of the nurses who led

the handover were staff nurses and hold diploma in nursing (n=30, 90.9%). Most of them have 1 to 5 years working experience (n=30, 90.9%) and the number of years spent on their present ward ranged from 1 to 5 years (n=28, 84.8%). Majority (n=28, 84.8%) of them perform handover at the bedside and the format used often is verbal handing over (n=23, 69.7%). Nurses present at a handover were mostly more than five (n=17, 51.5%). Most (n=20, 60.6%) wards had more than 10 patients to be handed over and less than 10 minutes (n=21, 63.3%) was spent in handing over a patient.

Table 1: Background characteristics of participants

Demographic characteristics	Frequency (N= 33)	Percentage (%)
Gender		
Male	14	42.4
Female	19	57.6
Age		
18-25	2	6.1
26-30	24	72.7
31-35	5	15.2
36-40	2	6.1
Rank		
Staff Nurse	24	72.7
Senior Staff Nurse	5	15.2
Nursing Officer	2	6.1
Senior Nursing Officer	2	6.1
Educational Background		
Diploma	30	90.9
First Degree	3	9.1
Work Experience		
1-5 years	30	90.9
6-10 years	2	6.1
Above 10 years	1	3.0

Table 1 continued

Time Spent at Present Ward		
Below 1 year	5	15.2
1-5years	28	84.8
Place of Handover		
Nurses' Station	2	6.1
Designated Place	3	9.1
Bedside	28	84.8
Handover Format		
Verbal	23	69.7
Written	1	3.0
Both Verbal & Written	9	27.3
Nurses Present at Handover		
1-5	16	48.5
More than 5	17	51.5
No. of Patients on ward		
1-3	6	18.2
4-6	4	12.1
7-10	3	9.1
More than 10	20	60.6
Time spent on each Patient		
Below 10 mins.	21	63.3
10-20 mins.	6	18.2
21-30 mins	5	15.2
More than 30	1	3.0

Source: Researcher's Construct

Research question 1: How well do registered nurses at CCTH follow the NMC handover protocol?

The results in Table 2 point out that all the participants (100%, n=33) "Move around from bed to bed to handover patients" during handing over. Also 72.7% (24) of the nurses allow incoming nurse read ward report on patients. Moreover, approximately 91% (30) of the respondents explained issues to the incoming staff and answered any questions that arose from the reports. Table 2 continues to show that approximately 85% (28) of the respondents welcomed the incoming staff and 85% (28) also established rapport with patients during handovers. Furthermore, approximately 82% (27) checked and confirmed patient's information on patients' chart. Again, approximately72.7% (24) of the nurses handed over sensitive information about patients at the nurses' station. Meanwhile, only 42.4% (14) checked with staff that gadget on patients is functioning and 39.4 % (13) checked and handed over drugs and other relevant resources available. Again, approximately 39.4% (13) of nurses' handover ward annexes for incoming nurses to ensure they are clean. Approximately, 27.3% (9) of the nurses reported departmental instructions and 33.3% (11) reported on defects on equipment and made request for urgent repairs. The results point out that though most staff members go through the handover procedure, they do not observe all handover protocols.

Table 2: Assessment of Handover using Observational Checklist

Handover Procedure	Yes		No	
	Frequency (N= 33)	Percentage (%)	Frequency	Percentage (%)
Welcome incoming staff	28	84.8%	5	15.2%
Allow incoming nurse read ward report on patients	24	72.7%	9	27.3%
Explain issues and answer any questions raised	30	90.9%	3	9.1%
Move around from bed to bed to handover patients	33	100.0%	0	0.0%
Handover sensitive info about patients e.g. condition of patients	24	72.7%	9	27.3%
Establish rapport with patients during handover	28	84.8%	5	15.2%
Check and confirms info about patients' charts	27	81.8%	6	18.2%
Check with staff that gadget on patients are functioning	14	42.4%	19	57.6%
Check and handover drugs and any other relevant resource available	13	39.4%	20	60.6%
Handover ward annexes for incoming nurse to ensure they are clean	13	39.4%	20	60.6%
Report on any defects on equipment and request made for urgent repairs	11	33.3%	22	66.7%
Report on departmental instructions and other important information	9	27.3%	24	72.7%

Source: Researcher's Construct

Results of Interviews

The data was obtained from the interviews with 10 shift in-charge nurses. In all three major categories and eleven subcategories emerged from the data (Table Four).

Table 3: Characteristics of Nurses interviewed

ID of Respondents	Age	sex	Years worked	Rank	Years spent on current ward
Participant 1	40years	F	17years	PNO	9 years
Participant 2	30 years	F	4 years	SSN	3 years
Participant 3	26 years	F	2 years	SN	2 years
Participant 4	30 years	F	4 years	SNO	4 years
Participant 5	28 years	M	2 years	SN	1 year
Participant 6	37 years	F	13 years	SNO	5 years
Participant 7	27 years	F	3 years	SSN	3 years
Participant 8	25 years	F	2 years	NO	2 years
Participant 9	30 years	F	9 years	SNO	5 years
Participant 10	37 years	F	10 years	NO	4 years

Source: Researcher's Construct

Table 4: Categories and Subcategories derived from the interviews

Categories	Subcategories
1. Process	1. Welcoming incoming nurses
	2. Report reading and discussing the report
	3. Movement
	4. Patients' charts
2. Content	1. Patient Identification information
	2. Clinical state
	3. Medical information
	4. Nursing information
3. Factors affecting handover	1. Organisational factors
	2. Human factors
	3. Environmental factors

Interview Question 1A: Please describe your experience with nursing handover.

The nurses shared their experiences with nursing handover. Their opinions were expressed in the narrations below:

> *"Okay I was posted to this ward not long ago but since I was posted here, sometimes the handing over is good and sometimes is bad depending on the time you come" (*Participant 3).

> *"Yea, almost every day we hand over, from patient-to-patient"* (Participant 4).

"Personally, I'll say sometimes our handing overs are inadequate, sometimes too we adequately do it" (Participant 6).

*"I recall one incidence when I was a rotational nurse. At my unit we normally take up in a group but that day I came for morning and the night nurse said she was late for an event so I should take up and when the rest come they will join. When the in-charge came, she queried me for taking up. I was penalized for that and I will never forget it. Since then I always wait for the in-charge unless I'm the in-charge for the shift, then I will wait for the group before taking up" (*Participant 8).

*"Sometimes it is bad and sometimes it is good but it depends on the workload or the environment" (*Participant 10).

Interview Question 1B: Kindly share with me how you normally conduct your handover? (Probe for taking up of the wards).

In this instance the researcher was interested in knowing from the nurses to ascertain how well nurses follow the NMC handover protocol. The nursing handover process includes, welcoming incoming nurses, report reading, discussing the report of patients, movement, sensitive information, rapport, patients' chart, controlled drugs, equipment, handover of Annexes and ward issues. Their narration generated four subcategories.

Welcoming incoming Nurses

In welcoming incoming nurses as a process of the handover process, some of the nurses shared their experience in this regard. A female Nurse was of the view that:

> *"For me when I come to work, I write my name after greeting each other and find out how each is doing"* (Participant 3).

Another one added that:

> *"When I arrive at the ward, I make sure I greet everyone including the patients and nurses on duty and ask them how they and their families are doing. I then proceed to write my name and time of arrival"* (Participant 7).

Another nurse also shared her views on the issue of welcoming nurses to take over from the ward. She had this to say:

> *"Sometimes when I come, I go around shaking hands with everyone as a way of being welcomed into the ward. And as you know some of the Nurses on the ward will smile for seeing you. Others too hmm" ……* (Participant 9).

Report reading and discussing the report

After a nurse has reported on the ward and the necessary protocols have been observed, another key issue to look at as far as the handover process is concerned is the reading and discussing of report. That is the report being handed over to the one taking over which contains information on the patient on the ward. The participants mentioned the 24-hour report book, changes book, nurse's notes, and ward state as some of the documents they give to the

incoming nurses to read. They added discussions usually are based on the general happenings on the ward which includes admissions, discharges, death and sensitive issues. I explored from the participants of this study (i.e. Nurses) on how the report reading and the discussions are done, they shared their views as follows. Excerpt from the participants were captured as

> "*…on a typical day, I tell them the number of patients we have in the ward so far, the admission and discharges and if there is any death. Also, if there is any sensitive issue I have to discuss at the nurse's station*" (Participant4).

Another participant said during the discussion, she cross checks the information that has been handed over to her for authentication. Clarifications of the information is also sought when the need be before accepting what has been provided.

> *"Well first of all, I cross check the names that have been admitted on the computer and the ward state to see whether all the information in there have been documented in the A & D book. So when everything is settled, then I counter sign the report book"* (Participant 10).

Another nurse added that she takes the pain to read the report, changes book or ward states handed over to her to know where to start or continue with the services rendered to patients on admissions. The excerpt below was captured from another participant:

"*I make detail reading of changes book and other documents of patients I came to meet to know where to start or continue with the service delivered to patients on admission"* (Participant 9).

Movement

According to all the ten participants interviewed, after reading and discussing the report, they begin the handover from the nurses' station and move to the various cubicles within the ward. At the patient's bedside, they move from one bed to another to handover each patient:

"As I said, the handing over is done from bed-to-bed and patient to patient" (Participant 6).

Another female nurse reiterated:

"*So from the nurses' station, all of us move to the cubicles to do proper handover. We move from cot to cot and one cubicle to the next cubicle to the last cubicle*" (Participant 10).

However, none of them was specific with the composition of the team, whether it is only the shift in-charges or the entire teams (both outgoing and incoming) who move to the bedside to do the handover.

Patient's chart

To further ascertain the handover process, I explored from the participants how patients' charts are handled. The types of charts mentioned included vital signs sheet, treatment sheet, partograph, fluid intake and output chart and the nurse's notes. The nurses outlined what they do with the patients' chart as follows:

"We *handover the patient's fluid input and output chart, treatment sheet, nurse's note, billing sheet, patient's valuables and then whatever vital signs that you have to handover"*(Participant 9)

Another nurse reiterated that the purpose of handing over the charts were to prevent missing information and detect accurateness of the information which has been given orally.

"*We check on treatment sheet if medication was given or not, nurses note if they were well written or any other information that needed to be added and whether there is the need for any corrections to be made"*(Participant 6).

A nurse corroborated what her previous colleague nurses said with regards to patients 'chart. She had this to say:

"Mostly the patients' chart is part of the patients' bedside papers. It shows the recovery progress of the patient on admission. Once you take over from the nurse on duty you need to have a look at it to inform you on how the patient is faring" (Participant 7).

Furthermore, another nurse reiterated that

*"The patient's folder was so important in that it is the official document that contains the patient's details and therefore had to handle with outmost care" (*Participant 1*)*.

Participant 5 added that:

"The patient folder is one of the things in the ward I don't joke with at all. All the vital information

pertaining to the patients are kept in this folder. It usually contains the diagnosis, laboratory reports, and other information of the patient on the ward so we don't keep it at the bedside".

It could be deduced from the above that to a larger extent there was a limitation in the performance of handover process as only few of the nurses interviewed mention all the various stages in the process. The only exception which was noted throughout all those interviewed was that they all discussed performing the handover at the bedside of the patient.. Even though most of the various steps in the NMC handing over protocol were observed, they had their challenges in observing some of them which included establishing rapport, handing over of sensitive information, gadget on patients, equipment in the ward, controlled drugs and ward instructions.

Research question 2: What is the content of the communication that occurs during nursing handover?

Interview Question 2: What information do you give during the handover?

In this regard researcher was interested in knowing from the nurses what information they give to the incoming nurses during the handover process. Various experiences were shared by the participants.

Patient identification information

In this regard the nurses enumerated how they identify their patients during handover. Most nurses mentioned name, age, sex and parity of the

patient as the socio-demographic information they give during handover. The nurses generally mentioned some of the demographic information as follows:

> "*When we get to the patient's bedside, we make sure the name on the folder corresponds with the patient on bed. We normally call out the name, and we check on the parity to identify between two patients"* (Participant 7).

Another participant said she pays particular detailed attention to age, name and sex of the patient when she gets to the ward.

> "*When I'm on the ward I check to see that the name of patient is well written on her folder and bedside papers in order to avoid it been exchanged for another patient's folder which could affect treatment and medication of the patient"* (Participant 5).

Clinical state

Nurses again shared information in relation to the clinical state of patients during the interview. Here, I was interested in knowing from the nurses how they recognize the condition of the patients as they take over from their colleagues. Generally, it was noted that the clinical state identified by the nurses was based on either the diagnosis of the patient, stage in the disease progress and state of the condition of patient's health. Concerning the diagnosis of the patient, a midwife in the delivery ward explained that:

> *"Sometimes we may have two clients in labour with one having malaria or eclampsia as additional diagnosis. These are very critical conditions that make the patient weak. Although all two patients are*

in labour but one of them because of the malaria, eclampsia, or gastroenteritis might look sick than the other. We even have beds like eclamptic beds in the ward so when you get there; you know that patient is sick" (Participant 7).

Pertaining to the stage of the disease progress, a nurse used the word "chronically ill" to describe the clinical state of the patient. Nurses used words such as sick, stable or critically ill to describe the clinical state of the patient.

"You go to the critically ill patients to hand them over first. However, those who are stable or discharged, we only take verbal statement very quick. Merely, we don't ignore the critically ill patients even if we are in a hurry" (Participant 6).

Medical information

Participants' responses highlighted various medical information nurses give during handing over. Their deliberations showed that, most of the medical information provided was on medical instructions and medical interventions**.** Medical instructions include the reviews or plan, investigations requested by doctors and medications prescribed for the patient during ward rounds. For instance, Participant 3 said:

"*I will ask you about the review for today, what the doctor said and how the condition is so far. Whether a patient has been put on any new medication or treatment".*

Medical interventions also include outcome of care and medical procedures performed by doctors. Outcome of care include admission, discharge, referral, death, diagnosis and re-diagnosis as mentioned by the nurses and medical procedures were the special medical or surgical activities carried out by doctors on the patient. A nurse recounted:

> "*…And sometimes we inform the incoming nurse a patient needs re-suturing or an NG (nasogastric) tube to be passed for a special procedure. So that the doctor can be called or be remaindered for that particular procedure to be carried out"* (Participant 6).

Nursing information

In this regard I was interested in exploring from the participants the kind of nursing information that is given out during the handover process. Most nurses interviewed mentioned the information given to incoming nurses focused on nursing assessment information, activities of daily living for the patient, nursing procedures that have been carried out, pending nursing procedures, equipment and logistics, as well as current shift information. Assessment information nurses give include; the patient history, mobility status of the patient (whether patient is active, passive, or totally dependent on nurses): Below are excerpts from the

> *"So at the bedside, I seek for the history, the diagnoses, the progress or plan of care, review and what you have done during the shift for the patient such as vital signs, change of diaper or maybe there*

was change in the condition of the patient"(Participant 4).

Another nurse added that activities of daily living for the patient include information on activities such as bathing, toileting, feeding and dressing:

"We check whether the personal hygiene of the patient has been maintained. You have to make sure the patient's bed is well laid. If she is on urethral catheter, you have to make sure the urine bag is emptied. Her linen, if is dirty has been changed. During handing over if all these have not been done, we ensure they do it before allowing them to leave" (Participant 7).

Handover of nursing procedures include those procedures that have been performed already as well as those pending to be done. Relating to nursing procedures such as monitoring of vital signs, fluid intake and output, drug administration and wound dressing; a nurse said

"In handing over, the key things to handover are issues of blood transfusion and those on twice daily wound dressing, you need to notify your colleague because it is very important" (Participant 5).

To buttress the views of previous participants on the issue of nursing information, a nurse said she include pending procedures that need to be performed for the patient to the incoming nurses:

> "Any *other procedure that needs to be done, one after the other we inform them, and check the documentation"* (Participant 6).

Regarding equipment and logistics, most noted they give information on equipment and logistics used in the daily running of the wards. They added incoming nurses are informed about the availability and condition of these items:

> *"Then we check on the instruments; if ehmmm they have cleaned all the instruments and none has not been left in the decontamination solution. We also check the sonicaid and thermometers whether they are all working, then you handover all before you can leave for the incoming nurses to continue with the work"* (Participant 7).

To conclude on the nursing information, a nurse explained that, they give information on current shift. They indicated this information summarizes the general happenings on the ward during the shift:

> "*Then we talk about what went on during the shift"*
>
> (Participant 2).

It is evident from the responses from the nurses that content of communication as a key component of the handover was well documented and observed. Key content of the communication component included the nursing

information, clinical state as well as patient identification information. Nursing information such as patient history and mobility status of patient is passed on to their follow colleagues in the handover process. The nurses added nursing information that is given during the nursing handover were focused on nursing assessment information, activities of daily living for the patient, nursing procedures, equipment and logistics, as well as current shift information. Nevertheless, none of the nurses gave the physiological indicators for determining the clinical state of a patient except the ones that have been listed above.

Research question 3: What influences the type of information outgoing nurses handover to incoming nurses?

Interview Question 3. What factors make it difficult for your handover on a typical day?

Handover process comes with its challenges and difficulties. These challenges in one way or the other affect the quality of information that is passed on and invariably affect the care rendered to the patient. In view of this the investigator explored from the participants to ascertain the possible factors that could impede the handover process. Among the factors that emanated from the responses were grouped into three subcategories namely; organisational, human and environmental factors.

Organisational factors

These are processes that stem from the facility (organisation) or health system that hinders the performance of handover appropriately. Most of the nurses mentioned factors such as workload and shortage of staff, handover performed by unqualified personnel, patient centered care policy, lack of

printed standardized protocol, improvised procedures, inadequate time for hand over, inadequate logistics, ward culture, inadequate computers for use during handing over and taking up and lack of in-service training as organisational factors influencing handover. The following are some of the comments made by the participants:

> *"Also, because of the work overload and inadequate staff, we handover quickly and leave because we are already tired and don't want any trouble"* (Participant 1).
>
> *"Our hospital lacks printed standardized protocols. That is strict protocols that could guide the handover procedure. I believe if the hospital has printed and posted the protocols on the ward in a way to ensure handover there would not have been much difficulty" (*Participant 9).
>
> *"I will also say that there is inadequate logistics in our hospital. It hinders the smooth running of our activities and the handover process is one of such activities that it affect. Inadequate computers for use during handing over and taking up and lack of in-service training are some of the things that affect the quality of handover I do"* (Participant 8).

Human factors

These are human attitudes that hinder the proper performance of handover. Numerous human factors were enumerated by the participants

which include forgetfulness, lateness to work, familiarity, irresponsibility among staff, improper documentation, misunderstanding between staffs, theory practice gap, working experience, knowledge from school, reluctance to perform handover, use of phone during working hours, absenteeism, experience of nurse taking up, laziness, previous handover information and reading habit of nurses. Their views were revealed in some quotations below:

> *"The use of phone during working hours by some nurses has become the order of the day in our wards. They get glued to the phone so much that little or no attention is paid to the handover process. Another challenge could be irresponsibility on the part of the nurses, no one is willing to say I am the charge nurse, I am taking responsibility of this, I am doing this, I will handover, so they will do anything and handover anyhow and go"* (Participant 9).
>
> *"A large number of the challenges come from us o, some of the nurses easily forget to handover well. Some might even be in hurry to go home and therefore forget to handover properly. Again some of the nurses come in very late. Instead of them to come on time so proper handover process could be followed, they do not come"* (Participant 3**)**
>
> *I will say that knowledge from school and the experience from work really had impact on how I perform handover (Participant 4)*

> "I *think the first one is familiarity; we know ourselves so you just feel like, ok, pardon the person. If the person says I have done everything, there is no way you will question the person since the person is your friends. Sometimes you want to probe something and others will say you scrutinize things too much or give you name like 'madam perfectionist'. So you just move along believing in the persons. However after the person has left when you check it will be realized that most of the things has not been done as discussed*" (Participant 8).

Environmental factors

These include all the things in the surrounding of the nurse that hinder the performance of handover. Distractions and interruptions, nature of ward and natural events like rain storms were among the environmental factors narrated by the participants. A nurse stated:

> "*I'll say, Errrrr, interruption; sometimes while handing over, somebody will just bring an issue up and it will just interrupt with what you are saying. Issues which in most cases are not even related to the patients or sometimes somebody will just mention your name and you get destructed from what you are supposed to do"*(Participant 4).

Noise was also an environmental issue that affected handing over process. For instance, a nurse mentioned:

> *"And then noise, from the ward. Sometimes you are handing over and doctors just by you, are rounding and discussing things that also distract you"* (Participant 1).

The nature of the ward refers to whether the ward is an acute ward or chronic ward. The swiftness of activities organized on a particular unit or ward can influence the way handovers are performed on that particular unit. A nurse who had worked in emergency ward and currently at one of the medical wards said ;

> *"I worked at the emergency but there… I can say this place we take time to handover because in the emergency unit you always see incoming patients rushing in, so you do not have time to do handover properly. Unlike this place, if you have five patients, we know that our patients are five so when you are handing over, you are handing over five and we take our time to go through everything, but at the emergency unit because we have other patients being rushed into the unit, we hurriedly go through handing over in order to receive the others coming in"* (Participant 2).

A participant narrated that:

> "*Bedside nursing handovers are constantly interrupted by patients, healthcare personnel and the environment itself"* (Participant 5).

From the analysis of the factors affecting handover process, it can be deduced that organisational, human and environmental factors were basically the factors that impeded the smooth running of the handover process. Specific organisational factors such as work overload on nurses, inadequate staff, lack of printed standardized protocols, logistics constraint were mentioned. Irresponsibility on the part of nurses, forgetfulness, the use of mobile phones during working hours, and absenteeism were some of the human factors purported to be affecting handover process. Noise making, nature of the wards among others were narrated by the nurses to be environmental factors that affect handover process.

DISCUSSIONS

Discussion of Findings

The following discussions provided an interpretation of the combination of study findings from both the observational checklist and the interview. The discussions have been grouped into three thematic areas according to the research questions: how well the registered nurses followed the NMC handover protocol, the content of communication during handing over, and factors affecting nursing handover.

How well registered nurses at CCTH follow the NMC handover protocol?

Table 5 below shows the summary of comparison of commonalities and discrepancies between the two data sets results. For the purpose of this section I have used “observed” for results of the observational checklist and “described” for the interviews.

Table 5: Comparison of Commonalities and Discrepancies in the Observations and Interviews

	Steps in protocol	Observational checklist(n=33)	Interview (n=10)
Commonalities	Move around from bed to bed to handover patients (Movement)	33	10
1. Equal or more than half of the response	Check and confirms info about patients' charts (Patient's Chart)	27	5
2. Less than half of the response	Check and handover drugs and any other relevant resource available (Controlled Drugs)	13	3
	Handover ward annexes for incoming nurse to ensure they are clean(Handover of Annex)	13	2
	Report on any defects on equipment and request made for urgent repairs (Equipment)	11	3
	Report on departmental instructions and other important information (Ward issues)	9	2
Discrepancies	Welcome incoming staff (Welcome)	28	3
	Allow incoming nurse read ward report on patients (Report reading)	24	4
1.More in observation with less response in interview	Explain issues and answer any questions raised (Discussion)	30	2
	Handover sensitive information about patients e.g. condition of patients (Sensitive information)	24	3
	Establish rapport with patients during handover (Rapport)	28	4
2. Less in observation with more response in interview	Check with staff that gadget on patients are functioning (Gadget)	14	5

The result obtained from the table 5 showed that, few (2) steps in the protocol were observed and described by more than half of the participants. These were movement and patient's chart. There were discrepancies in most areas between the observed and described data gathered as shown by summary in Table 5 above. They include welcome, report reading, discussion, sensitive information, rapport, and gadget. These discrepancies include areas where more of the steps were observed than described and described than observed. These discrepancies in both instances described above could be attributed to the fact that the nurses knew they were been observed and therefore adhered to the strict compliance of the handover process. Observed discrepancies may also be the likelihood that, some nurses were just following the handover as a ritual and not really doing the actual handover as recommended by NMC. The discrepancies in activities observed more than described as shown in this work are similar to studies by Elkins (2009) and Wong, (2011) who identified that, sequence of transfer components varied in both the observed activities and the described activities.

To answer research question one which sought to seek how well registered nurses at CCTH follow the NMC handover protocol, it can be deduced that, to a lager extent, there was limited adherence to the handover process as indicated by the observed and described datasets. Two out of the thirteen steps achieved 100% performance in both data sets while there were discrepancies in the performance in the remaining steps. The limited compliance to the handover process is similar to work by Kumar et al.,(2015) who studied clinical handover practices among nurses and doctors in a neurosciences center in India. Their report concluded that, there was a

relatively inferior handover practice across all categories, in both groups (nurses and doctors).

Content of the Communication that Occurs During Nursing Handover

To answer research question two which is content of the communication that occurs during nursing handover, the findings were derived only from the interviews. The study found key components of the handover and this was well described by the participants. Most nurses in this study shared information on patient's identification, patient's charts (nursing information) and doctor's plan (medical information).The finding is in agreement with work by Athanasakis, (2013) who identified content of handover to include identification of the patient, clinical history, clinical status, care plan (tests or diagnostic procedures) and outcomes of care. The findings are further echoed in the works of Carroll et al., (2012) who identified most common information shared during handover to include the patient's demographics (i.e. age, sex), primary and secondary diagnoses, attending physicians, medications, vital signs, and plan of care. Another important finding was that, few of the participants in this study described information on state of gadget (5), controlled drugs (3), equipment they work (3), departmental instructions and other important information in the ward or facility (2).The important information on a ward may include pending procedures to be done for a client or an instruction to be followed in the management of a client. This aspect of the communication was highly neglected by nurses as shown by the described data. According to Halm, (2013), bedside rounds at the end of change-of-shift handoffs enable nurses to perform vital quality checks on equipment, alarms, intravenous catheters and

infusions. However, in this current study that was not the situation. It may be assumed that missing out some of this essential information may be attributed to lack of structured communication tool or checklist to guide the type of information outgoing nurses are to give to the incoming staffs. Again, according to Salzwedel, et al., (2013) and Sluisveld et al., (2017), using checklists has helped in managing information without missing important patient data. Several studies have found that using checklists improves the quality of the handover process and enhances quality of care and patient safety (ACSQHC, 2010; Burleton, 2013; Matic, Davidson &Salamonson, 2010; WHO, 2007; Wong et. al., 2008). This finding has implication for the need to consider the introduction of handover checklist in the study area.

Factors that Influence Handover Information among Nurses

The results obtained from the interview revealed that, handover process is affected by organisational, human and environmental factors. The finding support work by Siemsen et al. (2012), who study exposed that organizational factor constitutes a fundamental factor on patient safety in handover. Regarding organisational factors, majority of the nurses identified workload and shortage of staffs as setbacks to the performance of nursing handover. Result from this study support the findings by Alberta et al.,(2018) who stated that workload and stress influences nurse handover. Nursing staff shortage, matched with high workload, can have a negative influence on the calibre of care provided to the patients (Bodur&Filiz, 2010; Bost et al., 2012; Khater et al., 2015). Therefore in order the improve handover practices, there is the need to consider improving the nursing staffing level in the study area.

The finding from this work revealed that, lateness to work, forgetfulness, and experiences from work were the human factors that mostly influence the performance of nursing handover. This finding corroborates a study by Okine, (2017) who identified some behaviour of nurses such as lateness to work to affect their continuity of patient care. Another important finding in relation to human factor was forgetfulness and experience from work. The result obtained from the study support the research by Alyamany, (2013) on communication in verbal hand-over reports : which concluded that some nurses easily forget things, causing miscommunication which affects the handover quality. According to Segall et al.,(2012), it is possible that experienced providers, who handover or receive patients on routine, may forget to share or request information or incorrectly assume certain information. Hence in order to improve handover practice in the study area, ward in-charges should ensure staffs report to work early and these in-charges should join other members of staffs to handover and take up. These may be done in addition to adopting a handover checklist as explained above.

Among the environmental factors mentioned from the research were; interruptions and distractions resulting from emergencies and noise from staffs on the ward. This compares favorably with result of Kowitlawakul, et al (2015) who identified distractions in handover. According to them, human factor is the common cause of interruption. Furthermore, this result is Contrary to the research by Lozano, et al., (2015) who identified distractions in the ward to include noise from movement of carts and supplies, clothes and food, cleaning machines, the high volume of radios and televisions and telephone calls. In view of this, it is imperative for nurses to handover before

doctor's ward rounds begin. Again, chitchatting among staffs during handover should be discouraged to minimize distraction and interruptions to improve handover performance at the study area.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents an overview of the study, including methods of the study, summary of main findings, conclusions, implication for nursing practice, recommendations and area for further research. The study assessed handover process and communication among registered nurses at CCTH. Specifically, the study sought to assess handover process among registered nurses using the Nurses' and Midwives' Council of Ghana protocol as a guide, described the content of communication in handover from one nurse to the other, and identified factors influencing the types of information outgoing nurses' handover to incoming nurses.

To achieve this, a descriptive qualitative case study was conducted at the Cape Coast Teaching Hospital. An observational checklist was first used to assess 33 handovers across the 11 wards in the hospital. The wards, shifts and nurses were purposively selected. A semi-structured interview guide was used and administered through face to face interview; this was audio-taped and transcribed. The population for the interview consisted of 10 shift nurse in-charges who had earlier participated in the handover assessed by checklist. Data obtained from the observational checklist was analysed using percentage terms, while interviews were analysed thematically.

Summary of Key Findings

1. The findings of the study indicate that there was limited adherence to the performance of the handover process. This was evident through the result as it revealed that there were a lot of discrepancies between the

observational checklist and that of the interview data and few items on the nursing process was fully followed by all the nurses.

2. Key content of the communication component identified in the study included the patient identification information, nursing information, clinical state and medical information. In the context of the communication content, it was observed most of the nurses shared information centered on patient's identification, patient's charts (nursing information) and the doctor's plan (medical interventions). However, few information was shared on state of gadget, controlled drugs, equipment they work, departmental instructions and other important information in the ward or facility.
3. Another finding that emerged from the study is that handover process is affected by organisational, human and environmental factors. Organizational factors mentioned among many are work overload on nurses, inadequate staff, lack of in-service training or workshop, lack of printed standardised protocols, logistics constraint. Human factors such as lateness to work, forgetfulness, experiences from work, knowledge from school, irresponsibility on the part of nurses, the use of mobile phones during working hours, familiarity and absenteeism were also numerated. Among the environmental factors mentioned was noise making, nature of the wards. Among these three factors, it was the organizational factors that all the participants identified as influencing handover.

Conclusions

Based on the key findings, it can be concluded that, a significant number of registered nurses at CCTH do not adequately perform inter-shift handover by following the NMC handover protocol even though they have been taught at the pre-service training schools. In addition, most of the participants perform handover at the bedside which is the recommended place by the NMC. The study further showed that the information which the nurses exchange was mainly related to the patient care and ward routines. Limited information was found regarding hand over on state of gadget on patient, equipment nurses work with and departmental instructions and other important information such as information on pending procedures. Finally, a number of nurses identified certain organisational, human and environmental factors during the interview which influence the quality of inter-shift nursing handover.

Recommendations

As a result of the findings from the study, the following recommendations are put forward for consideration to improve the performance of nursing handover. This will be discussed under nursing practice, nursing education and future research.

Nursing practice

1. The Director of Nursing in collaboration with the in-service training coordinator may organise refresher training on nursing handover at CCTH.

2. The content of the training may include the standard handover protocol for NMC and a structured communication tool.
3. CCTH may adopt a structured communication tool or checklist such as SBAR to guide the information nurses share during hand over.
4. Ward in-charges at CCTH must be encouraged to participate in ward rounds as it was observed in the study that most of the nurses identified to lead handover were staff nurses who are the lowest rank in professional nursing in Ghana.
5. DDNS in-charge of the departments at CCTH may periodically join wards to monitor and encourage nurses to perform handover properly.
6. All ward in-charges may be encouraged to paste a copy of NMC handing over protocol on the wards to serve as a reminder to the nurses.
7. Handing over should be part of the topics discussed during orientation for new nurses and rotational nurses at CCTH.
8. The Ministry of Health must be encouraged to employ more nurses at CCTH to reduce workload on nurses for proper handover practice.

Nursing education

1. In nursing education, it will be important to add a comprehensive communication tool such as SBAR in the curriculum in the Nurses' and Midwives Training Colleges, and nursing students must be made to adhere to these protocols that will be inculcated into the nursing syllabus.

Future research

1. The nursing and Midwifery council should conduct similar studies on nursing handover in other health institutions to see if similar findings will be found so that necessary action can be taken to improve the performance of nursing handover.
2. There is the need for further research to be conducted on interventional studies to ascertain the implementation of standardized handover protocols in health facilities.

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APPENDICES

APPENDIX A: CONSENT FORM

TITLE OF PROJECT: Assessing Handover Process and Communication among Registered Nurses in Cape Coast Teaching Hospital

You are asked to participate in a study conducted by Charlaine Ama Mensah a final year postgraduate student at the University of Cape Coast offering Master of Philosophy in Nursing at Department of Nursing and Midwifery. Before agreeing to participate in this study, it is important that you read the following explanation. This statement describes the purpose, procedures, discomforts, benefits, as well as your right to withdraw from the study anytime.

PURPOSE OF THE STUDY

The aim of this study is to describe handover process and communication among registered nurses at Cape Coast Teaching Hospital.

EXPLANATION OF PROCEDURES

If you volunteer to participate in this, I would first assess how you perform handover using a checklist developed from NMC Ghana protocol, and then later invite you for a face to face interview. This will take on average of 45minutes.

POTENTIAL RISKS AND DISCOMFORTS

By participating in this research, you are likely to experience some form of discomfort. This includes the discomfort of someone assessing you while working and also discomfort of questioning. The team will try to decrease your chances of these discomforts from occurring. Again, the checklist and the

interviews will be carried out during normal working hours in order not to disturb the work in of the unit or department you are working in.

POTENTIAL BENEFITS

There is no direct benefit by participating in this project. However, this research is expected to provide data on handover process and communication which may improve the performance of this procedure.

PAYMENT FOR PARTICIPATION

You will not be paid for participating in this research project. Any question concerning this project should be directed to Charlaine Ama Mensah (0244884380) of the school of nursing and midwifery, university of cape coast.

Questions regarding any rights issues as a person in this project should be directed to the chairpersons of internal research board of University of Cape Coast and Cape Coast Teaching Hospital.

CONFIDENTIALITY

All information gathered from thisstudy will remain confidential. Your identity as a participant will not be disclosed to any unauthorized persons but will be kept as strictly as confidential. If information from your interview is used in publications or reports, I will not referto your identity in any way.

WITHDRAWAL FROM PARTICIPATION

Participation in this project is voluntary; refusal to participate will involve no penalty. You are free to withdraw consent and discontinue participation in this project at any time without prejudice.

CONSENT TO PARTICIPATE

I …….

- Confirm that I have read the written information to the study, ***assessing handover process and communication among registered nurses in Cape Coast Teaching Hospital,***and that the study procedures have been explained to me by study during the consent process for this study.
- Confirm that I have had the opportunity to consider asking questions about this study and I am satisfied with the answers and the explanations that have been provided.
- Understand that I grant access to data to authorized persons described in the information sheet.
- Have been given time and opportunity to consider taking part in this study.

Tick as appropriate (this decision will not affect your ability to enter the study):

I consent to participate in the above research study.

Signature of subject…….

Date…….

Signature of interviewer……

Date ……..

CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

TITLE OF PROJECT: ASSESSING HANDOVER PROCESS AND COMMUNICATION AMONG REGISTERED NURSES IN CAPE COAST TEACHING HOSPITAL

You are asked to participate in a study conducted by Charlaine Ama Mensah from the School of Nursing and Midwifery, University of Cape Coast. Before agreeing to participate in this study, it is important that you read the following explanation. This statement describes the purpose, procedures, discomforts, benefits, as well as your right to withdraw from the study anytime.

PURPOSE OF THE STUDY

The aim of this study is to describe handover process and communication among registered nurses at Cape Coast Teaching Hospital.

EXPLANATION OF PROCEDURES

If you volunteer to participate in this, I would first assess how you perform handover using a checklist developed from NMC Ghana protocol, and then later invite you for a face to face interview. This will take on average of 45minutes.

POTENTIAL RISKS AND DISCOMFORTS

By participating in this research, you are likely to experience some form of discomfort. This includes the discomfort of someone assessing you while working and also discomfort of questioning. The team will try to decrease your chances of these discomforts from occurring. Again the checklist and the interviews will be carried out during normal working hours in order not to disturb the work in of the unit or department you are working in.

APPENDIX B

OBSERVATIONAL CHECKLIST

TITLE: Assessing Handover Process and Communication among Registered Nurses at CCTH.

HANDOVER CHECKLIST

PART A: DEMOGRAPHIC INFORMATION

1. Gender: Female [ ] Male [ ]
2. Age: …….
3. Ward: …….
4. Work Shift: Morning Shift [ ] Afternoon Shift [ ] Night Shift [ ]
5. Rank: SN [ ] SSN [ ] NO [ ] SNO [ ] PNO [ ] OTHERS [ ]
6. Educational Background: Diploma, [ ] Post Diploma Specialisation, [ ] First degree, [ ] Masters [ ]
7. Number of Years of Nursing Experience:
8. Number of Years Spent on Present Ward:
9. Place of Handover: Nurses Station [ ] Designated Place [ ] Bedside [ ]
10. Format of Handover: Verbal [ ] Written [ ] Audio Taped [ ]
11. Number of Nurses Present at The Bedside Handover:
12. Number of patients on the ward:
13. Time handover started:
14. Time handover ended:

PART B: HANDOVER PROCEDURE

INSTRUCTIONS: OBSERVE THE HANDOVER KEENLY AND TICK (√) APPROPRIATELY

STEPS	PROCEDURE	PERFORMANCE	
		YES	NO
1	Welcome the incoming staff		
2	Allow incoming nurse to read the ward report on patients		
3	Explain issues and answers any questions that may be raised		
4	Moves around from bed to bed to handover patients		
5	Maintains individuality of patients, handover sensitive information about patient at the nurse's office e.g. condition of patient		
6	Establishes rapport with patients during handing over		
7	Checks and confirms information about patient charts		
8	Checks with incoming staff that gadgets on patients are functioning e.g. cardiac monitor, intravenous line, oxygen apparatus and suction machine, drainage tubes, Ryle's tubes, urinary catheters, chest tubes and intra-abdominal tubes etc.		
9	Check and handover-controlled drugs and any other relevant resources available		
10	Handover ward annexes for incoming nurse to ensure they are clean		
11	Report on any defects on equipment and requests made for urgent repairs		
12	Report on departmental instructions and other important information e.g. clinical lectures and departmental		
13	Handover important issues in the ward diary		

APPENDIX C

SEMI-STRUCTURED INTERVIEW GUIDE

SEMI-STRUCTURED INTERVIEW GUIDE QUESTIONS

Section A: Assessing handover process

A. Please describe your experience with nursing handover.

B. Kindly share with me how you normally conduct your handover? (Probe for taking up of the wards).

Section B: Assessing content of communication

A. What information do you give during the handover? Probe for

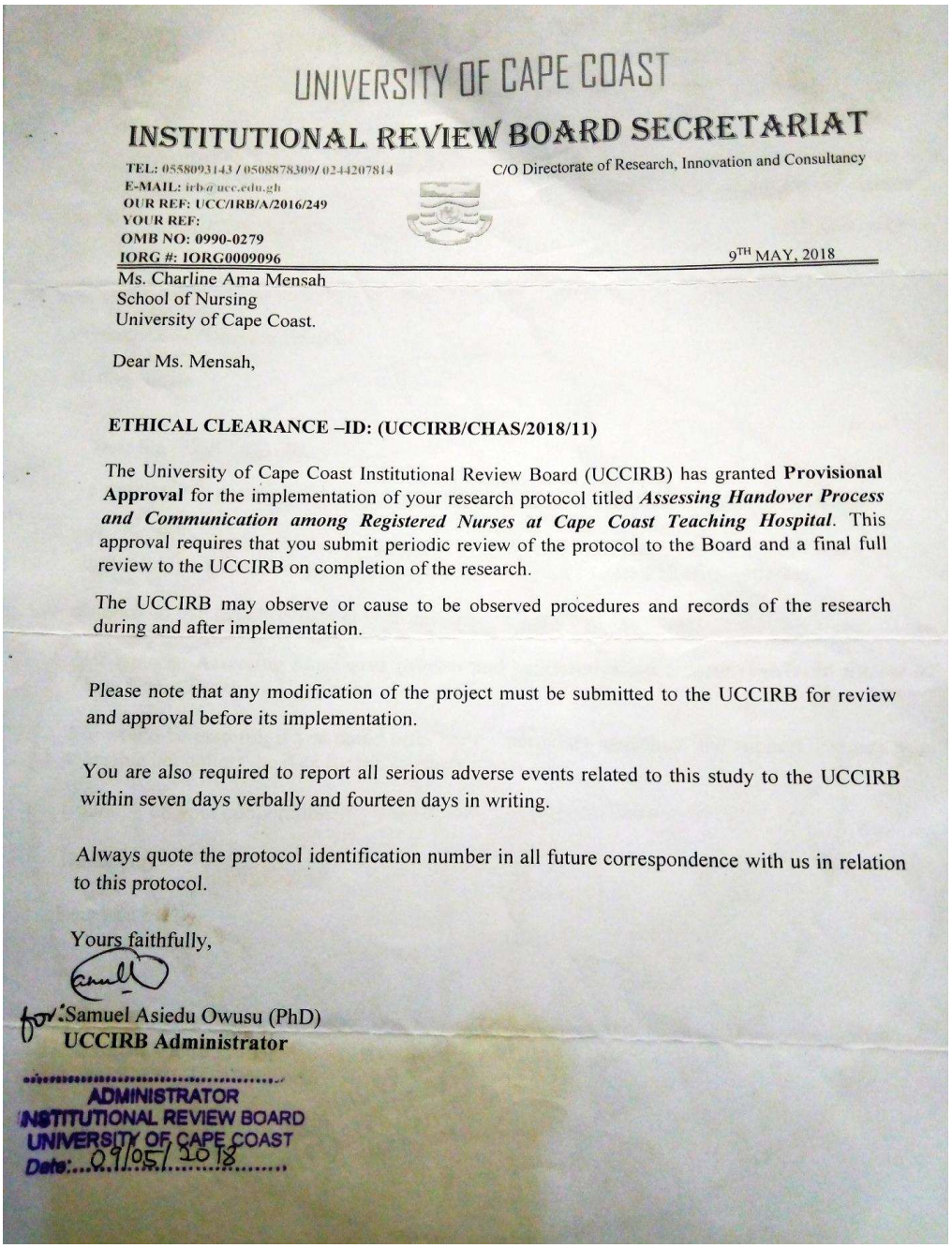
- Patient identification information
- The clinical state
- The medical information
- Nursing information

Section C: Identifying factors influencing nursing handover

A. What factors make it difficult for your handover on a typical day?

APPENDIX D

ETHICAL CLEARANCE FROM UCC IRB



UNIVERSITY OF CAPE COAST

INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309/ 0244207814
E-MAIL: irb@ucc.edu.gh
OUR REF: UCC/IRB/A/2016/249
YOUR REF:
OMB NO: 0990-0279
IORG #: IORG0009096

C/O Directorate of Research, Innovation and Consultancy

9TH MAY, 2018

Ms. Charline Ama Mensah
School of Nursing
University of Cape Coast.

Dear Ms. Mensah,

ETHICAL CLEARANCE –ID: (UCCIRB/CHAS/2018/11)

The University of Cape Coast Institutional Review Board (UCCIRB) has granted **Provisional Approval** for the implementation of your research protocol titled ***Assessing Handover Process and Communication among Registered Nurses at Cape Coast Teaching Hospital***. This approval requires that you submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research.

The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

Please note that any modification of the project must be submitted to the UCCIRB for review and approval before its implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

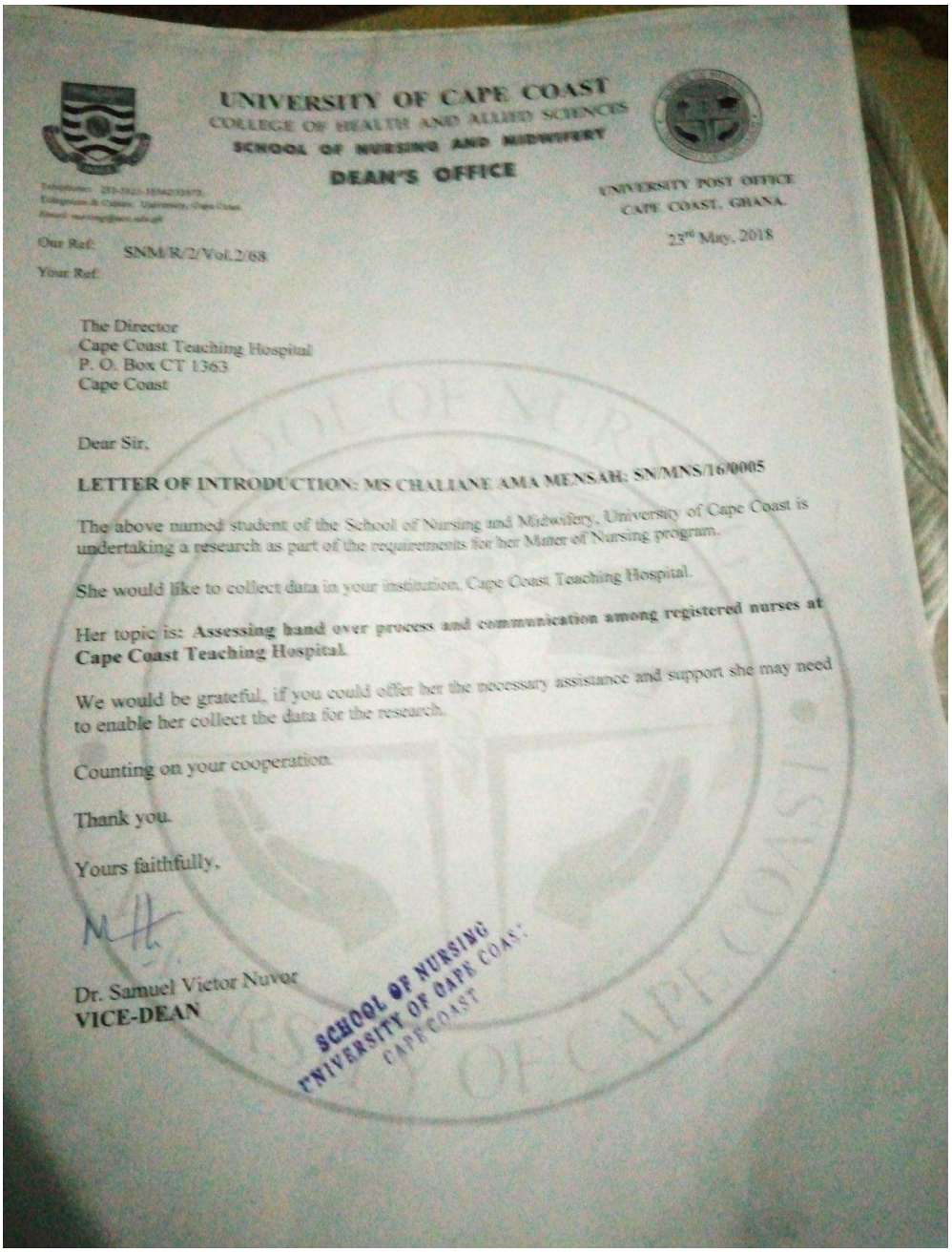
Yours faithfully,

for: Samuel Asiedu Owusu (PhD)
UCCIRB Administrator

ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF CAPE COAST
Date: 09/05/2018

APPENDIX E

INTRODUCTORY LETTER



UNIVERSITY OF CAPE COAST
COLLEGE OF HEALTH AND ALLIED SCIENCES
SCHOOL OF NURSING AND MIDWIFERY
DEAN'S OFFICE

UNIVERSITY POST OFFICE
CAPE COAST, GHANA.

Our Ref: SNM/R/2/Vol.2/68
Your Ref:

23rd May, 2018

The Director
Cape Coast Teaching Hospital
P. O. Box CT 1363
Cape Coast

Dear Sir,

LETTER OF INTRODUCTION: MS CHALIANE AMA MENSAH: SN/MNS/16/0005

The above named student of the School of Nursing and Midwifery, University of Cape Coast is undertaking a research as part of the requirements for her Master of Nursing program.

She would like to collect data in your institution, Cape Coast Teaching Hospital.

Her topic is: **Assessing hand over process and communication among registered nurses at Cape Coast Teaching Hospital.**

We would be grateful, if you could offer her the necessary assistance and support she may need to enable her collect the data for the research.

Counting on your cooperation.

Thank you.

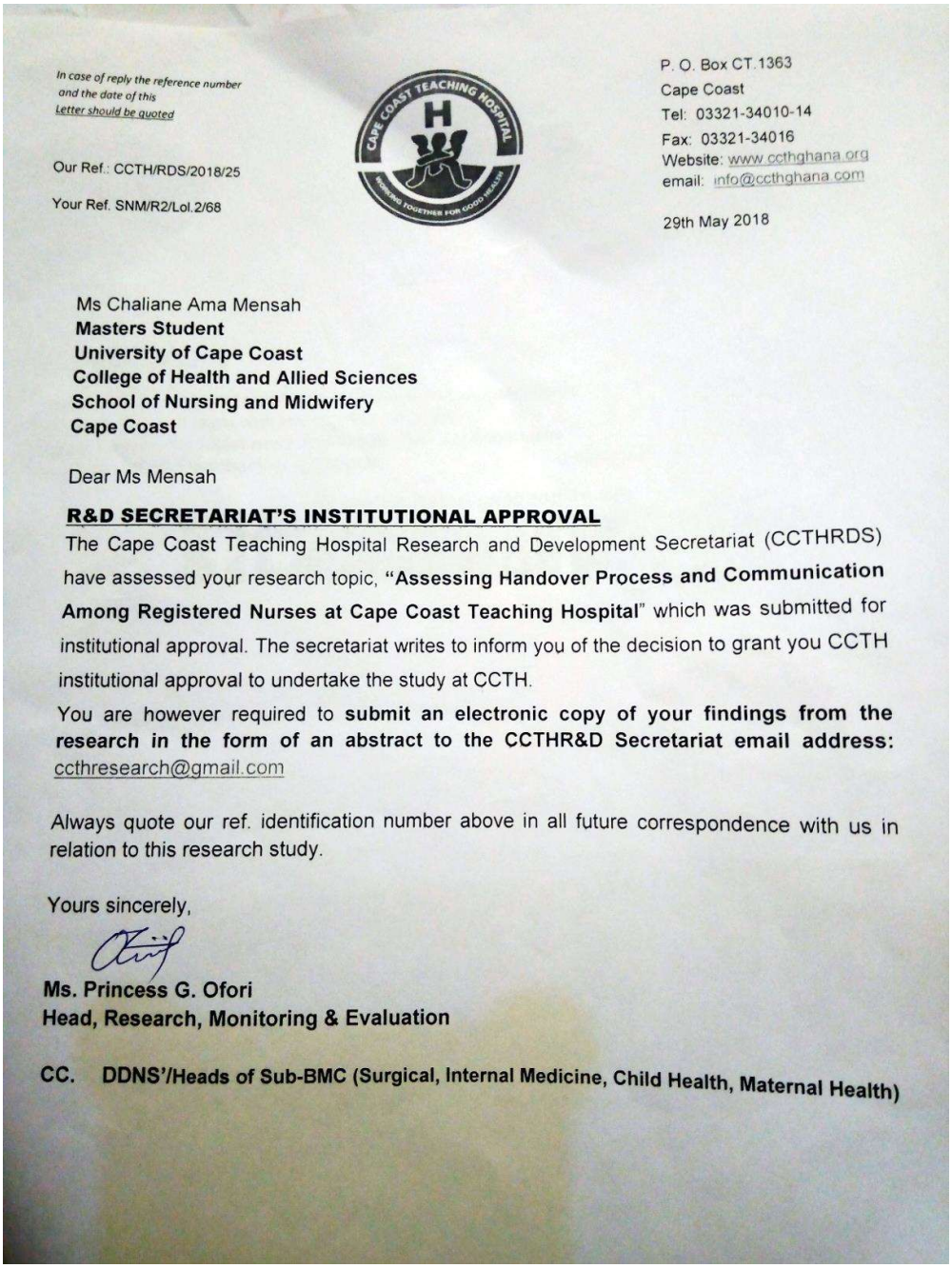
Yours faithfully,

Dr. Samuel Victor Nuvor
VICE-DEAN

SCHOOL OF NURSING
UNIVERSITY OF CAPE COAST
CAPE COAST

APPENDIX F

ETHICAL CLEARANCE FROM CCTH



In case of reply the reference number and the date of this Letter should be quoted

Our Ref.: CCTH/RDS/2018/25

Your Ref. SNM/R2/Lol.2/68

CAPE COAST TEACHING HOSPITAL

NURSING TOGETHER FOR GOOD HEALTH

P. O. Box CT.1363
Cape Coast
Tel: 03321-34010-14
Fax: 03321-34016
Website: www.ccthghana.org
email: info@ccthghana.com

29th May 2018

Ms Chaliane Ama Mensah
Masters Student
University of Cape Coast
College of Health and Allied Sciences
School of Nursing and Midwifery
Cape Coast

Dear Ms Mensah

R&D SECRETARIAT'S INSTITUTIONAL APPROVAL

The Cape Coast Teaching Hospital Research and Development Secretariat (CCTHRDS) have assessed your research topic, "**Assessing Handover Process and Communication Among Registered Nurses at Cape Coast Teaching Hospital**" which was submitted for institutional approval. The secretariat writes to inform you of the decision to grant you CCTH institutional approval to undertake the study at CCTH.

You are however required to **submit an electronic copy of your findings from the research in the form of an abstract to the CCTHR&D Secretariat email address:** ccthresearch@gmail.com

Always quote our ref. identification number above in all future correspondence with us in relation to this research study.

Yours sincerely,

Ms. Princess G. Ofori
Head, Research, Monitoring & Evaluation

CC. DDNS'/Heads of Sub-BMC (Surgical, Internal Medicine, Child Health, Maternal Health)

APPENDIX G

NMC HANDING OVER PROTOCOL

INDEX NO. OF CANDIDATE..... CENTRE :..... DATE:.....

NAME OF CANDIDATE:..... ..... SIGNATURE:.....

TASK: **HANDING OVER THE WARD**

RATING KEY:
0 - Step omitted
1 - Step performed incorrectly
2 - Step performed correctly with hesitation
3 - Step performed correctly with confidence
4 - Step performed correctly, speed and style excellent

INSTRUCTION: For each step draw a circle round the appropriate numeral to indicate the candidate's level of performance.

COMPONENT TASKS	RATING
1. Welcomes the incoming staff	0 1.2 3 4
2. Allows incoming nurse to read the ward report on patients	0 1 2 3 4
3. Explains issues and answers any questions that may be raised	0 1 2 3 4
4. Moves around from bed to bed to hand over patients	0 1 2 3 4
5. Maintains individuality of patient, hands over sensitive information about patient At the nurse's office e.g condition of patient	0 1 2 3 4
6. Establishes rapport with patients during handing over	0 1 2 3 4
7. Checks and confirms information about patients charts	0 1 2 3 4
8. Checks with incoming staff that gadgets on patients are functioning e.g. cardiac Monitor, intravenous line, oxygen apparatus and suction machine, drainage tubes, Ryle's tubes, urinary catheters, chest tubes and intra abdominal tubes etc.	0 1 2 3 4
9. Checks and hands over controlled drugs and any other relevant resources available	0 1 2 3 4
10. Hands over ward annexes for incoming nurse to ensure the are clean	0 1 2 3 4
11. Reports on any defects on equipment and requests made for urgent repairs	0 1 2 3 4
12. Reports on departmental instructions and other important information e.g clinical Lectures and departmental conferences	0 1 2 3 4
13. Hands over important issues in the ward diary	0 1 2 3 4

SCORE OBTAINED..... DATE : .....

NAME OF EXAMINER ..... SIGNATURE: . .....