

**THE FAST QUEUE SERVICE POINT: THE ANALYSIS OF THE
QUALITY OF CARE FOR PRIMARY HEALTH CARE USERS IN
ETHEKWINI DISTRICT, KWAZULU-NATAL**

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**Thesis submitted in fulfilment of the requirements for the Doctoral Degree in
Nursing in the Faculty of Health Sciences at the Durban University of
Technology**

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Date : July 2015**

Declaration

This is to certify that the work is entirely my own and not that of any other person, unless explicitly acknowledged (including citation of published and unpublished sources). The work has not previously been submitted in any form to the Durban University of Technology or to any other institution for assessment or for any other purpose.

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Abstract

This mixed methods study aimed to assess the functioning and processes of the Fast Queue Service Point in order to analyse the quality of care rendered in primary health care (PHC) facilities in the eThekweni district of the KwaZulu-Natal Province in South Africa. The Fast Queue Service Point provides service in PHC facilities for health care users requiring short consultations. Congestion of PHC facilities is a result of increased access to PHC services with the introduction of free PHC services. This congestion was aggravated by the decentralization of services from hospitals to PHC level such as the introduction of Nurse Initiated Management of Anti-Retroviral Therapy (NIMART). In 2010, the National Core Standards (NCS) for health establishments were formulated further to the PHC Service package, to address issues of quality.

An explanatory sequential mixed methods study design was used and data collection was conducted in two phases; the quantitative data collection phase consisting of two subsets of observations namely; the retrospective record review and structured observations of the Fast Queue Service Point process. The Statistical Package for the Social Sciences (SPSS) version 22 was used to analyse data. During the second phase semi-structured interviews were conducted with PHC staff members to describe their experiences of the Fast Queue Service Point and to clarify issues from the quantitative phase.

Although Fast Queue Service users received sufficient care, there were important care assessments that had been inadequately performed or omitted. These included discussing side effects of medications and or immunizations and management thereof. Childrens' weights were not interpreted, an important aspect for children under five years of age. There was also lack of supportive supervision coupled with shortage of resources and too many time-consuming written records that were required to compile accurate statistics.

Retraining and in-servicing of health personnel and making resources available, would assist in strengthening patient assessment, management and recording

thereof. While clinic managers require to offer supportive supervision to health care providers, provision of lower categories of staff would be beneficial in supporting PNs and ENs so that they have time to compile records for statistics purposes, which were found to be taking up the bulk of their time. The framework for continuous quality improvement in implementing a Fast Queue Service in PHC settings was developed based on the findings of the study.

Key words: Continuous quality improvement, Fast Queue, Primary health care (PHC), Quality assessment, Quality improvement, Quality, Quality of health care

Dedication

I dedicate this thesis to God Almighty, who is my Lord and Saviour, who gives me life and protects me even when the evil one is after it. I Bless the Lord with all my soul.

To my late father, who could neither read nor write, but had the foresight to give me education; “Ngiyabonga Nzuza elimconjwana, Nozishada kaMaqhoboza”. My mother: Madlamini, who never got over my studying all the time “kanti usuyofunda kuze kube njani?”, yet encouraging me when I got dejected.

My loving daughters, Nosipho and Thula Mngoma who have been supportive during the course of my study thank you “MaCenge amahle”. They were by my side during sleepless nights, keeping me company and encouraging me. Without them I wouldn’t have had the drive to endure this tough journey. They also made life easy for me as a single parent, by being respectful and responsible.

I will not forget my two angel sons, who are looking at me from beyond the sky, Andile and Phila “May their souls Rest in Peace”.

Acknowledgements

I would like to thank God Almighty for granting me the opportunity to realise my dream as well as the strength to embark on this journey.

The SANTRUST South Africa Nursing Pre-Doctoral Programme: - thank you for such a great opportunity. I am unashamedly a researcher today through the lessons learned from all the presenters (local and international) who facilitated the workshops. My colleague and friend Mrs. TSP. Ngxongo—we had a wonderful experience in Cape Town, thank you for your support.

I would also like to thank the FUNDISA/SANTRUST collaboration for the financial grant that enabled me to complete the project.

The promoter of my project, Prof Nokuthula Sibiya, your continuous guidance, encouragement and valuable feedback, support and dedication to the project is highly appreciated. You motivated me when it was hard to go on, I could not have asked for a better supervisor. Thank you for your understanding.

Prof N. Gwele, co-promoter of the project, for finding time in your very busy schedule to read and correct my work and to consult with me and making me see reason. Thank you so much I have learnt a lot from you.

Prof Kathleen Nokes from Hunter University, New York, for your time spent reading my work and for your humility and empowerment through lessons learnt from your teaching; you gave me something that nobody will ever take away from me. Thank you.

My colleagues in the Nursing Department at the Durban University of Technology (DUT), for your support especially while attending the SANTRUST workshops; it would have been impossible without you. Thank you to the research office of DUT for their support.

The Municipality Health Unit, KZN Department of Health and the PHC Managers for allowing me to conduct the study in their facilities. Thank you to all health care professionals who participated in the interviews and observations. To all health care users who permitted me to review their records. Thank you.

The statisticians, Prof. Catherine Comiskey of Trinity College in Dublin, Ireland and Gill Hendry, thank you for your assistance. The language editor Dr Richard Steele, thank you for your expertise in editing the thesis. I have learnt so much from you. Ms LL. Dlamini thank you for translations from isiZulu to English and back, your input has not gone unnoticed. Thank you to the research assistants without whom the mammoth task of data collection would not have been possible.

To all my friends whom I could call at anytime of the day and lament about how tough things were. You listened without complaining and you would always show interest in the progress I have made. You have all been my pillar of strength and my support system. Thank you. Everyone who rendered any input towards this project, one way or another, your input is highly appreciated.

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Chapter Outline

Chapter 1: Overview of the study	Overview of the research problem, purpose, objectives and significance of the study.
Chapter 2: Literature Review	An in-depth review of literature related to the topic under investigation to give the researcher information on what has been published or discussed in the literature regarding the phenomenon, including the legislative framework and guidelines.
Chapter 3: Theoretical Framework	Discussion of the theoretical framework used to guide the study.
Chapter 4: Methodology	Overall plan for addressing the research question and ethical considerations.
Chapter 5: Presentation of Results	Presentation of the overall findings
Chapter 6: Discussion of results	In-depth discussion and interpretation of findings. Conclusions, recommendations and limitations of the study.
Chapter 7: Development of a framework for continuous quality improvement	Development of a framework for continuous quality improvement based on the study's findings.

Acronyms

Acronym	Full word/sentence
AIDS	Acquired Immune Deficiency Syndrome
ANC	African National Congress
ARFHU	Accredited Rural family health units
ART	Anti-retroviral therapy
BMI	Body mass index
BP	Blood pressure
BS	Blood sugar
CHC	Community health centre
CINHAL	Cumulative index to nursing and allied health literature
COPC	Community oriented primary care
COPHC	Community oriented primary health care
COHSASA	Council for Health Service Accreditation of South Africa
CVD	Cardio vascular disease
DHS	District health system
DM	Diabetes Mellitus
DOTS	Directly observed treatment shortcourse
DUT	Durban University of Technology
EAP	Employee assistance programme
EDL	Essential Medicine List
EML	Essential Medicine List
EMTCT	Elimination of Mother-to-child Transmission of HIV
EN	Enrolled Nurse
ENA	Enrolled Nursing Assistant
ERIC	Education Resources Information Center
FM	Facility manager
FP	Family planning
FS	Facility supervisor
HCT	HIV Counseling and Testing
HIV	Human immune deficiency virus

HPT	Hypertension
IMCI	Integrated management of childhood illnesses
IoM	Institute of Medicine
KZN	KwaZulu-Natal
LNMP	Last normal menstrual period
MCWH	Mother, child and woman's health
MDG	Millennium Development Goals
MDR TB	Multi-drug resistant Tuberculosis
MMC	Medical Male Circumcision
MUAC	Mid upper arm circumference
NCS	National Core Standards
NDoH	National Department of Health (of South Africa)
NHI	National Health Insurance
NIMART	Nurse Initiated Management of Anti-retroviral Treatment
NRHU	Non-accredited rural health units
PEFR	Peak Expiratory flow rate
PEM	Protein energy malnutrition
PHC	Primary Health Care
PMTCT	Prevention of Mother-to-Child Transmission of HIV
PN	Professional Nurse
RCT	Random controlled trial
RDP	Reconstruction and Development Programme
RN	Registered Nurse
RtHB	Road to health book
RtHC	Road to health chart
RSA	Republic of South Africa
SANC	South African Nursing Council
SPSS	Statistical Package for the Social Sciences
SRU	Smallest replicable unit
STG	Standard treatment guidelines
STI	Sexually transmitted infection
TB	Tuberculosis
X-DR TB	Extreme drug resistant tuberculosis

TB	Tuberculosis
UNAIDS	United Nations Acquired Immune Deficiency Syndrome Programme
UNICEF	United Children Emergency Fund
WHO	World Health Organisation

CHAPTER 1 : OVERVIEW OF THE STUDY

1.1 INTRODUCTION TO AND BACKGROUND OF THE STUDY

The primary health care (PHC) approach is the strategy that was formulated by the World Health Organization (WHO) in 1978 in Alma Ata at a conference where PHC was defined as:

Essential care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford... (WHO/United Nations Children's Emergency Fund (UNICEF) Joint Report 1978: 5).

The WHO also defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO 1998: 1). The definition of health has evolved and has since gone beyond this definition to denote health as "a resource for everyday life, the object of living with peace, shelter, education, food, income and stable eco-system, sustainable resources, social justice and equity as requirements that enable one to attain health" (WHO 1986: 3). This definition of health depicts health as being a basic human right and is enshrined as such in various chapters of the constitution of the Republic of South Africa of 1996 (NDoH 1996).

Prior to 1994, health care in South Africa was highly fragmented along racial lines, was inequitable and inefficient and directed more towards curative than preventive and promotive health (African National Congress 1994a: 1). When the African National Congress took over in 1994, the health system needed restructuring to correct the legacies of the apartheid era. The newly elected government adopted PHC as the health care delivery system and further ensured its implementation. Various legislation and policies were enacted to give direction to the ensuing changes in the health care delivery system. More PHC facilities

were built at places near communities' residential areas, "taking health care to the people". In order to achieve the goal of making PHC the generally available and acceptable health care delivery system, 14 health departments were combined into one National Department of Health (NDoH). The Reconstruction and Development Programme (RDP) was developed before the 1994 election as the vision of the African National Congress for the country. Its main aim was to improve the general living standards and quality of life of the general population (African National Congress 1994a: 2). The WHO's definition of health encompasses the aims of the RDP. In the same vein, the National Health Plan of 1994 was compiled, setting out the strategy that would be used to transform the health system and address the inequities of the past (African National Congress 1994b: 1).

To further realise its objectives the government developed the Constitution of the Republic of South Africa in 1996 and enshrined in this Constitution are the rights of citizens to health and the bold endorsement of the "Health for all" statement which was one of the main points of the Declaration of Alma Ata (Republic of South Africa 1996: 6). One of the key policy documents was the White Paper for the Transformation of the Health System in South Africa that was introduced in 1997. This is the document that presented the Comprehensive PHC approach which was the strategy that would facilitate changes in the health care system (Republic of South Africa 1997a: 6).

The main thrust of the White Paper (Republic of South Africa 1996: 6) was decentralisation of health care and health service delivery to districts hence 'the District Health System' (DHS) which was seen as the vehicle and an organisational framework for the delivery of PHC. The PHC approach has been combined with the DHS in what has come to be known as the district-based PHC. The principles of the DHS were overcoming fragmentation, striving to attain equity, comprehensive services, effectiveness, efficiency, quality, access to services, local accountability, community participation, decentralisation, a developmental and intersectoral approach and sustainability (National Department of Health 1997: 28). The same principles were embraced in the formulation of the National Health Act No 61 of 2003 (Republic of South Africa

2003: 40). The district based PHC model of health care provision necessitated changes in the organisation of the health care system and distribution of the health care services. Public health resources were redistributed to the provinces and districts and health care institutions were rearranged into the different levels of health care according to the expertise that would be available at each level, to create and facilitate a referral system between health institutions. Figure 1.1 depicts the hierarchy of the levels of care within South Africa's health care system.

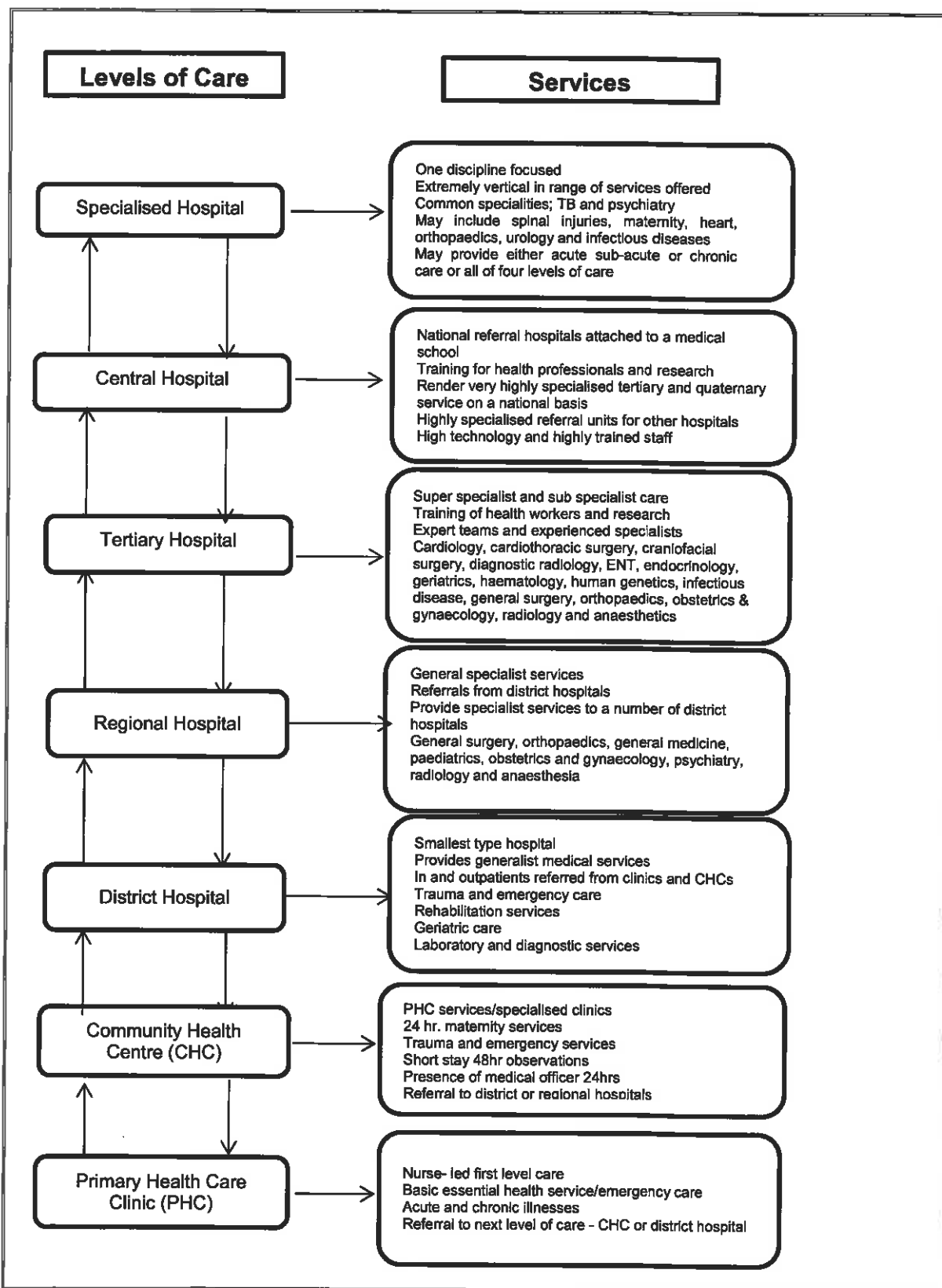


Figure 1.1: Levels of health care (NDoH 2011a: 29)

The Comprehensive PHC Service Package for South Africa is one of the important documents that were released in 2001 which aimed at standardising care with the purpose of defining the services to be rendered through the district health system (DHS). The Comprehensive PHC Service Package for South Africa introduced the Fast Queue Service Point (also known as Fast Queue), which is a service to reduce wait time for people that need short consultations, those that have already been seen previously in a community health centre (CHC) or hospital and are collecting medications to reduce waiting times at these facilities (NDoH 2001). The components of the fast Queue Service Point are:

- Routine check-up procedures for chronic diseases, namely: blood pressure measurement; weighing; measurement of glycaemia and cardiac auscultation;
- Monitoring for the presence of complications;
- Identifying and referring people with disabilities;
- Instructions on taking prescribed medicines;
- Organisation of health education sessions for groups or individuals;
- Booking of next PHC clinic visit;
- Prescription continuation according to protocols and instructions;
- For children: checking on schedule for preventive activities; information, education, counseling to caretakers; rheumatic heart disease prophylaxis; counseling of parents regarding the effects of medication should children fall pregnant while on treatment; sending of reports to schools if agreed by parents or legal guardians;
- Mental health protocols, the components of which include severe chronic psychiatric patients needing basic management; dispensing and monitoring of medications for a limited period according to protocols; identification and referral of patients for periodic re-assessments; crisis counseling and referrals; screening, treating and counseling of patients with less severe mental disorders and those who abuse substances; referrals to CHC, psychiatric team for new and serious cases;
- Walk through service, which is a service for patients with special needs like working patients. Services are made available to suit their working hours as part of extended service hours or patients could attend very early before

other services start. The components of this service are dispensing of family planning methods, daily Directly Observed Treatment Short Course (DOTS), patients can collect medications for chronic conditions, immunisations, and other agreed upon services like geriatrics, emergencies and dispensing of sunscreen to people with albinism (NDoH 2001).

To ensure standardisation of treatment and availability of medicines the Standard Treatment Guidelines (STG), previously the Essential Drug List (EDL), now known as the Essential Medicines List (EML), was developed for PHC and hospitals. The EML is most useful for nurses who work independently without the immediate assistance of a doctor, as a guide in the treatment of common ailments seen at PHC clinics and it stipulates when to refer health care users to the next level of health care facility.

Rather than revising the Comprehensive PHC Service Package for South Africa, the NDoH has taken quality a step further and re-enforced what is stipulated in the PHC package, particularly the Fast Queue. In 2011, the NDoH, in consultation with various stakeholders, including the private sector and non-governmental organisations, formulated the National Core Standards (NCS) for health establishments which, according to the National Minister of Health Dr Aaron Motsoaledi, "... reflect the new vision for South Africa's health services...." (NDoH 2011b: 5). This was a national drive to improve the quality of care (Lourens 2012: 1). The NCS has been prioritised in all health establishments, training of staff has been vigorously conducted and quality champions identified to take the vision forward.

The NCS are used as a standard guideline towards providing quality health services, improved quality of care to enhance the current health outcomes, and restore patient and staff confidence in the public and private health sector. There are seven cross cutting domains which are vital for good quality management specifically a) patients' rights, b) patient safety, clinical governance and care, c) clinical support, d) public health, e) leadership and corporate governance, f) operational management and g) facilities and infrastructure (NDoH 2011b: 15).

The first domain is of importance to this study since it explains what is expected of the facility in order to ensure that patients' rights are upheld (NDoH 2011b: 5).

Domain 1: Patients' rights

- Respect for patients by facility staff, access to health facilities, respect and dignity for health care users, hygienic environment.
- Access to information for patients: patients to be given information regarding their treatment, their care after discharge and their participation in research where necessary, clear sign posted services, information and service timetables.
- Continuity of care: patients requiring referrals receive the necessary care and support.
- Reducing delays in care: waiting times and queues are managed to improve patients' satisfaction and care, and serious patients' treatment is prioritised.
- The waiting list kept as short as possible, however some of the areas that have been prioritised in terms of the NCS are reducing queues, decreasing waiting times and improving patients' safety and care (NDoH 2011a: 8).

The NCS require nurses to refocus on patient engagement and ensure patients' satisfaction with nursing care. The purposes of the NCS are to:

- a) Develop a common definition of quality care which should be found in all health establishments in South Africa, as a guide to the public, managers and staff members at all levels;
- b) Establish a benchmark against which health establishments can be assessed, gaps identified and strengths appraised; and
- c) Provide national certification of compliance of health establishments with mandatory standards (NDoH 2011b: 8).

1.2 PROBLEM STATEMENT

The adoption of the district based PHC, which decentralised the responsibility of healthcare and health service delivery to districts, meant that people requiring

medical assistance must first report at their local PHC facilities. They will then be referred to the next level of care if there should be such a need, in order to decongest the hospitals and CHCs. Furthermore, the National Health Plan of 1994, prioritised the health care needs of vulnerable groups including maternal, child and women's health (MCWH), and introduced free health care for children under six years of age, pregnant and lactating women. Subsequently free health services were extended to all people attending PHC facilities (African National Congress 1994b: 67). In the same regard, the Comprehensive PHC Service Package (NDoH 2001), suggests three service points for organisations to ensure the smooth flow of patient queues in the clinics and mobile services namely; children, adults and the Fast Queue or Repeats (NDoH 2001: 9). The Fast Queue Service Point has three protocols namely:

- a) Chronic disease care;
- b) Mental health service; and
- c) Walk through service.

Poorly staffed health care facilities face challenges of attending to complex health problems encountered at PHC level, which have been compounded by the impact of the human immunodeficiency virus/ acquired immune deficiency syndrome (HIV/AIDS) epidemic on the disease profile coupled with the emergence of the HIV/TB co-infections. In the late 1990s to early 2000s anti-retroviral treatment (ART) was not available in the public sector. This meant that only a small proportion of the population had access to ART in the private sector hospitals and doctors until 2004 when these were made available in the public sector. The majority people, falling within the low socio-economic population group of South Africa, the same population severely impacted by the HIV/TB epidemic, can only afford to seek help at the public sector facilities. The morale of staff members had been negatively affected by the excessive morbidity and mortality of PHC users before the widespread roll-out of ART prior to 2004. While the introduction of ART brought hope for the AIDS sufferers and health workers, PHC facilities received increased numbers of users from hospitals' referrals. To up-scale the availability of ART and to increase accessibility, PHC nurses were trained to initiate treatment (NIMART) in PHC facilities (Republic of South Africa 2010: 1; Fairall *et al.* 2012: 89). The question that remains is: 'Are the human resources

and PHC clinics' infrastructure adequate to meet the increased demands for PHC services at PHC clinics?'

While availability of life-extending drugs was a welcome improvement in PHC delivery, it has had a major impact on health care delivery in South Africa. The influx and overcrowding at PHC clinics affect health care service delivery adversely, with queues growing longer and patients having to wait many hours for service. To avoid overcrowding in the CHCs, patients requiring referrals would need a letter from the clinic, and those who came without a referral letter, should be sent to the clinic section of the CHC and those with serious illnesses should be referred directly from the clinic to the hospital without going to the CHC first (NDoH 2001: 10).

According to Sokhela *et al.* (2013: 5), different facilities utilise the Fast Queue Service Point for various purposes. This causes patients to wait for long periods of time and some patients might feel disadvantaged when they perceive themselves as belonging to this queue. Sokhela *et al.* (2013: 6) also asserted that while the Fast Queue Service Point has been instrumental in the promotion of access to health care, a major goal of the PHC approach, it would appear that PHC facilities were not prepared for the sudden influx of clients in terms of infrastructure and human resources. The NCS for health establishments were formulated further to the PHC Service package, to address issues of quality. Within each of the seven domains are sub-domains, standards which further breakdown the domains into sub-sections or critical areas which together describe the scope of that domain namely domain, sub-domain, standard, criteria and measures (NDoH 2011b: 13). The main focus of this study was on the quality of care in the Fast Queue Service Point and quality is mainly encompassed within the sub-domains of the first domain of the NCS, namely: patients' rights. The sub-domains are: respect and dignity, information to patients, physical access, continuity of care, reducing delays in care, access to a full package of services and complaints management measures (NDoH 2011a: 12). However, the NCS are still fairly new in health establishments, especially at PHC clinics, and as such its impact on quality is yet to be established. With all these challenges in mind,

the researcher was interested in studying the quality of care, specifically at the Fast Queue Service Points in PHC clinics.

1.3 RESEARCH QUESTION

What is the standard of quality of care that is rendered by the health personnel in the Fast Queue Service Point in PHC facilities in the eThekweni district, KwaZulu-Natal (KZN) province South Africa?

1.4 PURPOSE

The purpose of the study was to evaluate the implementation of the Fast Queue Service Point processes in order to analyse the quality of care rendered by PHC personnel. The two-phase explanatory mixed methods study obtained the quantitative data first, which were analysed and followed by the qualitative phase consisting of interviews to clarify issues from the quantitative phase and to analyse the implementation of the Fast Queue Service Point with respect to the Comprehensive PHC Package and the NCS. The ultimate aim was to develop a framework for continuous quality improvement guidelines for enhancing the Fast Queue's quality of service delivery.

1.5 OBJECTIVES

The objectives of the study were to:

Phase 1

- Determine the implementation of the Fast Queue Service Point by the PHC personnel.
- Determine quality of care provided to Fast Queue users.

Phase 2

- Describe the experiences of PHC personnel assigned to work at the Fast Queue Service Point.

Phase 3

- Develop a framework for continuous quality improvement, based on the findings.

1.6 SIGNIFICANCE OF THE STUDY

The results of the study might assist in ensuring that guidelines are clear and practical for the intended implementers and this might be applicable to PHC clinics throughout South Africa, provided that each PHC clinic's unique characteristics are accommodated.

In light of the continued shortage of highly trained health personnel, especially nurses, in South Africa (Georgeu *et al.* 2012: 7), the findings might enhance the more effective strategies to shorten waiting time for health care users.

Accessibility of health care facilities might increase when health care users know that they are not going to wait for long periods, those who need to be fast tracked, will be provided services expeditiously leaving other users with enough time for consultations.

1.7 OPERATIONAL DEFINITIONS

Continuous quality improvement: a never-ending effort to identify gaps and challenges in quality of a service and rectifying them to maintain good quality standards.

Health care: any care rendered to any person who has presented at a health institution for consultation with the health care professional.

Health care professional/provider: all categories of nurses employed in a PHC facility

Health care user/patient: any person that accesses the health facility needing care/assistance also referred to as patients.

Health facility: any health care establishment.

Patient satisfaction: is considered as the extent to which patients feel that their needs are being met by the service provider.

PHC: is the first level of care rendered mainly by nurses in a PHC facility.

PHC facility/clinic: is the first level of care institution where basic medical care is rendered.

PHC Personnel: any individual that is employed in health care facility rendering PHC services also referred to as health care providers.

Polypharmacy: prescribing multiple drugs to an individual without due consideration for drug-disease or drug-drug interactions (Cassimjee and Suleman 2009: 1079).

Quality: excellence of a service in meeting customer needs.

Quality assessment: systematic regular review of quality activities.

Quality assurance: ensuring prevention and management of quality problems through planned activities.

Quality control: activities and systems used to maintain the quality of a service that has been achieved.

Quality of care: refers to the extent to which a facility is able to meet its users' needs and expectations. Quality was measured through checking whether all appropriate clinical tests and procedures were carried out by health care providers and if interactions between health care providers and users occurred according to the Comprehensive PHC Package and NCS.

Triage: the process of sorting patients according to the seriousness of their condition so that the more serious ones go through first.

The Fast Queue Service Point: Is the service for health care users that require short consultations that have been seen previously in a hospital, CHC or another PHC facility and have been referred to the PHC clinic for treatment.

1.8 SUMMARY

This chapter presented the background of the study which discusses PHC as the vehicle for health care delivery as recommended by WHO in 1978 and how it has evolved to include the HIV/AIDS pandemic as well as the increasing non-communicable chronic conditions. The problem statement describes how the problems in PHC facilities have unfolded to warrant this study whose purpose and aim were to understand the Fast Queue processes and how the quality of care is maintained. The objectives of the study assisted the researcher to achieve the aim and purpose of the study. The next chapter will focus on the literature review.

CHAPTER 2 : LITERATURE REVIEW

2.1 INTRODUCTION

As indicated in chapter one, the Fast Queue Service Point was introduced as part of the Comprehensive PHC package for South Africa in 2001. The primary aim of this service was to facilitate the decongestion of PHC facilities and to promote the standardisation of care, with the purpose of defining the services to be rendered through the DHS (NDoH 2001: 9). The implementation of the Fast Queue Service Point remains problematic for health care providers and its effect on quality of care is a source of debate hence this study. In this regard there is a need for a thorough review of literature to be carried out to find out what is already known about this phenomenon; the quality of care provided for the Fast Queue users. The current chapter presents a review of literature related to what knowledge already exists on the topic and in the area of PHC quality. Fink (2010: 3) views a literature review as: "A systematic, explicit, comprehensive and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners". For better understanding, it was deemed vital by the researcher to explicitly explain the steps taken towards reaching and deciding on the literature that was used in this study.

Authors, including Polit and Beck (2012: 95), regarded a literature review as the evaluation of existing literature, about the phenomenon being studied, in order to provide the overall context and identification of knowledge gaps for further research. Furthermore, Burns and Grove (2009: 95) defined a literature review as the presentation of the work that has been published by the scholars on the topic of interest. In keeping with each of the above-identified definitions, it was imperative for the researcher to critically analyse previous studies to determine their limitations and interpret their findings (Burns and Grove 2009: 599). The literature draws attention to how quality is assessed, controlled, improved and maintained in different settings of the health system including PHC services. In

this regard, the literature review focussed on current debates relating to quality in PHC generally and to Fast Queue Services specifically.

Qualitative and quantitative researchers offer different perspectives on literature reviews, debating whether literature review should be conducted before or after the study has been conducted. Qualitative researchers, particularly grounded theorists, believe that little or no review of the literature should be conducted before data collection, in keeping with their philosophical belief that the explanation of the phenomenon should emerge from the themes emanating from collected data (Glaser 1978: 31). Some researchers would conduct a limited literature review before data collection (Polit and Beck 2012: 61).

Glaser (1978: 31) posited that substantive reading of the literature should not be carried out before the research is done so as “not to contaminate one’s effort to generate concepts from the data with preconceived concepts that may not really fit, or work or be relevant”. Whereas Strauss and Corbin (1990: 50) asserted that literature should be limited to the background of the research before data collection. Contrary to the qualitative researchers, the quantitative researchers assert that a literature review is vital in that it provides them with the existing knowledge on the phenomenon comprising the basis from which they work, because quantitative research is conducted within the context of previous knowledge. In quantitative research, a literature review is done prior to data collection (Polit and Beck 2012: 58). Accordingly, the primary purpose of literature review is to provide the understanding of available research while highlighting the weaknesses and strengths of studies related to the topic of interest. It also demonstrates to the reader that the researcher has a good understanding of the work that already exists within the particular field and most critically; it highlights gaps in knowledge within the chosen field of study justifying the need for research.

In health care systems, there are specialised areas that have not been fully researched previously, and related research might be limited. In order to understand the domain, the researcher could be required to review studies sourced from closely related thematic areas, so that inferences could be drawn

about a specific study. The Fast Queue Service Point is one area that is specialised and has been sparsely researched, hence an inferential review was warranted.

2.2 DATA SEARCH STRATEGY

The use of libraries has been seen as the starting point to search for books and journals, but electronic databases have gained so much popularity that researchers have increasingly become less reliant on the traditional library to search for literature. The choice of search strategy is also essential in order to obtain high quality reviews. In this study, a thorough search for studies that were reviewed was conducted through browsing various electronic data bases including:

- EBSCO Host
- Academic Search Complete
- Cumulative index to Nursing and Allied Health Literature (CINAHL) Plus with Full Text
- Education Resources Information Center (ERIC) on the EBSCO Host platform
- Medical Literature on-Line (Medline) with Full Text
- South African (SA) e-publications
- Science direct

Prior to the literature search; the researcher decided on a plan to gather information such as identification of key search terms which assisted to direct the researcher toward literature that covers the topic under study. In order to yield maximum results when conducting a literature search, each phrase was used independently and also combined with one of the other key terms to try and broaden the search parameters. The literature search was conducted at different stages of the research process. The following key search terms were used to search literature.

Table 2.1: Search terms

<ul style="list-style-type: none">• Fast Queue• Health care• Health care quality• Primary health care (PHC)• Polypharmacy in PHC• Quality control in PHC• Quality assessment in PHC• Quality assurance in PHC	<ul style="list-style-type: none">• Quality of child health services• Quality of family planning services• Quality in PHC• Quality of health care• Quality health care• Quality improvement in PHC• Triage in PHC
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2.3 ELIGIBILITY CRITERIA FOR INCLUSION OF STUDIES IN THE LITERATURE REVIEW

During a literature review, explicit criteria for including or excluding a report from the review should be clearly specified. As such, the literature search yielded a number of studies. However, many of them were not adequately relevant to the phenomenon being studied as they did not meet the following inclusion criteria:

- Only studies that were about quality in PHC settings, including hospitals' outpatient departments, were considered.
- Studies that were reviewed were published or unpublished research that were pertinent to quality of care including: conference proceedings, discussion and position papers, expert opinions, reports and peer-reviewed articles. Dissertations and theses conducted under the auspices of tertiary education institutions were included.
- Consideration was also given to legislation and policy with regard to the changing South African Health System including policies that attempt to improve quality of health care. These policies and legislation were considered vital and relevant because they give direction to and guide the health system and practice.
- Only studies published in English were included in the review.
- Only literature from validated databases was used, in view of the challenge of authenticating literature data sources. Only the mentioned databases were used to search literature.
- Research reports that were published ten years ago were considered. If a document provided invaluable information which was not available, or which

lacked clarity in newer versions of literature or if it is policies and legislation it was used even it was older than ten years. Although the researcher would have liked to limit literature by date of publication, as research in the field of quality in PHC is sparse, particularly on the phenomenon of the Fast Queue Service Point, that exclusion by date would have possibly eliminated studies which offered critical insights into the state of knowledge in the quality of care in the Fast Queue Service Point of PHC.

There is scarcity of literature on the quality of care in PHC, as a result policies and legislations were also reviewed as they form the basis of the changing health care system of South Africa as well as offer a directive towards rendering quality care.

2.4 STUDIES EXCLUDED FROM THE REVIEW

During a literature search, some studies did not fit the study's focus, and were excluded from this study. Such studies focussed on:

- Quality of care for patients admitted to hospital;
- Quality of very specific care modalities;
- Quality of care for sick babies; and
- Quality of care for acute illnesses.

2.5 HIERARCHY OF EVIDENCE AND TRIANGULATION ISSUES

Polit and Beck (2012: 727), defined an evidence hierarchy as “a ranked arrangement of the validity and dependability of evidence based on the rigour of the method that produced it; the traditional evidence hierarchy is appropriate primarily for cause–probing research”. Researchers should realise that not all evidence is equal in terms of its validity. To assist the interpretation and evaluation of research findings, hierarchies of evidence have been developed which rank research according to its validity. The major focus on the hierarchies has been effectiveness; hence the Randomised Control Trial (RCT) is taken as the gold standard in quantitative research. RCT is viewed as providing the highest level of evidence, because the processes used during RCTs, minimise

confounding factors influencing the results compared to uncontrolled studies and opinion pieces. The lowest evidence is opinions of authorities and expert committees while the strongest evidence is systematic reviews of RCTs.

Therefore, there is general agreement that RCTs rank above all other methods of research and those studies that are uncontrolled are ranked at the bottom. In nursing, the best evidence is about reliability, and precision of nursing assessment measures and determinants of health and wellbeing. Where there is insufficient information on nursing studies, other sources are utilised such as bench-marking data, pathophysiological data, chart reviews, quality improvements and risk data and clinical expertise (Polit and Beck 2012: 29). Legislation and policy rank lower in the hierarchy of evidence because they are not research. However there has been a need to appraise these as well for reasons stated above. It is well documented that both qualitative and quantitative approaches are appropriate for exploring health care issues, despite discussions about their technical differences in terms of rigour, validity and reliability. The two approaches complement each other to generate knowledge useful for nursing practice (Burns and Grove 2009: 22). Hence studies from both approaches will be reviewed. In the next chapter, paradigms of these two approaches will be shown to complement each other in answering the question being asked in the study, namely; what is the standard of quality of care that is rendered by the health personnel in the Fast Queue Service Point in PHC facilities in the eThekweni district, KwaZulu-Natal (KZN) province, South Africa?

2.6 PRE-REVIEW CONSIDERATIONS

An effort has been made to ensure that a coherent and relevant analysis of pertinent literature has been carried out. This study is complex in that the choice to explore the research topic using a mixed methods approach creates unique challenges that require the researcher to modify aspects of the literature review. The study focused primarily on the quality of care in PHC settings. There are other settings which function similarly to PHC such as hospital outpatients' departments known in South Africa as "gateway clinics". These are PHC facilities that are within or in very close proximity to a hospital's buildings. Primary as well

as secondary research reports were reviewed. Some issues, relating to “methodological variation”, needed clarification before the proper literature review could be carried out. It is difficult to define quality, and hence quality of care is assessed in various formats, and various aspects are assessed at any given time.

A number of studies have been conducted to measure quality of care through patient satisfaction within the different aspects of PHC; this is done to consider the patients’ views when planning patient care. Quality of care is assessed on different aspects of health care, including waiting times; communication with the health care providers, quality of care for specific patient groups, accessibility, adherence to treatment protocols and the use of guidelines. For consistency of the literature reviewed, strict inclusion and exclusion criteria were adhered to. A brief review of the studies brings to the fore a number of realisations which describe current evidence and opinion within the quality of care in PHC settings. The studies included in the review were mostly carried out over the last ten years and are relevant to the study of quality of care in PHC situations.

2.7 DEFINING QUALITY OF CARE

Quality of care has been defined in many ways by various authors. The Institute of Medicine (2001), defined quality of care as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge (Institute of Medicine 2001: 9). Quality of health care and quality improvement are priorities on the agenda of most countries’ health systems, but it is not easy to define. Previously, quality of health care was assessed in terms of cost and patient satisfaction, but in recent years assessments of quality have included efficient use of resources and effectiveness of health care. It is therefore imperative that the concept of quality care should be clearly understood.

Generally, health care describes any care rendered to any person who has presented at a health institution to be seen by a health care professional. In defining quality of health care, Campbell, Roland and Buetow (2000: 1612), identified two main dimensions of the quality of care namely: accessibility and

effectiveness, implying that the health care users can receive the care they need and that care is effective when they receive it. Furthermore, effectiveness has two elements: the clinical and interpersonal care as related to the individual needs, in other words the health outcomes of individual health care users are dependent on the fact that they can access effective health care. In addition, health care cannot be of good quality if it is inaccessible and/or ineffective. These authors defined quality of health care in terms of Donabedian's structure, process and outcome categories.

Structure implies the physical requirements for delivering health care, process being the actual care given and outcomes the consequences of the interactions between individuals and a health system. Outcomes are not components of health care but rather components of care (Campbell Roland and Buetow 2000: 1612). Structure includes factors like physical characteristics of the buildings, availability of equipment, consultation hours and staff characteristics. These factors enable health care users to access and receive health care and will increase or decrease the likelihood of high quality health care. Process involves what is done with the health care users within the health system. These aspects include technical interventions which occur when health care providers apply their knowledge of disease and medicines and inter-personal interactions where members of the health team interact with the health care users at the level of social and psychosocial management. Outcomes are consequences of care which are influenced by structure as well as process (Donabedian 1980: 100).

According to the Institute of Medicine (2001) and the WHO (2006a), quality health care describes health care services for individuals and populations, which increases the likelihood of desired health outcomes and are consistent with current professional knowledge. To deliver quality care, a health system needs to work well for patients and professionals alike. Health care should be safe, timely, effective, efficient, equitable and patient-centred (Institute of Medicine 2001; WHO 2006a: 9). These six components are already encompassed in the principles of PHC (WHO/UNICEF Joint Report 1978), which means that quality of care is built into PHC.

In health, the 'raw material' entering the health system is a patient and the "finished product" is the health of the patient and his degree of satisfaction (Francu and Francu 2012: 147). Terms that are related to quality are; standards, quality assurance and continuous quality improvement. Good quality of care impacts positively on both health care user and staff satisfaction, improving efficiency and effectiveness of health care provision in the public and private sectors thus resulting in the public trusting the health system more, thus improving access to public health facilities (Whittaker *et al.* 2011: 60). PHC offers cost effective and accessible health care to the underserved communities. Quality is the major goal of health services and should be evaluated regularly. According to De Maeseneer (2009: 133), there is evidence that countries with a strong comprehensive PHC system, which is a cost-effective health system and affords all communities high quality care, also provide better overall quality care. In South Africa, the Comprehensive PHC Package emphasises disease prevention, early diagnosis and management of health problems (NDoH 2001: 9).

2.8 VARIABLES PERTAINING TO QUALITY OF CARE

Enquiry into the quality of care in PHC has consistently focused on a number of significant variables, particularly exploring the widely used patients' satisfaction levels, patients' perceptions of the quality of care and waiting times before being consulted. There are specific conditions that have been given special attention with regard to quality of care, particularly with adherence to the use of treatment guidelines for clinical conditions such as asthma, hypertension and diabetes mellitus. The quality of care for certain groups of patients such as children, the elderly and women of child bearing age who are sometimes studied as separate entities or combined. Researchers and theorists have studied quality of care with varying results as will be found in the discussion of literature below; further research is needed that provides an in-depth picture of quality of care for users of the Fast Queue.

2.9 PATIENT SATISFACTION

There is a growing trend to assess quality using patient satisfaction surveys, as patient satisfaction is growing in importance. Patient satisfaction is considered as the extent to which patients feel that their needs are being met by the service provider. Positive patients' perceptions of care often translate into more positive outcomes in their clinical experience, developing longer lasting relationships with health care providers and assuring satisfaction as well as compliance, continuity of care and better health outcomes (Harutyunyan *et al.* 2010: 12).

Many studies in this area suggested that patient satisfaction is a good measure of quality in health institutions (Harutyunyan *et al.* 2010; Al-Eisa *et al.* 2005). Although this is a very "subjective" measure of quality of care, it is widely used and accepted by researchers. Overall assessment of quality of the facility might produce good results in terms of high levels of quality and satisfaction. However, if specific service areas are assessed individually, results might change (Harutyunyan *et al.* 2010; Al-Eisa *et al.* 2005). Even when overall patient satisfaction is high, there are areas within the clinic which render better services than others. The overall satisfaction with the care in a facility in Kuwait was rated at 88.6% but the highest satisfaction score was for pharmacy 92% and the lowest score was for buildings (Al-Eisa *et al.* 2005: 11). In a Georgia PHC setting, patients rated the overall level of PHC high in all domains of clinical behaviour and pertaining to the organisation of care. Doctor-patient relationships were rated as being excellent, as well as the level of medical care, informational support and organisational care. However, patients recommended that some improvements were required in the same areas that they had rated so highly (Pitskhelauri, Chikhladze and Pitskhelauri 2012: 2758).

Patient satisfaction levels are sometimes related to the patients' demographic characteristics. In Kuwait, younger and literate females showed significantly lower levels of overall satisfaction with the PHC facilities. However, males who were illiterate and older showed higher levels of satisfaction. This could be attributed to the fact that illiterate and older patients might be less demanding because they might lack knowledge, and might also feel dependent on health

care providers for their wellbeing (Al-Eisa *et al.* 2005: 11; Raftopoulos 2010: 115). Consistent with the findings of this study are the findings of a different study, conducted in Greece, which revealed that men were more satisfied with the physician because they felt more respected as the patients were physically protected, and their privacy was maintained, during physical examinations done by doctors (Al-Eisa *et al.* 2005: 11; Raftopoulos 2010: 115). This is consistent with the findings of a study conducted in a community with mixed characteristics, where social class perceptions of their own health needs were related to their satisfaction levels with the care that they had received. Older patients showed a higher level of satisfaction than younger patients as they had formed relationships with health care providers. Long waiting times proved to be a source of dissatisfaction among patients treated at the clinic. Communication with the doctor was cited as the factor that yielded high satisfaction levels with the service as this was associated with good relationships rather than the doctors' professional competence (Francu and Francu 2012: 148).

Some studies on patient satisfaction confirm that patients' perceptions of quality of care, and thus satisfaction with the service, might be influenced by various factors some of which could be extrinsic to the patient (Bamidele, Hoque, and Van der Heever 2011; Fomba *et al.* 2010; Salam *et al.* 2010). Factors, including personal trust, interpersonal interactions and provider-client relationships, might influence patients' satisfaction with the quality of care they had received. In a different study in a rural setting, despite the dilapidated physical state of the clinic buildings which were very cold in winter, a shortage of basic medications and equipment, patients still unexpectedly reported high levels of satisfaction.

Patient satisfaction was influenced by the physicians' interpersonal skills rather than by the actual quality of medical care. This was more pronounced in rural areas, where patients were poor and fully dependent on the PHC clinic for health care provision. These patients might be very grateful for the service provided, so that they could not evaluate it objectively for fear that they might jeopardise their chances of losing the little that they had. Furthermore, patients might be reluctant to hold health care providers accountable for quality standards that are impossible to attain because of the reality of the socio-economic situation and fear of

victimisation. This might be more so in small rural areas where health care providers and patients know each other and are neighbours. They could even be afraid that the health care providers might be punished for the negative reviews (Harutyunyan *et al.* 2010: 15). This is a predicament that most patients face, because PHC facilities have been built where communities are to increase accessibility of PHC services. Health care providers are allocated to work in clinics near their residences. This has advantages for both the patients and the health care providers in respect of understanding the dynamics of the community, contributing positively to patient care.

Patients, who had access to both rural and urban facilities within their reach, chose to attend at an urban facility. A study, conducted on 310 patients, assessed patients' satisfaction with the quality of PHC with respect to customers' profiles and health care seeking behaviours. This study reported that the majority of patients at PHC facilities were young females (15-24 years), in this particular study there were more married females in rural facilities compared to the city facilities. Patient satisfaction was also influenced by the geographic location of the facility; hence satisfaction levels were higher in the city centre than in the non-urban facilities. The marital status had no influence on satisfaction. Patients aged 25 and older were more satisfied than the younger patients. Younger patients had higher expectations and were more critical of the services than older patients (Salam *et al.* 2010: 3).

Similarly, Bamidele, Hoque and Van der Heever (2011: 172), found that patients attending a clinic, were mostly single employed females, who were satisfied with the overall services provided by the clinic and that the overall quality of care was good. Patients rated the pharmacy unit highest for providing quality service as well as satisfaction with the doctors compared to nurses who scored the lowest. The greatest dissatisfaction was with the long waiting times at the clinic. These findings were attributed to the fact that patients found individual consultations with the doctors to be fulfilling their purpose of coming to the facility. Additionally, Fomba *et al.* (2010: 260) found that the majority of respondents in their study, on the utilisation and perceptions of the quality in CHCs, were younger females who were housewives and illiterate. Contrary to the previous studies' findings, the

overall satisfaction with the service was not linked to age or profession. However, the illiterate felt more satisfied than the literate respondents. Easy access was cited as one reason for their attendance at the CHCs as well as continuous visits and skills of health staff. In order to improve quality, the respondents suggested the reduction of waiting times and increasing the numbers of staff members.

In a study done in Afghanistan, clients of PHC services reported relatively high levels of perceived quality. Patients were more satisfied when history taking and physical examination were thorough, consultations were with a doctor and communication was good. In this study, the client's and provider's gender did not affect the perception of quality but if both the provider and the patient were female, quality was perceived to be higher and lower when waiting times were perceived as being long (≥ 2 hours) and transport fares to and from the facilities were expensive (USD 50) (Hansen *et al.* 2008: 386).

In most countries health care is provided through both the public and the private health sectors and the situation in South Africa is no different. It has been found that there are differences in the quality of care between these sectors. The private health facilities are better resourced than the public ones in terms of structure, equipment, staffing, availability of medication, staff remuneration, interpersonal relationships and waiting times are shorter. Therefore patients attending private health care facilities will display higher levels of satisfaction than those using the public facilities with large numbers of patients. Due to high rates of unemployment and poverty, so many people attend the public health facilities that they cannot cope with the high demands placed on public health care facilities. Patients in a public facility had low levels of satisfaction associated with long waiting times and shortages of medicines which were often 'out of stock'. This was the major determinant of patient dissatisfaction with the public health facilities in Tanzania, Kenya and Ghana (Hutchinson, Do and Agha 2011: 9).

When patients visit a clinic they expect to receive medications for their illnesses, which is not necessarily always the case. Sometimes a patient might need a health talk about the presenting symptom which may not need treatment with medication. It is a different case where the patient needs to receive medication

but cannot because of stock depletions. A study conducted in the North West Province of South Africa, showed similar results because more than half of the patients were dissatisfied with the availability of medicines and other supplies, and a high dissatisfaction level (63.1%) was reported concerning the inaccessibility of doctors. However, most of the patients (74.6%) felt good about having their illnesses discussed and perceived that as good health education which led to satisfaction with the service (Bediako, Nel and Hiemstra, 2006: 14). Communication comes up as a good determinant of patient satisfaction with the service. In her study to assess the experiences of users with the Fast Queue at PHC in eThekweni district in South Africa, Sokhela *et al.* (2013: 44) found that most patients were highly satisfied when the health care providers communicated with them. This was the case even if the communication was not health-related because they said it made them feel human and respected. One of the most effective ways to identify what is important to consumers is to ask them directly in order to explore the PHC users' perceived quality of care, care expectations and satisfaction with the PHC services provided to them. It is, however, evident that there other compounding factors that affect or influence patients' satisfaction levels with the service which might cause patient satisfaction surveys to produce subjective data. Whether patient satisfaction surveys could be used as a sole measure of quality of care remains yet to be determined.

2.10 THE USE OF GUIDELINES

Guidelines are commonly used in health care as the gold standard to support health care providers who would normally work independently at PHC clinics, mostly with little or no support from a doctor. This is especially so in the rural areas where there are gross shortages of nurses and doctors. Guidelines are also useful for improving and maintaining quality and also to guide the practice of health care workers and are used as indicators of the quality of care rendered. Quality assurance is a major factor in health care and the guidelines are used as tools to monitor quality care in the health sector.

The quality of appropriate drug use is monitored through the prescribing habits of the health care providers and it also ensures that drugs are not prescribed unnecessarily leading to medication abuse and polypharmacy. With the improvement in health care and hygiene practices, especially in more developed countries; the lifespan of the population is increasing. Improvement in technology and management of communicable diseases such as TB, as well as urbanisation enabled more people reach their old age than in previous decades. This paved a way for changed disease patterns with increased chronic diseases, known as diseases of lifestyle. This has created a greater demand for long-term quality health care services for chronic conditions compared to acute conditions (Bushardt *et al.* 2008: 384).

A conference paper by Kalula (2011: 22) highlighted a greater demand for health services in South Africa with the increase in non-communicable diseases like hypertension and diabetes. This is attributable to an increase in the life expectancy which means more older people require long term care. It is therefore important that quality of care in PHC facilities is of a good standard to prevent disability in old people who could later require long term care. Kalula (2011: 23) further asserted that health practitioners are not well prepared to care for the elderly who not only require management of acute illnesses but also sustained management of complex multiple chronic diseases, with the potential to commit errors. However, Sequist *et al.* (2010: 480), argued that although quality of care has improved within the Indian Health System, which is a federal agency that

provides health care to 1.9 million Native Americans, those who receive care from this health system still generally have high mortality rates and decreased life expectancy. These authors further asserted that the increased number of patients suffering from chronic diseases emphasises the importance of the delivery of high quality care to prevent complications. As the number of elderly people increase in populations, so do chronic diseases, and health care providers acquired a new responsibility to prescribe appropriately in order to manage the multiple chronic diseases.

Bushardt *et al.* (2008: 384) concluded that for 1 027 chronically ill elderly people, six or more drugs were prescribed for 29.4% with 15.7% being inappropriately prescribed and 9% being overprescribed, or prescribed unnecessarily. Tinetti *et al.* (2008: 1410) found that elderly patients with multiple chronic diseases were treated with multiple drugs and were therefore at risk of fall injuries from the drugs' side-effects. However, most of these patients preferred to tolerate side-effects from medications, to obtain the maximum benefits, while others would forego medication benefits to avoid the risk of falling and injuring themselves.

Guidelines have been formulated to ensure that patients, suffering from specific diseases, receive evidence-based care (NDoH 2008a: iii). The Swedish Board of Health and Welfare published guidelines to treat asthma in 2004. In the same way, a survey conducted to assess adherence to guidelines with regard to asthma care found that PHC nurses carried out all the necessary procedures to assess the asthma patients, but that study did not assess how nurses prescribed medications (Calfjord and Lindberg 2008: 2). Similarly in South Africa an Essential Drugs Programme, consisting of an EML, was formulated in 1999 to promote rational drug prescription and use.

A retrospective analysis of 2 100 PHC prescriptions was done by Cassimjee and Suleman (2009) to determine the percentage of compliance to the STG of the Essential Drugs Programme in the treatment of hypertension, found that PHC scored a low 27% for adherence to the guidelines for treatment of hypertension. Two of the 21 PHC facilities scored 99% for prescribing the correct dose and 51.57% for prescribing the correct dose frequency. Their findings suggested that

when fewer drugs were prescribed per script, then the prescribing habits were better. The average number of drugs prescribed per patient was 4.045 which were much higher than that of neighbouring countries and this might be considered polypharmacy. Ehiri *et al.* (2005: 181) pointed out that, in assessing the quality of child health services, emphasis should be given to structure, but also to process with particular attention paid to the effective use of guidelines.

Thandrayen and Saloojee (2010: 16) concurred with these findings in that structural issues received more attention than issues of processes in measuring quality of care. Their research found that routine treatments were inadequately provided by health professionals in a rich city's PHC clinics, despite the availability of protocols and algorithms to follow. Like in many other countries, PHC facilities in India are the responsibility of the health workers and one of their main functions is to immunise children. The results of the study carried out in this setting, indicated that a significant number (78%) of health workers had no knowledge about the immunisation schedule and the skill of giving the vaccines. This was the case although clear guidelines had been provided (Lodhiya *et al.* 2012: 2).

In most developing and underdeveloped countries and rural areas, child health services are a priority. Governments always strive to ensure that there is a decline in the child mortality rate and therefore most child health services are provided by the public sector free of charge. In addition, there are varying opinions about the quality of care in PHC facilities, which in most countries is provided by the public sector (African National Congress 1994b: 10). The popular belief is that free health care services are equated with lower quality compared to services that are paid for. There might be a perception that if the service has been paid for, health care users expect value for their money. Furthermore, private facilities are better off structurally and are well equipped and the perception is that better quality is obtained because the service was paid for. The NDoH prioritised PHC and free primary care for children and young babies. These free services were later extended to pregnant and nursing women, and eventually to all PHC users (African National Congress 1994b: 84).

In their study Ehiri *et al.* (2005: 181) assessed the quality of child health services in PHC facilities in south east Nigeria and found that PHC facilities were well equipped for immunisations. Of health care workers, 68.3% had been trained about immunisations and their knowledge of immunisation was much higher (62%) than in other areas of care. In addition, Thandrayen and Saloojee (2010: 16) conducted observations at of well-baby clinical encounters in PHC facilities in a rich city in South Africa found that although health professionals were adequately trained and facilities well equipped, routine examination procedures were poorly performed and babies' growth monitoring and management were inadequately assessed and/or reported for babies.

The Road to Health Cards (RtHC) were requested during all consultations (100%), but 99% of the children were weighed with 88% weights correctly plotted and 94% were interpreted correctly. Immunisations were offered to all eligible babies (100%) while developmental milestones were asked in only 26% of the observed consultations. Inadequate health promotion and prevention activities such as growth monitoring, immunisation and developmental assessments were not performed whereas the health care providers had all the means to perform these. The authors used their findings to conclude that the quality of child health services, offered by the PHC facilities in the city of Johannesburg in South Africa, was disappointingly poor. Supervision is key to ensuring that health care providers perform at an acceptable standard and regular observations and card reviews need to be carried out to ensure quality standards. Each child health care worker needs to know the required standard of quality that should be provided at every child visit.

2.11 QUALITY OF CARE AND ACCREDITATION OF FACILITIES IN THE AFRICAN REGION

The accreditation programmes aim at ensuring the quality of PHC services. An accreditation process involves an independent comprehensive systematic and periodic assessment of compliance with a set of standards or domains in all areas of health care to improve the quality of care. The accreditation status remains valid for a certain period of time, after which the accreditation officers audit the

facility again and scores the facility accordingly. The accreditation status may change, if the facility is found to be no longer compliant with the prescribed standards. There have been numerous initiatives in an attempt to improve the quality of health care delivery (Whittaker *et al.* 2011: 61).

Abdel-Razik *et al.* (2012) conducted a study in rural Egypt to compare the quality of care rendered in accredited and non-accredited facilities. The researchers hypothesised that the accredited rural family health units (ARFHUs), compared to the non-accredited rural health units (NRHUs), would comply better with the quality standards. They also assumed that the ARFHUs would be better resourced in terms of availability and proper management with resultant improved service outputs. Using a quality checklist, data revealed that ARFHUs achieved 81% of the standard quality score against 79% for the NRHUs exceeding the ARFHUs by only 2% (Abdel-Razik *et al.* 2012: 13). There were areas of care where the NRHUs scored 100% such as in family planning services versus 97% for the ARFHUs. In well-baby services both facilities obtained 94% for immunisation. The results show no significant change after accreditation, and no difference was seen between accredited and non-accredited facilities. The accredited facilities failed to achieve 100% in two consecutive years 2007 and 2008 which could "indicate the inability of the accreditation programme to have dynamic responses to quality assurance" (Abdel-Razik *et al.* 2012: 13).

Similar results were found in the Philippines where the Department of Health implemented a quality assurance programme, whereby PHC facilities were certified for meeting certain criteria as set out in the quality standards document (Catacutan 2005: 65). The quality of preventive health services, curative and monitoring programmes of certified and non-certified PHC facilities were compared. The results from this study concurred with the results from the previous study. This report also indicated that certified facilities performed no better than the non-certified facilities for preventive and monitoring programmes and were insignificant in the area of curative programmes. For new family planning acceptors, non-certified facilities fared much better than the certified facilities. This is an indication that certification of the facilities did not improve the

processes necessary for the achievement of better health quality outcomes (Catacutan 2005: 65).

2.12 QUALITY AND ACCREDITATION OF FACILITIES IN SOUTH AFRICA

The Council for Health Service Accreditation of Southern Africa (COHSASA) is an organisation which dealt with quality improvement and accreditation of hospitals in 1993 and PHC was registered in 2005. The aim of this organisation was to assist health facilities to achieve standards in a piece meal style, whereby incentives and certificates would be given for sections where standards had been achieved in order to encourage good behaviour. Over a period of time all standards would be achieved and the facility would be accredited, and would be required to maintain the standards in order to retain the accreditation status (Whittaker *et al.* 2011: 61). In 2010, the NCS for health establishments reflected what was expected and required to deliver safe quality care and there are tools to assess compliance to these standards. These are fairly new and training is still going on for health care providers.

2.13 THE NATIONAL CORE STANDARDS (NCS) FOR HEALTH ESTABLISHMENTS

The Comprehensive PHC Package (2001) has been used as a guide for services that should be available in all PHC facilities. However, the NDoH has shown its commitment to providing good quality care to users of health services by developing the NCS in 2008. The NCS were revised in 2010 and were disseminated for use by health establishments (NDoH 2011b: 9). The purpose of the NCS was to develop a common definition of quality of care, which should be found in all health establishments in South Africa as a guide to the public and to managers and staff members at all levels. The NCS also established a benchmark against which health establishments could be assessed, gaps identified, strengths appraised and provided a national framework to certify health establishments as being compliant with standards (NDoH 2011b: 8).

The NCS are based on the National Health Act (No. 61 of 2003) which states that services rendered should take into cognisance the Constitution of the Republic of South Africa (Republic of South Africa 1996). The NCS have been given priority in the facilities to improve quality of care; as enshrined in the Constitution of the Republic of South Africa (2006), including the rights of patients, and to ensure safe efficient health care for all citizens of the country. As discussed in Chapter 1, the NCS have seven quality domains subdivided into sub-domains which describe the criteria and quality areas to be assessed (NDoH 2011: 15).

2.14 NURSES' CHARACTERISTICS AND THE QUALITY OF CARE

Nurses are at the frontline of PHC provisions working independently with little or no support from the doctors (NDoH 1996: 18). It is critical that nurses are properly prepared and adequately skilled to provide quality care at minimally resourced PHC level. Many human resource-related factors contribute to rendering quality care. Clarke and Donaldson (2008: 3) asserted that the nurses' numbers, as well as the appropriate execution of assessments and interventions relevant for the patient's condition affect the quality of patient care. However, safety and accuracy of medications also have a bearing on patient care quality and patient outcomes. Furthermore the quality of nursing care is also influenced by knowledge, experience and nurses' ability to assess and monitor the patient for complications and should involve the multidisciplinary team in managing the patient's condition.

2.15 POLICY, LEGISLATION AND QUALITY OF CARE

Different policies and legislations will be addressed to:

- put the South African health system into perspective to understand
- where the South African health system comes from, with its endeavours to ensure quality health care, and
- how change has come about over the years.

Previous discussions indicated that policy and legislation rate very low in the hierarchy of evidence, but these documents form a vital part of this study's literature review. The South African government has embarked on many efforts in order to continually decrease child and adult morbidity and mortality rates which are unacceptably high for a country classified by the World Bank as higher middle income (WHO 2015: 3).

In 2007, a quality assurance policy for the health system was formulated by the NDoH with the main aim of providing a way to improve the quality of care for both private and public health sectors. The policy identified quality problems of under-use and over-use of services, avoidable errors, variation in services, lack of resources, inadequate diagnoses and treatments, re-allocation of funds from the 'better off' to the previously poorer communities and facilities, inefficient use of resources, poor information, an inadequate referral system, disregard for human dignity, drug shortages, inaccurate records and poor delivery systems (NDoH 2007: 2-3).

Some of these challenges do not require any resources to be provided for their implementation, like respect and dignity for communities. However, if not adhered to, these add expenditures to the health care system in law-suits and reduction of productivity. The policy's aim is to target quality improvement interventions among health professionals, patients, communities and the health delivery system, utilising the approach whereby an environment will support quality improvement and capacity building (NDoH 2007: 3).

In order for these strategies to be successful district health teams will need to designate a person responsible for quality assurance and continuous quality improvement and for the hospitals to do the same (NDoH 2007: 2-3). Districts have employed nurses to work as quality assurers in hospitals and clinics. However, it remains a struggle to reach the desired outcomes because of infrastructure and human resource gaps. Furthermore, the NDoH has embarked on patients' satisfaction surveys and patients' complaints to develop the programme known as the Fast Track to Quality. This plan encompasses the Constitution of South Africa, the Batho Pele (meaning 'people first') Principles, the

Patient Rights Charter and the National Core Standards. The programme identifies the six most critical areas of patient care namely:

- a) Caring staff and feeling cared for: patients' complaints and patients' satisfaction surveys revealed that health workers were impolite to health service users and this is perceived as a lack of quality of care.
- b) Cleanliness of facilities: these were unhygienic and unclean and the infrastructure lacked maintenance. This indicates disrespect for patients and staff.
- c) Waiting times to receive care: patients waited long hours for service, queues were long and in some occasions patients died while waiting for a consultation.
- d) Safety from medical harm or medical errors: failure to implement protocols resulting in patients not receiving the care they expect and deserve;
- e) The risk of being infected in hospital: this is preventable infection through adhering to infection prevention and control measures;
- f) Shortage of medicines: if patients do not receive treatment they came to collect they might not have the financial resources or time to return thus impacting on compliance. (NDoH 2011a: 9).

Some facilities are showing results from efforts of projects and other initiatives to improve service provision.

Continuous self-assessment and monitoring, removing barriers to improvement will assist these facilities to continue showing improvement and these successes have to be recognised and shared. However, there are still a large number of facilities that are weak in this regard, with poor care, ineffective management and demotivated staff. These need strong support systems, development and training where necessary and supported self-assessments until the required standards have been reached and are being maintained (NDoH 2011a: 9).

2.16 RE-ENGINEERING PRIMARY HEALTH CARE IN SOUTH AFRICA

The PHC approach, as per the Declaration of Alma Ata in 1978, has been promoted by the WHO as a valuable approach for the government's health

systems to deliver quality health care to communities, particularly in developing countries. "The PHC approach is the underlying philosophy for the restructuring of the health system" (NDoH 1994b: 20). South Africa has poor health outcomes, with the maternal and child mortality rates remaining high and this could be attributed to the overwhelming impact of the HIV/AIDS epidemic with TB, HIV/TB co-infection, Multi Drug Resistant (MDR) and X-treme Drug Resistant (XDR) TB. Among the resultant problems are longer waiting times, and poor quality of care due to overflowing facilities resulting in health care users presenting with multiple complex challenges. It is hoped that the re-engineering of PHC will address some of these challenges (Republic of South Africa 2011b: 23). It is against this background, that the Fast Queue Service Point needs to be strengthened, and its quality of care ensured for both communicable and non-communicable diseases.

PHC encompasses health as a human right and is rendered free of charge to afford the poor communities equitable access to quality health care. Health care providers are moving away from dictating care to health care users, the users are now becoming more aware of their constitutional rights, including the right to basic quality health care in terms of the constitution of the Republic of South Africa (Act 108 of 1996). Similarly the WHO has as one of its objectives as the attainment of the highest possible level of health for all people (WHO 2002: 2).

In order to address challenges faced by PHC, its re-engineering was seen as the strategy to transform the health sector through revitalisation of PHC based on the ten point plan. This was to ensure implementation of activities that would bring about the transformation of health and address the crisis in the health services. The ten point plan is a five year priority strategy adopted by the NDoH to ensure implementation of activities that would bring about transformation of health and address the crisis in health services. Some of these priorities are improving the quality of health services, overhauling the health care system and revitalising the infrastructure (NDoH 2009). PHC re-engineering is in preparation for the National Health Insurance (NHI) which is discussed in the next section of this thesis. The ten point plan aims to:

- a) Provide strategic leaders and create a social impact for better health outcomes;

- b) Implement the NHI plan;
- c) Improve quality of health services;
- d) Overhaul the health system and improve its management;
- e) Improve human resource planning, development and management;
- f) Revitalise the physical structures;
- g) Accelerate the implementation of the HIV/AIDS and sexually transmitted infections (STIs) National Strategic plan 2007 and increase the focus on TB and other communicable diseases;
- h) mass mobilisation for better health for the population;
- i) Review of the drug policy and
- j) Strengthening of research and development (NDoH 2011c: 20).

The goal of PHC re-engineering is to achieve long and healthy lives for all South Africans. It also refocuses health on health promotion, preventive care, ensuring quality curative and rehabilitative services to ensure a comprehensive package of health services at all levels of care. These levels of care include primary, secondary, tertiary and quaternary levels with guaranteed continuity of health care benefits (NDoH 2011b: 24). This will be achieved through bringing health to the people by rendering health care in three streams namely; multi-disciplinary teams of clinically competent professionals, community, municipal ward-based multi-disciplinary health teams and effective implementation of national school-based teams (Pillay and Barron 2011: 5).

PHC re-engineering needs a strong district health system to drive PHC. There are many elements that comprise quality and there are many ways to improve quality. For the re-engineering of PHC it is recommended that a number of systems issues, which are directly linked to quality, be put in place. One of these could be attending to the physical structure of facilities to enable health care users to be directed to the relevant queues with ease and that they move around without restrictions. Health care users can also be seen comprehensively under one roof to enhance integration of services and quality since they will be attended to by one health care provider at any given time.

PHC re-engineering brings back the concept known as 'Community Oriented Primary Care' (COPC) a concept which dates as far back as the 1940's whereby doctors Sidney Kark, and his wife Emily, established primary care based on the same principles as that of PHC re-engineering at Pholela in rural KZN, to help the poor rural blacks of this area (Kark and Kark 2001: 20). COPC is today seen as a step towards defining the practice of PHC in South Africa. The main strategy of COPC was integrating curative and preventive health services, focusing on the health of families and communities rather than individuals, while also emphasising communities' empowerment and participation in health care delivery services (Kark and Kark 2001: 20). According to Kark and Kark (2001), COPC is a unified practice that combines individual clinical care and family practice with community health whilst Bushy (2008 in Stanhope and Lancaster 2010) defined community oriented primary health care (COPHC) as "an effective model for delivering available, accessible and acceptable services to vulnerable populations living in underserved areas" (Stanhope and Lancaster 2010: 389). The main purpose of this strategy is to create better relationships between the health care user and the health services.

2.17 THE NATIONAL HEALTH INSURANCE

Two health systems, the private and public sectors exist in South Africa, and the two systems perpetuate inequalities in health care. The quality of care in the public sector, which caters for the larger part of the population, has declined dramatically due to understaffing, declining infrastructure, poor management and the impact of the HIV/AIDS epidemic. On the other hand the private sector is accessed by the employed people and others who can afford to pay their monthly contributions to belong to pre-paid medical aid schemes. The private sector has the best resources and renders high quality care. The South African government introduced the NHI to address the above challenges (NDoH 2011c). The main objectives of the NHI were to provide improved access to quality health services for all South African citizens both employed and unemployed, pool risks and funds so that equity and social solidarity will be achieved through the creation of a single fund, procure services on behalf of the entire population and efficiently mobilise

and control key financial resources and strengthen the under resourced public sector so as to improve health system performance (NDoH 2011c: 18).

The aim of the NHI is to bridge the gap between private and public health sectors thus improving accessibility to health care. The processes that will make implementation of NHI successful include transformation of health care service provision and delivery, overhauling of the entire health care system, re-engineering of PHC and the provision of the comprehensive package of PHC (NDoH 2001: 6). All South African citizens will have access to the comprehensive package of health services which will be provided through accredited and contracted public and private providers with great emphasis on preventive and promotive health, as was initially the aim of the Declaration of Alma Ata (NDoH 2001: 16).

2.18 SUMMARY

This chapter covered literature on topics in and around the Fast Queue service and quality and was organised according to themes that were created from the literature review. The study aimed to analyse the quality of care rendered by PHC personnel to health care users at the Fast Queue Service Points at PHC clinics in the eThekweni district, by checking whether protocols were being followed. The definition of quality can be presented from two different perspectives, that of research and that of policy, as seen from the literature reviewed. From the research point of view, it has become apparent that the views of patients have been used to assess quality of care, with patient satisfaction being the most popular construct. However, the question still remains if patient satisfaction surveys are reliable as determinants of quality of care. Literature has indicated that patient satisfaction has been influenced by different factors including socio-economic status, gender, literacy levels and age.

This study aimed to assess quality based on the stipulations of the protocol on what needs to be done for a health care user at every visit to a PHC clinic. Health care users may not know this and will invariably be happy to leave the facility quickly, not realising that the quality of care might have been compromised during this short visit. Because of the quick exit patient satisfaction levels could be very

high. If quality of care is determined by patient satisfaction, then it could be rated high although the quality of health care might have been compromised.

There are many questions that remain unanswered which this study is addressing, namely:

1. How can quality of care in PHC particularly in the Fast Queue Service Point be defined?
2. Does the Fast Queue Service Point reduce waiting time?
3. Are health care providers sufficiently equipped to render quality health care?
4. Does training and experience improve quality of care?
5. Do policies and guidelines play a role in quality of care?

The next chapter explains why the Clinical Microsystem Framework was accepted as a theoretical framework within which to contextualise the current study.

CHAPTER 3 : THEORETICAL FRAMEWORK

3.1 INTRODUCTION

According to Polit and Beck (2011: 128), a framework is the overall conceptual underpinning of the study, and allows a researcher to knit together data into an orderly scheme and make research findings meaningful and generalisable. This linkage of findings into a coherent structure makes the body of accumulated knowledge more accessible and, thus more useful both to practitioners who seek to implement the findings and to researchers who seek to extend their knowledge base (Polit and Beck, 2012: 131). There are two quality frameworks discussed in this chapter; a) Donabedian's Model of Health Care Quality and b) the Clinical Microsystem Framework. Donabedian's Model of Health Care Quality is the commonly used framework in quality studies, but for the purpose of this study the latter framework was used to guide the study.

3.2 DONABEDIAN'S FRAMEWORK

The conceptual framework for assessing quality of care, developed by Donabedian in 1966, is still a major reference point. Donabedian's Conceptual Framework consists of three elements namely structure, process and outcome.

Structure: the physical facility, adequacy of equipment, and human resources, as well as organisational characteristics such as staff training. These factors influence how providers and patients in a health care system act and are measures of the average quality of care provided within a facility or system (Donabedian 1980: 1743-1748).

Process: includes diagnoses, treatment, preventive care, and patient education, and can include technical processes, how care is delivered, or interpersonal processes, and the co-operation between all staff members involved in the execution of the programme (Donabedian 1980: 1743-1748).

Outcome: is sometimes seen as the most important indicator of quality because improving patients' health status is the primary goal of healthcare (Donabedian 1980: 1743-1748).



Figure 3.1: Donabedian's Model of Health Care Quality adapted
(Donabedian 1980)

3.3 THE CLINICAL MICROSYSTEMS MODEL

The model guiding the current study is the Clinical Microsystems Model which is the smallest replicable unit (SRU) of health care that evolves over time and is embedded in larger systems or organisations. This is where health care is provided quality, safety, and value are created. Each individual PHC facility is a microsystem in relation to the main hospital under which it falls, but the clinic also forms a macro system in its own right, where it stands alone being made up of various microsystems, which are different services rendered within the clinic. It is imperative to be able to assess quality in each of the microsystems individually because quality improvement processes that are implemented in one microsystem could be replicated in other microsystems within the clinic to improve the overall quality of care in the PHC clinic (Nelson, Batalden and Godfrey 2011: 3).

The Clinical Microsystems Model is characterised by five P's namely purpose, patients, professionals, processes and patterns (Nelson, Batalden and Godfrey 2011: 4). These five Ps exist within the context of the population which the clinical microsystems seek to serve (Nelson, Batalden and Godfrey 2011: 29). Purpose addresses the purpose of the clinical microsystem and how it fits within the overall vision. Patients are the people served by the clinical microsystem. Professionals are the staff members who work in the microsystem. Processes are the care giving support processes which the clinical microsystem uses to provide care and services and patterns that characterise the clinical

microsystem's functioning. Members of the clinical microsystems need to understand the anatomy of their own systems using the five Ps to design, implement and improve their clinical services (Nelson, Batalden and Godfrey 2011: 4). In the same way professionals need to have in-depth knowledge of the physiology of the microsystem which allows for extensive exploration of health care processes' functional inputs and outputs. This allows staff members to assess their systematic performance of the clinical microsystem and also enables them to recommend improvements and innovations.

The clinical microsystem is the smallest replicable unit of health care that evolves over time, and is embedded in larger systems or organisations. The clinical microsystem is where health care is provided, and quality safety, and values are created in microsystems. The microsystem is a living, complex, adaptive system and its functions include to do the work associated with its core aims, to meet members' needs and to maintain itself as a functioning unit (Nelson, Batalden and Godfrey 2011: 3-4). It is a small group of people who work together on a regular basis to provide care for discrete subpopulations of patients. It is where the experience of care is made or lost. It has its purpose, clinical and business aims, linked processes, and shared information environment. It produces performance outcomes

The Clinical Microsystems Model was developed by the Dartmouth clinical evaluation research institute in Liverpool in 1985. A Professor Emeritus at the Dartmouth's Tuck School of Business, Professor James Quinn is regarded as the father of clinical microsystems. Authors, like Edwards Deming, Kerr White and Avedis Donabedian, pioneered the theoretical and empirical idea of clinical microsystems in business. Quinn researched and analysed the best of the best organisations which were enjoying massive economic growth while also gaining popularity with customers (Nelson, Batalden and Godfrey 2011: 2). His finding was that, the most successful service organisations focused on the smallest replicable units (SRUs) or minimum replicable units (MRUs) within their enterprises (Nelson, Batalden and Godfrey 2011: 2). This is where service and interaction with customers took place. Organisations replicated the best practices

in these best performing SRUs to be successful. Professor Quinn identified features common in all enterprises that performed well including:

- a) There was ongoing improvement of frontline services within the SRUs where customer-provider relationships were created.
- b) Organisations ensured quality, efficiency, timelines, service excellence and innovation designed as part of the frontline work processes of SRUs.
- c) Back and forth information flow to create supportive, real-time information environments to enhance service delivery.
- d) Measurement, monitoring and management of activities to improve performance (Nelson, Batalden and Godfrey 2011: 3).

After reading Quinn's book, Nelson and colleagues saw the importance and relevance of SRUs in health care systems, and hence developed "the Clinical Microsystems Model" (Nelson, Batalden and Godfrey 2011: 3). The SRUs are points where customers interact with providers and are the same points where patients meet the health care providers. Every complex, adaptive system has structure, process, patterns and outcomes. As living entities, clinical microsystems are described in terms of structure (anatomy) and function (physiology) (Nelson, Batalden and Godfrey 2011: 3-4).

The clinical microsystems, which are places where patients, families and professionals meet, are building blocks of large health care systems (macrosystems). Microsystems do not function in isolation. External ancillary and supporting microsystems like laboratories, radiology departments and even transport challenges, need to be included in quality improvement initiatives for patients to experience good health care in all specific microsystems that they encounter during an illness.

Quality improvement is a team effort and cannot be the responsibility of one individual. The study of the five Ps framework of any clinical microsystem provides health care professionals with insight and perspective they might not usually see because of their busy schedules. Responses to these questions might help members of a clinical microsystem implement long-lasting improvements.

- *Purpose* (know your purpose): what is our aim? What do we actually intend to achieve?

In this study the purpose of the Fast Queue is to move health care users, who have come for short consultations, through the system expeditiously so as to maximize the quality services offered by the PHC and decongest the health facility.

- *Patients* (know your patients): whom are we caring for? Are there subpopulations we could plan services for, differently? What are the most common diagnoses and conditions in our care setting? What other microsystems' support do we need? What do we do to meet our patients' needs?

The Fast Queue Service Point services health care users who come in for short consultations, those who collect medications for chronic illnesses such as hypertension, diabetes mellitus, arthritis, mental health, asthma, TB, anti-retroviral treatment and epilepsy as well as those seeking contraception and well babies coming for weighing, immunisations and routine prophylactic treatment .

- *Process* (know your process): how do we deliver care and services to meet our patients' needs? Who does what in our clinical microsystem? What are our core and supporting processes? How does technology support our processes? How do we learn from failures and near misses?

In the Fast Queue service point, care is delivered expeditiously as it was established as one of the strategies to prevent unnecessary delays and decongest the facility.

- *Patterns* (know your patterns): what are the health outcomes for our patients? What are the regularly recurring associated or sequential work activities? How does it feel to work here? What is leadership like? What traditions and rituals do we have?

The health outcomes expected are that health care users collect and take their chronic medications regularly so that their chronic conditions remain controlled and prevent unwanted pregnancies as well as preventing babies from contracting vaccine preventable diseases or preventing TB patients from infecting others in the community or prevent multi-drug resistant TB (MDR TB). Leadership in the Fast Queue include the clinic manager and supervisor who are supposed to support staff members at this service point. The regular occurring activities are observations of vital signs where applicable, consultations and issuing of medications, health education and the administration of injections.

- *Professionals:* (know your professionals) for whom do we have to provide service? Are professionals able to provide the service?

Various personnel interact with users in the Fast Queue. All categories of nursing personnel are involved in providing services and work according to their level of training and competence within their scope of practice as prescribed by the controlling body the South African Nursing Council in Regulations 2598 and 2488 of the Nursing Act 50 of 1978 as amended (Republic of South Africa 1978).

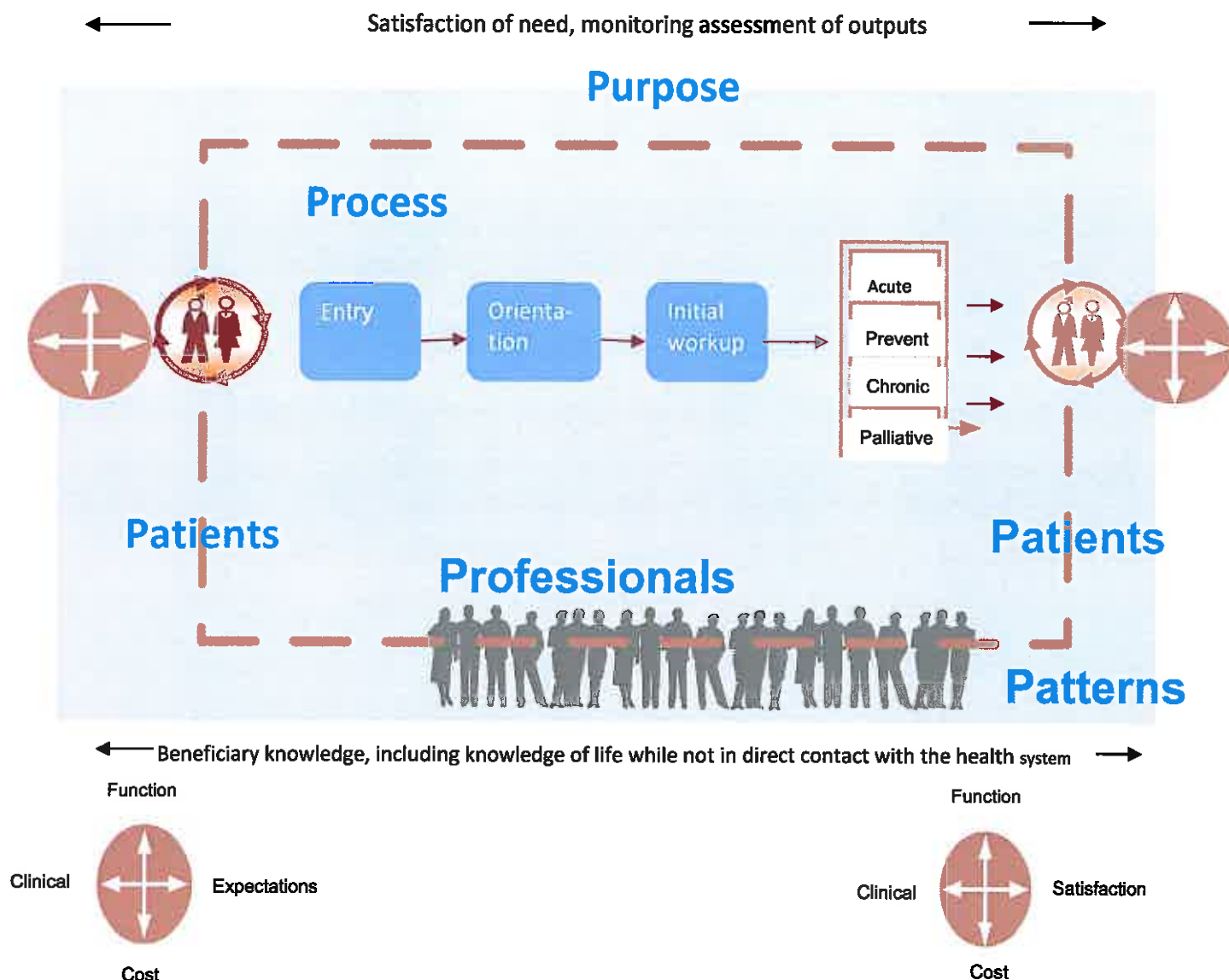


Figure 3.2: The Clinical Microsystems Model
(Nelson *et al.* 2011: xxiv)

This Clinical Microsystems Model was chosen for this study over Donabedian's framework because, it is explicit about all elements that require to be analysed when assessing quality, there is no danger of overlooking certain aspects because they are embedded in another element. This model also makes it easy to evaluate each element separately, so that specific improvements can be made for each section/sub section. Furthermore, it enhances the structure process and outcome model by including patients for whom the care had been planned and who are central to the whole process of quality improvement.

This Clinical Microsystems Model is also beneficial in that it could be applied to one clinical microsystem and, if it works, it can further be replicated in other microsystems within the facilities, and enhances the quality of care rendered. The Fast Queue Service Point is seen as one of the clinical microsystems (services rendered) in the facility. If there is improvement in the elements that make up this service point, it can be replicated in other microsystems within the facility. Other clinical microsystems would include programmes within the facility like, the dressing room, oral rehydration room, maternity ward, sick baby clinic, adult clinic and laboratories which support the Fast Queue Service Point or function independently as does the Fast Queue Service Point. While PHC facilities are macro systems in their own right, they are microsystems in relation to the health system and through communication with CHCs and hospitals, regarding patient care and referrals back and forth.

3.4 SUMMARY

A Theoretical framework is important in health sciences research in that it guides the study and gives it direction. The Donabedian's Model of Health Care Quality, is the widely used model where quality is the subject of study, however it is limited to structure, process and outcome whereas the Clinical Microsystems Model extends to include patients, patterns and professionals. Applying this model in assessing the processes of the Fast Queue enhances the focus on quality of care and each element is examined separately from others, ensuring that no aspect of quality is overlooked.

It is therefore of vitally important that all health care providers delegated to the Fast Queue Service Point are clear about its purpose so that they are able to utilise it for the purpose that it is meant for. Knowing the process of the Fast Queue and all activities that occur will determine whether the care rendered is of quality or not.

Understanding the pattern of work leads to understanding the patients for whom the service is rendered.

CHAPTER 4 : RESEARCH METHODOLOGY

4.1 INTRODUCTION

A research design is an overall plan used when a researcher makes a decision about the methods and procedures to be used to address the question the researcher wants answered in the study (Polit and Beck 2012: 58). There is a wide variety of designs available but the choice of a design depends on the nature of the question and how the researcher is going to go about answering it.

4.2 STUDY DESIGN

A mixed methods design was used to guide the because one data source would be insufficient to fully answer the question asked, namely; what is the standard of quality of care that is rendered by the health personnel in the Fast Queue Service Point in PHC facilities in eThekweni district, KwaZulu-Natal?

Data were collected using both quantitative and qualitative approaches. The mixed methods design is described as a research design, and a methodology of inquiry with philosophical assumptions guiding data collection and analysis using both the qualitative and quantitative research approaches (Creswell and Plano Clark 2011: 5) in different stages of the research process in a single study, to gain better understanding of the research problem than either approach could achieve on its own Tashakkori and Teddlie (2010) defined mixed methodologies research as research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both quantitative and qualitative approaches in a single study (Tashakkori and Teddlie 2010: 340).

There are six major mixed methods designs namely:

- a) Convergent parallel design,
- b) Explanatory sequential design,
- c) Exploratory sequential design,
- d) Embedded design,
- e) Transformative design and

f) Multiphase design.

The mixed methods design that was chosen for the current study was the explanatory sequential design (Figure 4.1) (Creswell and Plano Clark 2011: 82). In this design, data is collected in phases, with each phase feeding into the other. The qualitative phase was used to further explain and clarify the initial quantitative results. To study the quality of care at the Fast Queue Service Point both quantitative and qualitative approaches were used as a mixed methods study to answer the question asked. As such both approaches were treated as being equally important. The weaknesses of both quantitative and qualitative research are offset by the strength of using both in a mixed methods study. There is a general consensus that for every weakness there is a corresponding strength in both these approaches; neither approach has all the answers. It can be argued that in quantitative research consideration is not given to the setting and context in which participants respond just as their voices are also not directly heard since no direct quotes are used.

Quantitative data were collected and analysed first, followed by the qualitative data collection and analysis, followed by interpretation and integration of both results. This sequence was adopted because in starting with the quantitative phase, the researcher conducted retrospective record reviews and structured observations to see what actually happened in the Fast Queues in the participating PHC clinics. Based on her clinical experience and a review of relevant literature, the researcher knew what events and activities she was looking for, but did not know how frequently they happened. Structured observations were favoured because people might not do what they say they do (Cohen, Manion and Morrison 2007: 396). The advantage of using records as a data source is that records show patterns or trends over time about information that has been collected repeatedly; it also eliminates participant reactivity that might occur in during actual observations. The researcher was able to view the records on her own without requiring co-operation from participants such as it happened with the interviews, except for obtaining consent to review the patients' records (Polit and Beck 2012: 190).

It was anticipated that there might be issues requiring clarification within the quantitative phase which the qualitative phase could help to clarify. The qualitative approach was further used to explore the attitudes of personnel towards the use of the Fast Queue Service Point. Further to this Creswell and Plano Clark (2011: 82), asserted that the explanatory design is most useful when quantitative data had been used to assess trends and being able to explain why those trends occurred. Quantitative data were used to examine trends and those results were interpreted through qualitative data (Creswell and Plano Clark 2011: 71).

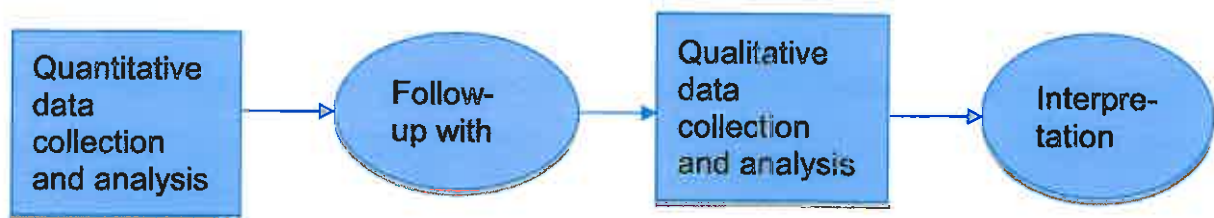


Figure 4.1: The explanatory sequential design
(Creswell and Plano Clark 2011: 69).

4.3 THE PHILOSOPHICAL UNDERPINNING OF THE STUDY

Mixed methods research is often associated with the pragmatist paradigm (Tashakkori and Teddlie 2010: 15). A paradigm is described as a way of looking at natural phenomena that encompass a philosophical assumption guiding one's approach to inquiry (Polit and Beck 2012: 736). Mixed methods have been described as studies that are products of the pragmatist paradigm and that combine the qualitative and the quantitative approaches within the different phases of the research process (Tashakkori and Teddlie 2010: 7).

In this world view, multiple methods of data collection are used to answer the question(s) being studied. Pragmatism is a school of thought that originated in North America by historical figures such as John Dewy (1859 - 1952), William James (1842 - 1910) and Charles Sanders Pierce (1839 - 1914). The word pragmatism is a Greek word derived from "pragma" meaning work. For an idea to be true, it must be shown to work. It focuses on the consequences of research; is problem-centered and pluralistic and oriented towards what works and stresses the real world practice (Creswell and Plano Clark, 2011: 40). To the pragmatists

what is “true” is what “works”. Originally there had been two research approaches; the quantitative and the qualitative approaches supported by two paradigms, positivism/post-positivism and constructivism.

A mixed methods approach emerged as the third research approach with pragmatism as the third paradigm. There were debates and arguments with the emergence of the mixed methods approach. Researchers, following the first two approaches, argued that it is impossible to mix quantitative and qualitative approaches because of the different philosophical underpinnings which are incompatible, it is either a quantitative or a qualitative approach, hence the “incompatible thesis” (Teddlie and Tashakkori, 2009: 15). This either quantitative or qualitative war was rejected by mixed methods researchers with the introduction of pragmatism. The pragmatists countered the incompatibility thesis by positing that it is possible and acceptable to mix quantitative and qualitative methods if the research required the use of the two methods to answer the research question(s) (Teddlie and Tashakkori, 2009: 73). The basic characteristics of pragmatism are the rejection of the either-or choice between constructivism and positivism, and the search for practical answers to questions in which the researcher is interested (Teddlie and Tashakkori, 2009: 86). Paradigms are based on three dimensions; namely epistemology, axiology and ontology.

- a) Epistemology pertains to the knowledge of reality and what is accepted as knowledge. In this study both quantitative and qualitative data collection approaches were used in order to triangulate data and ensure that the question being asked is answered fully. The qualitative approach was used to better understand the results of the quantitative approach so that there is deeper understanding of the problem by the researcher.
- b) Axiology describes the role of values of the researcher which are vital in conducting research and during the interpretation of the results (Teddlie and Tashakkori 2009: 90). The pragmatist researchers study what is important within their personal value system. The researcher in this study

has vast clinical experience and has taught PHC students and has a passion for it. The researcher believes that the lives of communities can be made better through PHC and values how users are treated and managed at PHC level.

- c) Ontology describes the nature of reality. Pragmatists concur with positivists about the existence of an external reality independent of our minds and deny that truth about reality can be determined (Teddle and Tashakkori 2009: 92). According to them, it is "the truth is what works". The use of mixed methods research assisted the researcher to obtain in-depth knowledge on the question asked through conducting the research using the quantitative and the qualitative methods to answer the research question more clearly and precisely.

4.4 PHASES OF THE STUDY

The study was conducted in three phases, namely: the quantitative approach as the first phase followed by the qualitative approach as the second phase and the development of a continuous quality improvement as the third phase. The first phase; the descriptive quantitative data collection was divided into two stages comprising two subsets of observations. The first stage of phase one of the study, was the retrospective review of users' records, where the researcher assessed whether documentation of care rendered adhered to the standards established in the Comprehensive PHC Package for South Africa (2001). During the second stage of the first phase of the study, structured observations of events that happened in the Fast Queue Service Point were recorded on checklists.

During the second phase of the study descriptive qualitative data was collected from interviews and analysis were undertaken. Qualitative researchers are more interested in ensuring that they can develop a rich, holistic understanding of the phenomena that are being studied (Polit and Beck 2008: 337). The qualitative phase was used to describe the experiences of personnel on the use of the Fast Queue Service Point and also helped to clarify significant and non-significant results obtained from the quantitative phase. Primary data were obtained through conducting semi-structured interviews, using open-ended questions and probing where necessary, as well as obtaining in-depth information about the issues that required further discussion from the results of the quantitative phase.

4.5 STUDY SETTING

The study was conducted at selected PHC facilities in the eThekweni district in KZN, one of South Africa's nine provinces. KZN has a total population of 10 449 300, accounting for 21.4% of the total population of South Africa and 34% of the total population of KZN live within the eThekweni district (NDoH, 2010: 63), one of the eleven health districts of KZN located in the south eastern part of South Africa. The district covers an area of approximately 2297km² of which 36% is rural and a further 29% is peri-urban and is home to some 3.5 million people. It

consists of a diverse society which faces various social, economic and health challenges (eThekweni Municipality 2011: 16).

The eThekweni district stretches from Umkomaas in the south which is 53 km away from the city of Durban, including some tribal areas in the Umbumbulu region, to Tongaat in the north 38km from Durban, moving inland to Ndwedwe, and ending at Cato Ridge in the west 46km from Durban (eThekweni Municipality 2011: 16). The district is divided into three sub districts namely, south, north and west.

Sixty percent of the district health services are provided by the Provincial Department of Health and 40% by the Local Authority (eThekweni municipality). There are eight CHCs; (seven provincial and one shared between the two health authorities), these operate over 24 hours. PHC facilities are 102 in total, of these 43 are under the administration of the Provincial Department of Health and 59 under the authority. There are three gateway clinics which operate within the hospital premises of the Provincial Department of Health. The hard to reach rural areas are serviced by 28 mobile units, 12 of which are operated by provincial and 16 by local authority (Provincial Department of Health 2013: 20).

4.6 SAMPLING

- a) Population refers to the whole aggregation of cases in which the researcher is interested (Polit and Beck 2012: 273). The population of this study were all PHC facilities of both local and provincial authorities of eThekweni district in the KZN province of South Africa. Patients' records were part of the population in stage one of the first phase of the study. The staff members from the facilities that came into contact with health care users in the Fast Queue Service Point comprised the population for stage 2 of phase 1 of the current study.
- b) A target population is the aggregate of cases about which the researcher would like to generalise a study's findings (Polit and Beck 2012: 274). The target population in this study comprised PHC facilities (as the study sites), records of users (as records used for data collection) and staff members

(interviewees) having contact with patients at the Fast Queue Service Point at the participating PHC clinics.

- c) An accessible population is the aggregate of cases that conform to designated criteria and that are accessible to participate in the study, which in this study were all health care users who agreed that the researcher reviews their records and observations as well as PHC personnel who were interviewed.

Sampling is the process of selecting a portion of the population to represent the entire population so that inferences about the population can be made (Polit and Beck 2012: 275). In this study sampling was done in two phases in line with the mixed methods used.

4.7 SAMPLING PROCESS

In quantitative research, sampling is pre-planned as the sample has to allow for statistical conclusion, validity and generalisability of the results (Polit and Beck 2012: 273).

4.7.1 Phase 1: stage 1: sampling of facilities

There were 102 PHC facilities in eThekweni district. These facilities were stratified according to the three sub-districts, south, north and west. PHC facilities were further stratified according to local and provincial authorities. The daily head count statistics of Fast Queue were used to calculate the average number of patients who attended the PHC facilities over a six month period. Sixty two PHC facilities were found to have an average of 190 or more Fast Queue attendance per month. Thirty-two percent ($n=20$) of the PHC facilities were randomly selected from each stratum. An equal number of PHC facilities were randomly sampled, 10 were provincial and 10 were local authority PHC clinics. The names of health facilities that met the inclusion criteria of the current study were written on a paper per stratum and the required sample was picked out of a bowl. This allowed the researcher to sample from all sub-districts to ensure geographic and economic representativeness of the population of the eThekweni district. In the south sub-district, four PHC facilities were sampled from the provincial and four

from the municipal PHC clinics, whereas in the remaining sub-districts, three facilities were sampled from each. The rationale for sampling more facilities in the south sub-district is that it is larger than the other two and has the highest number of PHC facilities. The sample size was determined in consultation with the statistician (Appendix 6). The factors considered in determining the sample size included that the researcher was interested in estimating the prevalence of quality of service at each user visit. These aspects included the checking of clinical tests of users of the Fast Queue Service Point at every visit and the interaction between health care providers and Fast Queue users. The researcher believed that at most 50% of visits would have records reflecting good quality services rendered to users of the Fast Queue. The sample size calculator (Naing *et al.* 2006) was used to estimate the adequate sample size. The Daniel (1999) formula was used in the calculation of the sample size determination process:

$$n = \frac{Z^2 P(1-P)}{d^2}$$

N = sample size, Z = value of a normally distributed variable which for a 95% confidence interval takes the value of 1.96. P = expected prevalence or proportion, d = precision or allowable error. The sample size calculator produced the following information based on the provided values: total of 585 observations in the 20 facilities were required within the study which was rounded off to 600 observations (Daniel 1999).

4.7.2 Phase 1: stage 2: sampling of records

Health care users were randomly given information letters and consent forms for permission to use their records (Appendices 3a and 3b). Every fifth Fast Queue user that agreed to participate in the research was selected, amounting to systematic sampling. Permission was sought from parents and legal guardians to use the records of their babies and children (Appendices 3c and 3d). Information letters were written in both isiZulu and English. Translation was conducted from English to isiZulu and back by an isiZulu and English teacher in the presence of the researcher to assist with medical terms. The two English versions were verified by the supervisor who is a PHC expert who agreed that meaning was not

lost during the translation. The teacher has a Further Diploma in Education (FDE), Senior Teacher's Diploma (STD) and Honours in Bachelor of Education (Appendix 11). Only well baby records were reviewed because they were seen in the Fast Queue Service Point. Records were collected and reviewed every day until the required number of 30 per facility had been reached.

4.7.3 Phase 1: Stage 3: Sampling of events for observations

The first fixed point was observed by the researcher whereby she sat at a spot where she could directly see what procedures were performed on the users. This was where vital signs of all users were checked. These included weighing, urine tests, blood pressure and blood glucose tests. The second point was in the waiting area where users waited for their consultations. Structured observations were carried out for four hours in the morning until the required number of observations had been conducted. Events of 30 Fast Queue users were observed per facility totalling 600 observations at the 20 participating PHC clinics.

4.7.4 Phase 2: Sampling of personnel

Data from the quantitative phase were used to identify the PHC facilities for inclusion in the qualitative phase. Twelve of the facilities out of the 20 were chosen based on performance scores. Fifty percent were high performers while 50% were low performers. A total of 13 out of 35 professionals who were involved in the Fast Queue Service Point were purposively sampled from 12 out of the 20 participating PHC facilities for conducting face to face semi-structured interviews. When ten participants had been interviewed, data saturation occurred as no further new information became apparent. However, three more participants were interviewed to ensure that data saturation had indeed taken place. Health care providers were purposively selected because they would provide the most specific information since they were involved in service delivery to patients using the Fast Queue Service Point. The researcher was careful to ensure that staff was interviewed from both the municipal and provincial clinics. The interviewed staff members included:

- a) Two clinic supervisors because these supervisors are responsible for a number of facilities in the same geographical area and clinic managers' report to them. One clinic supervisor was from the municipality and the other from provincial PHC clinics.
- b) Two clinic managers who oversee the daily functioning of the clinic and reports to the clinic supervisor.
- c) Five professional nurses; three from the municipality and two from the provincial PHC clinics.
- d) Two enrolled nurses and
- e) Two enrolled nursing assistants were sampled for interviews; one from each category was from the municipality and the provincial PHC clinics.

Health care providers were twelve 2 females and one male.

Inclusion criteria of facilities, records and personnel

- PHC facilities of the local and provincial health authorities in all three sub-districts of the eThekweni Municipality that provide services for an average of 190 Fast Queue users of PHC services per month.
- Records of consenting health care users
- PHC personnel providing services to health care users of the Fast Queue

Exclusion criteria of facilities, records and personnel

- PHC facilities of the local and provincial health authorities in all three sub-districts, that saw an average if fewer than 190 Fast Queue users per month
- Gateway clinics, CHCs and mobile units
- Facilities used to pre-test the tools
- Records of babies and children brought in by caregivers who were not their legal guardians.
- Facility personnel not allocated in the Fast Queue Service at the time the study was conducted

The rationale for the exclusion was that, PHC facilities that have fewer than 190 users a month might not depict the true picture of what really occurs at the Fast Queue Service Points because of minimal attendance, and health care providers might not be under pressure to work fast. CHCs function differently from PHC facilities because they are referral centres for very ill patients and most Fast Queue services are not rendered at CHCs. The gateway clinics do not render a full range of Fast Queue services since they function within hospitals, and some of these services are conducted in the hospital's outpatient department.

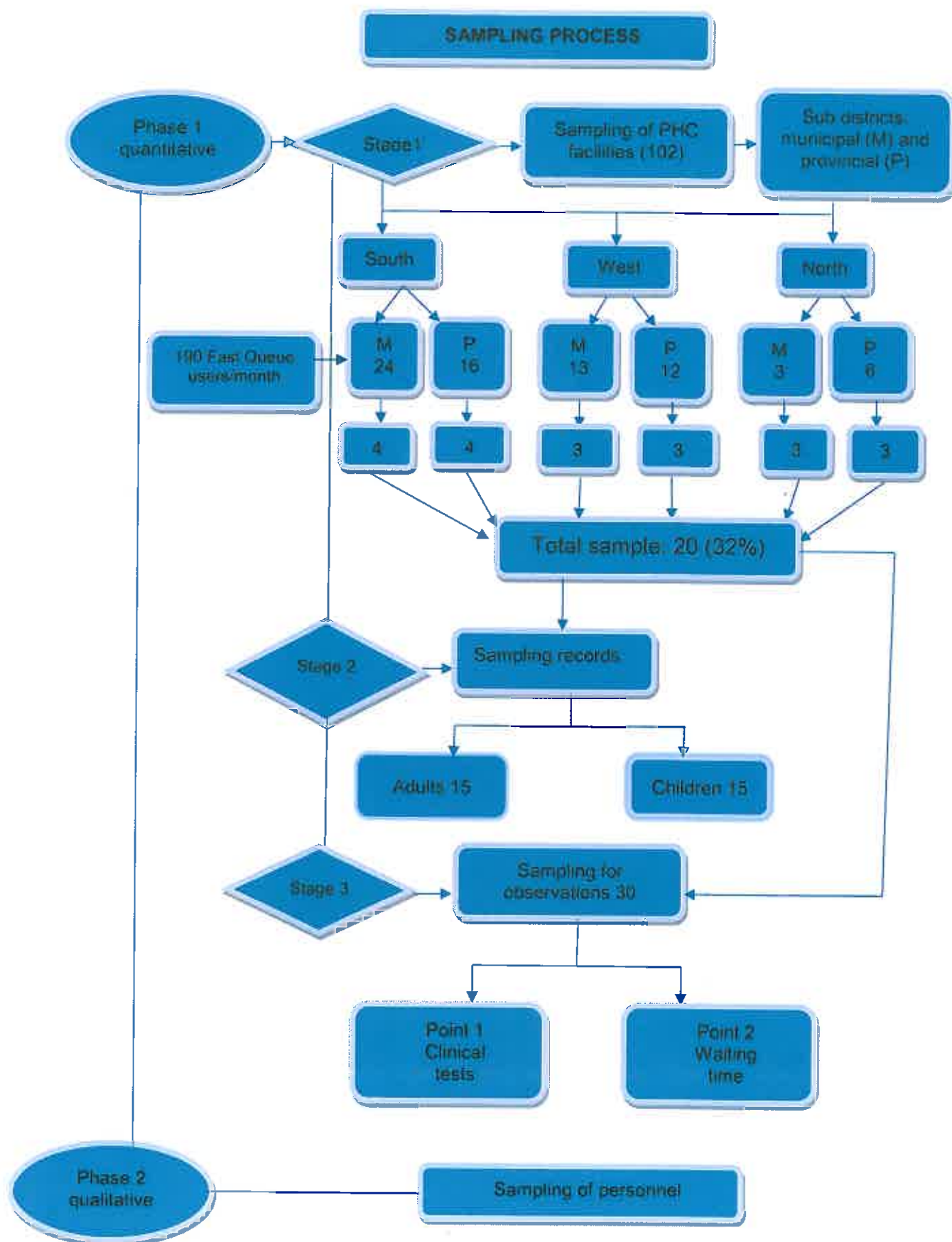


Figure 4.2: Sampling Process

4.8 QUANTITATIVE DATA COLLECTION

Quantitative data was collected in the form of structured observation of events that occurred for Fast Queue users as well as record reviews of both adults and children.

4.8.1 Data collection instruments

The checklists for record reviews and structured observations, used to collect quantitative data, were adapted from the NDoH's (2001) Comprehensive PHC Package for South Africa and the Road to Health Book (Appendices 7, 8 and 9). These tools had "yes, no and not applicable" answers and were analysed quantitatively to produce numeric information. Structured observations involved in the collection of observational data, using the formal instruments and protocols that dictated what to observe for how long, and how to record the information obtained from those observations (Polit and Beck 2012: 313). These types of observations are used to capture behaviours, actions and events. The molecular approach which entails observing large units of behaviour and treating them as a whole was used to observe the Fast Queue Service Points' processes. This approach was chosen because it had less observer errors and allowed for the analysis of small events and behaviours to facilitate understanding of the process.

4.8.2 Pre-testing of the data collection instrument

Pre-testing of the data collection instrument was conducted at one facility to ensure to the research questions were realistic and understood by the participants and that it did yield data that the researcher is looking for. A pre-test also ensures that challenges are dealt with at this stage to avoid flaws in the main study. According to Polit and Beck (2012: 67) pre-testing of the tools is conducted to evaluate and to measure their adequacy so that they can be refined if necessary. These authors further asserted that some uses of conducting pre-testing include evaluating the adequacy of the research method, appropriateness and quality of the instrument, identifying confounding variables that need to be controlled (Polit and Beck 2012: 380). The facility that was used for a pre-testing the tools was randomly sampled and did not form part of the main study. Ten observations

were done and four interviews conducted with personnel. No amendments were necessary to the methodology and tools.

4.8.3 Data collection from record reviews

During the first phase of the explanatory design, descriptive quantitative data were collected and analysed, followed by the qualitative phase of the research, as shown in Figures 4.3 and 4.4. In the first stage of the first phase, the researcher collected data in the form of retrospective record reviews of users exiting from this Fast Queue on the day that the researcher was at a specific facility. Information letters (Appendices 3a and 3c) were issued to randomly selected users while in the queue, to read and they had an opportunity to ask questions from the researcher. Once patients were satisfied that they had understood the information letter, they were requested to sign the consent form. Medical records of all consenting Fast Queue users were collected and reviewed using a checklist (Appendices 7 and 9). This process was repeated every day until the required number of records had been reached. The number of days spent in each PHC clinic was dependent on the availability of participants and their agreeing to participate in the study. On average five days as data was collected for four hours each day. This system enabled the researcher to overcome the challenge of attrition, since all this happened in the facility while the Fast Queue users were there.

4.8.4 Data collection from structured observations of events

During the second stage of the first phase of the current study, structured observations of the Fast Queue Service Point process were conducted in the selected PHC clinics. The researcher observed specific behaviours of participants on the Fast Queue for actions and events using a formal instrument (Appendix 8) that indicated what was going to be observed and how it was going to be recorded and ultimately produced numeric information (Polit and Beck 2012: 313). Structured observations were preferred because consistent records could be provided of what was being observed and how answers were recorded in an effort to enhance objectivity and reduce bias (Polit and Beck 2012: 189).

The norm for working hours per shift in most working environments in South Africa is eight hours; some PHC facilities are open for 24 hours. It was important to set targets that were realistic for maximum achievement within the time constraints of the researcher. The purpose of the Fast Queue is to reduce waiting times and improve quality of care. Observations and record reviews were used to determine the quality of care being offered to users of the Fast Queue Service Point and waiting times were measured. The six hundred observations were gathered at two points over an 80 hour period in the 20 different clinics. The researcher was at each facility for a minimum of 4 hours, usually from 08h00 to 12h00, which are the busiest times for the Fast Queue and observed the interactions between the Fast Queue users and health care providers. Each of the 20 clinics was visited until the sample of 30 observations of user events had been reached. The mornings were ideal for this data collection method because Fast Queue users normally arrived at the facility early in the morning and this was when most activities took place, the researcher was able to collect maximum data at this time. This also prevented researcher fatigue.

Participant reactivity which is when participants' behaviour changes when they know that they are being watched was anticipated and was overcome by the fact that familiarity occurred when the researcher spent time in the facility for the reviews of the records which had been done prior to the observations. The researcher made use of a trained assistant to help with the observations. The trained observer assistant signed an agreement to participate in the study as well as a confidentiality agreement (Appendix 4). This person was knowledgeable about research. The research assistant was trained by the researcher to observe those health care users who were identified by holding the information letters. A trial run was conducted at the pre-test site where the researcher conducted time observation simultaneously on the same participant with the research assistant to establish the interrater reliability. The research assistant recorded the time the health care user sat in the queue outside the consulting room and also recorded the times when the user entered and exited the consulting room.

There were two fixed positions where observations were done. The first one was where most activities happened, that is; where users registered and had bio-

observations done such as blood pressure measurement and the second one was in the queue where users waited for a consultation. The researcher observed the first station to capture most events and the research assistant observed the second station to record the duration of time users waited before consultations and the time spent with the practitioners during consultations.

4.9 QUANTITATIVE DATA ANALYSIS

Quantitative data analysis used statistical procedures to organise, interpret and communicate numeric information obtained during data collected (Appendix 12, 13 and 14). Descriptive statistics were used to describe and synthesise data, while inferential statistics were used to make inferences about the population (Polit and Beck, 2012: 379). Data were analysed using the Statistical Package for the Social Sciences (SPSS) version 22. Descriptive statistics, illustrating spread such as proportions, frequencies, ranges and central tendencies like the means, modes, medians and standard deviations were computed where appropriate.

In order to test for significant trends in the data, inferential statistics were computed such as the Chi-square tests for nominal and ordinal categorical data to compare and test associations between the observed and the expected frequencies. A Chi-square goodness of fit test was used to test whether any of the response options were selected significantly more or less often than expected. Chi-square tests of independence were applied to a cross tabulation to check whether a significant relationship exists between two specific variables.

Kruskal-Wallis tests were used to check whether significant differences existed between an ordinal test variable and different categories of another variable. The Mann-Whitney U tests were performed on pairs of categories to detect specific differences, when significant differences were found for a variable with more than two categories. This numerical data were graphically presented using graphs, pie charts and tables. Findings of the quantitative study were used for structuring the questions for the qualitative phase that succeeded the quantitative phase.

4.10 RESEARCH RIGOUR

In quantitative research there are two methods used to ensure that findings are accurate and not biased namely; reliability and validity.

4.10.1 Reliability and validity

Reliability refers to the accuracy and consistency of information obtained in a study and is most often associated with methods used to measure research variables (Polit and Beck 2012: 175). To ensure reliability, pre-testing of the tools was conducted at one clinic which was not part of the main study. Furthermore the research instruments focused only on the activities and events that were observed and reviewed with great precision. Validity is the degree to which an instrument measures what it is supposed to measure, consistency and accuracy are the measures of validity (Polit and Beck 2012: 175). Content validity refers to whether the tool covers the construct domain (Polit and Beck 2012: 458). The tool for adult record reviews was adapted from the standard that facility personnel should comply with in caring for the Fast Queue Service Point users. The child record review tool was taken directly from the Road to Health Book (RtHB), used when assessing well babies.

4.11 QUALITATIVE DATA COLLECTION

After the quantitative data was analysed, the researcher conducted semi-structured interviews, which were conducted in the second phase of the research using an interview schedule with a few open ended questions (Appendix 5) with PHC personnel. The interview schedule was developed by the researcher to identify the attitudes of personnel towards the use of the Fast Queue Service Point and also to get clarity and in-depth information on the quantitative findings where necessary. In semi-structured interviews, open ended questions and probing, where necessary, were used. This allowed the respondents freedom to express themselves without the constraints of closed-ended questions. Interviews were audio recorded and later transcribed in vivo. In the qualitative phase, face to face semi-structured interviews were conducted with 13 staff

members, using an open-ended interview guide. The interview schedule was guided and shaped according to the Clinical Microsystems Model (Appendix 5).

4.12 QUALITATIVE DATA ANALYSIS

Qualitative data were analysed using thematic analysis. Qualitative data were transcribed from the voice recorder into a written format (Appendix 15). Only health professionals were interviewed and these were conducted in English therefore translation was unnecessary. The transcribed interviews were captured onto a master file through Microsoft Word. Tesch's open coding approach was used, which entails the eight steps of analysis of data (Creswell and Plano Clark 2009: 185-87). This includes:

- Reading through all transcripts to get a general impression of the collected data.
- Writing down thoughts that emerged from the data in the margins of the pages.
- Making a list of all topics. Similar topics were clustered together. These topics were preliminarily organised as major topics, unique topics and leftover topics
- Abbreviating topics as codes were written next to the corresponding segments of the data. Any other topics or codes that emerged were also written next to the appropriate segment of the text.
- The most descriptive wording for the topics was used and turned into sub-categories.
- Grouping together of the related topics and emerging list of categories.
- Preliminary analysis of data was done by assembling data that belonged to each category from which themes emerged.
- Existing data were recorded.

4.13 TRUSTWORTHINESS

Trustworthiness refers to the extent to which a research study is worth paying attention to, worth taking note of and the extent to which others are convinced that

the findings are to be trusted (Babbie and Mouton 2001: 276). As qualitative research has an element of subjectivity, and is open to criticism, it is important that the study and the findings provide evidence of validity and reliability (Polit and Beck 2012: 174). With regard to qualitative research, Lincoln and Guba (1985: 36), suggested four criteria for establishing the trustworthiness of qualitative data. These are: credibility, dependability, confirmability, and transferability (Lincoln and Guba 1985: 36).

a) Credibility

Credibility is confidence in the truth and interpretation of data (Lincoln and Guba 1985: 36). Semi-structured interviews were conducted to further clarify findings from the quantitative phase and to obtain information on how personnel use the Fast Queue Service Point. Probing was used during interviews until data saturation had been reached after ten interviews but three more interviews were conducted to make sure that no new information emerged during subsequent interviews. Interviews were audio recorded and detailed field notes were written immediately after the interview. To establish confidence in the truth of the findings, during report writing voice recordings were played repeatedly to ensure that all the information was transcribed. Member checks were conducted whereby the researcher returned to the facilities and spoke with personnel in the Fast Queue service to test if they agreed with her interpretation of data. The researcher bracketed existing knowledge, pre-conceived ideas and personal views regarding the existing problems in the clinical area. On the other hand data triangulation was achieved by interpreting and integrating quantitative and qualitative findings.

b) Dependability

Dependability refers to the replicability of the results, that is, will the same results be obtained if research was to be repeated on the similar sample and context (Lincoln and Guba 1985: 37). Dependability relies on credibility. Data were collected from participants who had worked in the Fast Queue Service Point. An audit trail was maintained through safe keeping of the raw data of each interview for future reference. Records kept include data collection instruments, an audio

compact disc of interviews, transcripts, summaries of interviews and signed consent forms. The audit involved a close scrutiny of the data collected and any supporting documentation by an external reviewer, in this case the supervisor. Although the researcher coded the interviews herself, the data and analysis were checked for discrepancies scrutinised by the research supervisor.

c) Confirmability

Confirmability is concerned with whether the data presented represent what the participants said and are without the bias from the researcher to demonstrate neutrality of the research interpretations (Lincoln and Guba 1985: 37). In qualitative research, confirmability focuses on the characteristics of the data gathered in the study and by utilising an audit trail. Following the transcription of the voice-recorded interviews, each participant was given an opportunity to review the transcribed interview and was asked to confirm if the notes were a true reflection of his/her views regarding the Fast Queue Service Point. Voice recordings were done to reflect the participant's voice. The researcher's interpretations were scrutinised by the research supervisor who acted as an independent coder. The themes and sub-themes identified by the researcher were contrasted with those identified by the supervisor. No discrepancies were identified between the analyses of data. Lastly, excerpts and direct quotes from the data were used to support the themes that emerged during the data analysis.

d) Transferability

Transferability refers to the applicability of findings to other settings (Lincoln and Guba 1985: 37). Thorough, rich and thick descriptions of study participants, research setting and the research processes were provided to facilitate the process for future researchers who might endeavour to conduct similar studies

4.14 SUMMARY OF DATA COLLECTION PROCESS

Figure 4.3 illustrates the summary of the sampling process, data collection and the data obtained.

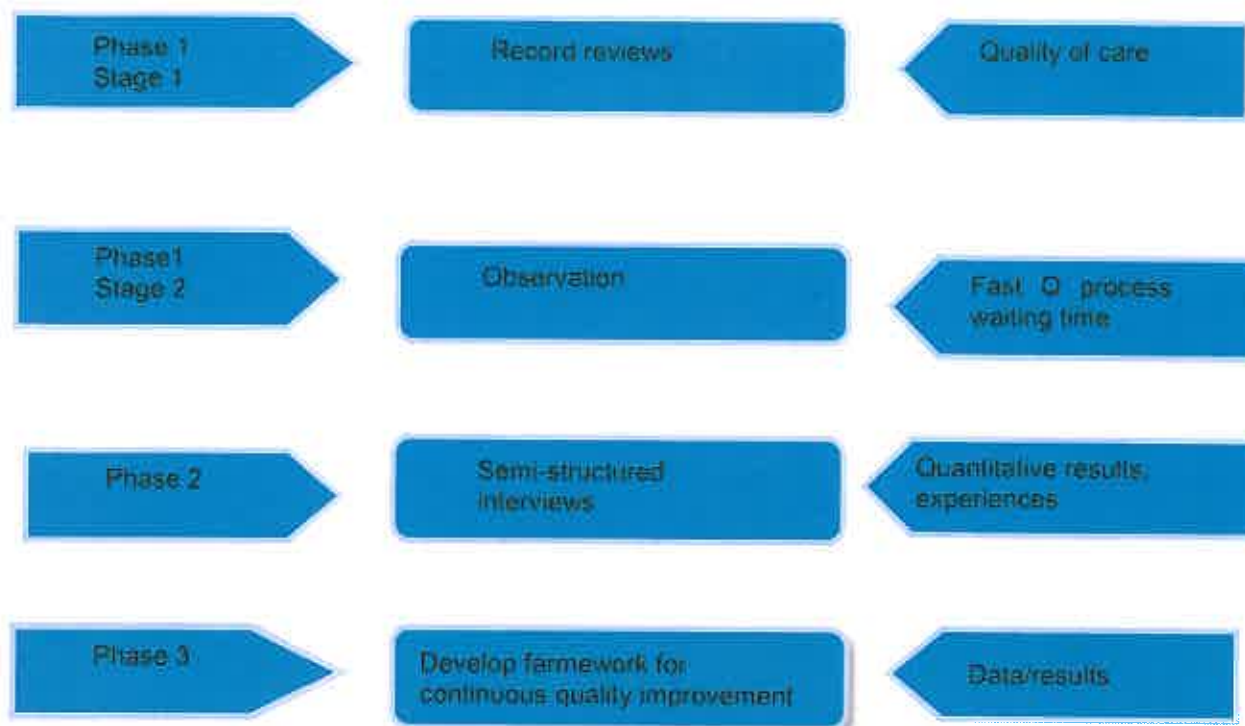


Figure 4.3: Summary of data collection process

Figure 4.3 indicates the phases and stages of the research process as well as the data collection methods that were used at each phase.

4.15 THE APPROPRIATENESS OF THE RESEARCH METHODOLOGY

The different research mixed methods orientations were applied to the current study to achieve each objective. Each objective is aligned with the data sources that were used to meet the objectives of the study (Figure 4.4).

OBJECTIVES	RESEARCH ORIENTATION	DATA COLLECTION METHODS and TOOLS	DATA SOURCES
1. To determine the implementation of the Fast Queue Service Point by PHC personnel.	Quantitative	Record Review Checklist	User Records
2. To determine the quality of care provided to Fast Queue users.	Quantitative	Structured Observation	Fast Queue Service Point process
3. To describe the experiences of PHC personnel working in the Fast Queue Service Point	Qualitative	Semi structured interviews	PHC personnel
4. To develop a framework for continuous quality improvement based on the findings	Qualitative	Development of a framework for continuous quality improvement	Data/results

Figure 4.4: The appropriateness of the research method

4.16 ETHICAL CONSIDERATIONS

Emanuel, Wendler and Grady (2000) discuss the following seven principles of ethical research:

1. **Social value:** research should generate new knowledge to improve the health of the communities. Participants were given an information letter detailing the objectives and significance of the research including how they were expected to participate.
2. **Scientific validity:** reliable and valid data must be generated from research through the use of rigorous methodology. The use of mixed methods, with both quantitative and qualitative approaches, ensured data triangulation.
3. **Fair subject selection:** Selection of subjects should be aimed at achieving the objectives of the study. Observations of records and events were those of Fast Queue users only and participants sampled were those allocated to work in the Fast Queue service at the time of the study.
4. **Favorable risk-benefit ratio:** clinical research should minimise risks and benefits should outweigh potential risks. There was no anticipated risk for the participants. However, participants might get distressed during interviews and observations. The researcher, a professional nurse, would have intervened if any person experienced emotional and/or physical discomfort. Furthermore, plans were made with the Employee Assistance Programme (EAP) of both the municipality and the provincial PHC clinics to debrief staff members after interviews if such a need should arise but this did not happen.
5. **Independent review:** independent individuals must review the research and approve, amend, or terminate it. Ethics approval was sought from the Durban University of Technology Ethics and Higher Degrees Committee (Appendix 1a). Permission was also sought from: the KZN Department of Health and the Municipality Health Unit research committees and the district office (Appendices 2a, 2c and 2e and permission was granted by all (Appendices 2b, 2d and 2f).
6. **Informed consent:** individuals should be informed about the research and provide their voluntary consent. Full disclosure about the study was done; no deception of participants took place. All participants were informed

about the research, signed consent forms but did not know on which days they were being observed. Participant reactivity was overcome by the researcher being in the facility for a number of days “familiarising” the researcher with the staff members and with the PHC clinic’s environment. Participation in the research was voluntary; they could refuse if they did not want to participate in the study. Participants were requested to sign a consent form after reading the information letter (Appendix 3a, 3b, 3c, 3d and 3e).

7. Respect for enrolled subjects: subjects should have their privacy protected, the opportunity to withdraw, and their well-being monitored. Participants were assured of confidentiality at all times. They were told that codes were used to identify facilities and individual participants, no names were disclosed, they were known only to the researcher. They were assured that data obtained would be used for the purposes of the study only, could refuse to answer specific questions and if they were uncomfortable answering questions, they could withdraw at any stage of the study if they so wished (Emanuel, Wendler and Grady 2000: 2701-2711). Electronic data will be stored in a password protected computer known only to the researcher and deleted at the end of five years. Hard copies will be kept under lock and key and shredded by the researcher at the end of five years.

4.18 SUMMARY

This chapter described the research methodology that was used in this study. It showed how the objectives of the study were met at every stage of the study. Different phases and stages of sampling were discussed and sampling was conducted to give participants an equal opportunity to be included in the study. Data collection methods were also discussed in this chapter including data collection tools that were used. Data analysis methods were discussed and in the next chapter, results will be presented.

Chapter 5: PRESENTATION OF RESULTS

5.1 INTRODUCTION

This chapter presents the report of the research results obtained from the retrospective record reviews of adults and children, observations of the Fast Queue Service Point (Fast Queue) and semi-structured interviews of providers of PHC services. The presentation of results is organised according to the five Ps of the Clinical Microsystems Model namely; purpose, patients, process, patterns and professionals. Purpose discusses the purpose of the clinical microsystem, with specific reference to the Fast Queue in the PHC clinics, and how it fits within the overall microsystem of the PHC facility; patients are the people served by the Fast Queue clinical microsystem; professionals are the staff who work in the Fast Queue clinical microsystem; processes are the care giving support processes the Fast Queue clinical microsystem uses to provide care and services; and patterns are the patterns that characterise the Fast Queue clinical microsystem functioning.

Members of the clinical microsystems need to understand the anatomy of their own systems, namely the five Ps, to be able to design, implement and improve their clinical services (Nelson *et al.* 2011: 4). The purpose of this study was to evaluate the implementation of the Fast Queue in order to analyse the quality of care rendered by PHC personnel in order to develop continuous quality improvement strategies pertaining to the Fast Queue services.

Using the Clinical Microsystems Model as an organising framework, the objectives of the study were to:

Phase 1

- Determine the implementation of the Fast Queue Service Point by the PHC personnel.
- Determine quality of care provided to Fast Queue users.

Phase 2

- Describe the experiences of PHC personnel assigned to work at the Fast Queue Service Point.

Phase 3

- Develop a framework for continuous quality improvement, based on the findings.

5.2 SETTING/SAMPLE DESCRIPTION

Data were collected through structured observations of 600 health care users' clinical tests and interactions between Fast Queue users and health care providers; retrospective record reviews of 300 children's and 300 adults' records, chosen from every fifth Fast Queue user; and semi-structured interviews conducted with purposively sampled 13 Fast Queue health care providers. The three sub districts of eThekweni district were coded as A, B, and C. The PHC clinics in the KZN province are managed by the local (municipal) and provincial health authorities which jointly provide health services within the district. Twenty of the 62 PHC facilities which were found to have an average of 190 or more Fast Queue attendances per month were randomly sampled from both provincial and municipality PHC clinics. Six PHC facilities were sampled from sub-district A; six from sub-district B and eight from sub-district C which is larger than the other two sub districts.

Facilities were coded as follows according to sub district and health authority:

- Sub district A: MA1 MA2 MA3 NA1 NA2 and NA3
- Sub district B: MB1 MB2 MB3 NB1 NB2 and NB3
- Sub district C: MC1 MC2 MC3 MC4 NC1 NC2 NC3 and NC4

5.3 DATA ANALYSIS

Quantitative data were analysed using SPSS version 22. Descriptive statistics were computed for the sample. Frequencies were computed for the structured

observations and chart reviews. Chi-square tests were used for nonparametric findings. The level of significance was set at $p < 0.05$. Qualitative data were analysed using Tesch's open coding approach, whereby data were interpreted by classifying the words in the text into categories in order to give them meaning through identification of themes that emerged after the researcher had immersed herself in the data.

5.4 PURPOSE

The results pertaining to the purpose of the Fast Queue Service Point are presented under the qualitative section.

5.5 PATTERNS

Structured observations consisted of two sets; the first set had two subsections; one was the work station where clinical tests were performed and the other subsection focussed on interactions between health care providers and Fast Queue users using a formal checklist (appendix 8). Record reviews comprised the second set of observations ascertaining how recording on the charts was done by health care providers. A 15 item checklist was developed by the researcher according to the Comprehensive PHC Package for South Africa (NDoH 2001: 10) and the NCS (2011b); guidelines which describe how the Fast Queue should function. This checklist had two sections of observations; one was to observe the carrying out of the clinical tests by health care providers such as blood pressure and blood sugar measurements, urine testing and weighing the patients where applicable. The other was observation of the interaction between the health care providers and the users of the Fast Queue Service and the results thereof will be presented under the element 'process' (appendix 7).

Structured observations were scored by the researcher as 2 if the behaviour was observed (yes), 1 if not observed (no), and 0 if not applicable (N/A) (Appendix 12). Fast Queue services were available in all the participating PHC facilities along with dedicated PHC health care providers. Health care users entered into the clinic and sat in the waiting room; health care providers

announced that those users should come to the Fast Queue Service if they were collecting medications or bringing babies for well-baby visits.

According to the guidelines, weight, blood pressure, blood sugar, and urine tests for selected patients must be measured and recorded before consultations take place with the health care providers, and the overall results indicate that in 99% of the observations (n=594), this guideline was met. All health care users that were to be consulted in the Fast Queue had to have weight measured. In this study 63% (n=377) of users' weights had been measured. Blood pressure was to be performed monthly on all hypertensive Fast Queue users and for those who suffered from other conditions; blood pressure would be measured annually. Of the 433 Fast Queue users that were supposed to have blood pressure readings performed 57% (n=247) were observed being performed.

There were 171 Fast Queue users who were due for blood sugar tests observed at this work station. However, only 49% (n=87) had blood sugar tests performed. Similarly urine testing is expected to be performed for diabetic and hypertensive users during the initial visit, monthly if abnormal on the previous test and annually on all Fast Queue users and whenever the health care providers deemed urine testing to be necessary. Of the 315 Fast Queue users that required urine tests, only 8% (n=26) were observed to have had this test done (Figure 5.1).

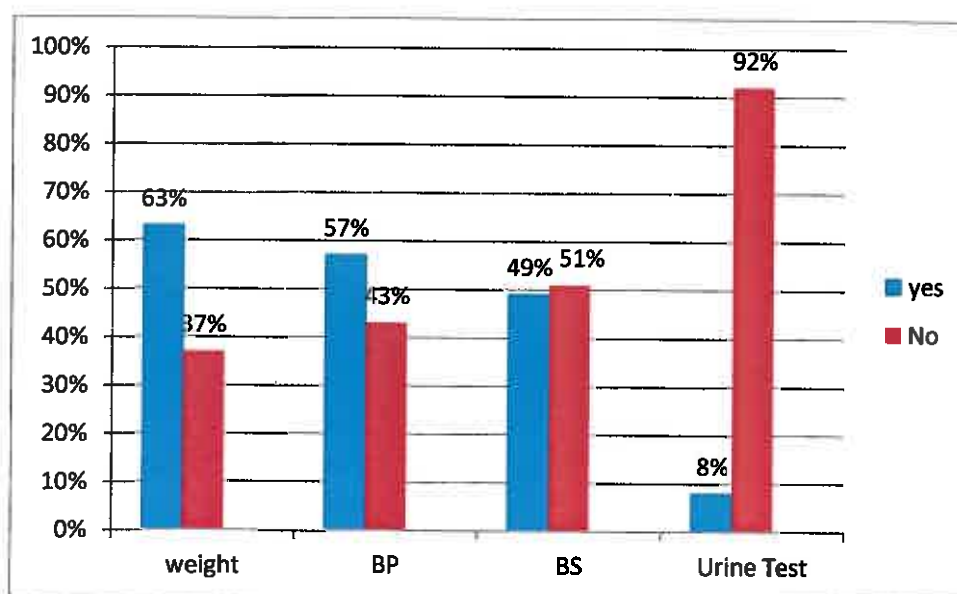


Figure 5.1: Overall observed clinical tests performed on Fast Queue users

Record reviews were conducted on 300 adult Fast Queue users' charts in order to determine whether or not they had received all services comprising 'completeness of care' in terms of the components of care specified in the Comprehensive Primary Health Care Package (NDoH 2001: 10). Thirteen components such as checking blood pressure and giving follow-up appointments were identified according to the PHC Package guidelines (Appendix 7). The researcher used a 13-item checklist to identify if a specific component was present or absent and, in some cases, not indicated due to the patient's diagnosis. The items in the checklist consisted of recorded clinical tests whose results were recorded first (Appendix13) and later the interaction between the health care provider and the health care user in the consulting room, were recorded under 'process'.

The overall quality analysis of the clinical tests in adults' records was conducted. Records indicated that of the 300 records, weights were recorded in 62% (n=186) of the total charts. Blood pressure was recorded in 59% (n=165) of 278 charts of users. On the other hand, analysis of records indicated that of the 98 records, blood sugar was recorded in 40% (n=39) of the records and urinalysis in 4% (n=5) of a total of 119 records of health care users requiring those checks. For health care users who came in for asthma treatment, the peak expiratory flow rate (PEFR) was not recorded in 100% (n=8) charts of asthmatics (Figure 5.2).

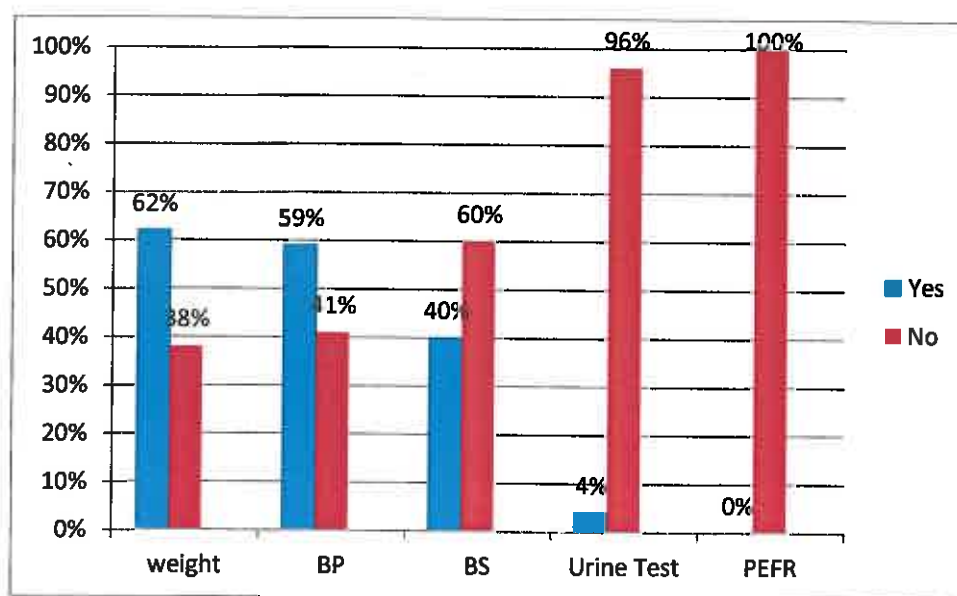


Figure 5.2: Overall Recorded Clinical Tests

5.6 Process

In this study, process refers to the 600 observed activities in the Fast Queue and interaction between Fast Queue users and health care providers. The overall results of the Fast Queue process indicated that 99.5% (n=597) of the users went to the Fast Queue as directed by the health care provider. At least one health care provider was responsible for the Fast Queue in 93.8% (n=563) of the observations.

In most circumstances 97% (n=582), health care providers did not leave for tea breaks during observations of the clinical tests. Of the 19 situations in which the tea breaks occurred, fewer than 26% (n=5) provided relief personnel to the Fast Queue users. As indicated under patterns, clinical screening tests were required prior to consultation with the health care provider and this screening station was not left unattended for more than five minutes in 92% (n=553) of the observations. Compliance was 100% for the following observed activities: users were fast tracked, a specific queue was available and there were dedicated PHC personnel for this service point. When users asked questions, they were spoken to politely in all health facilities. Fast Queue users were not sent back and forth for observations in 99% (n=593) of observed events (Figure 5.3).

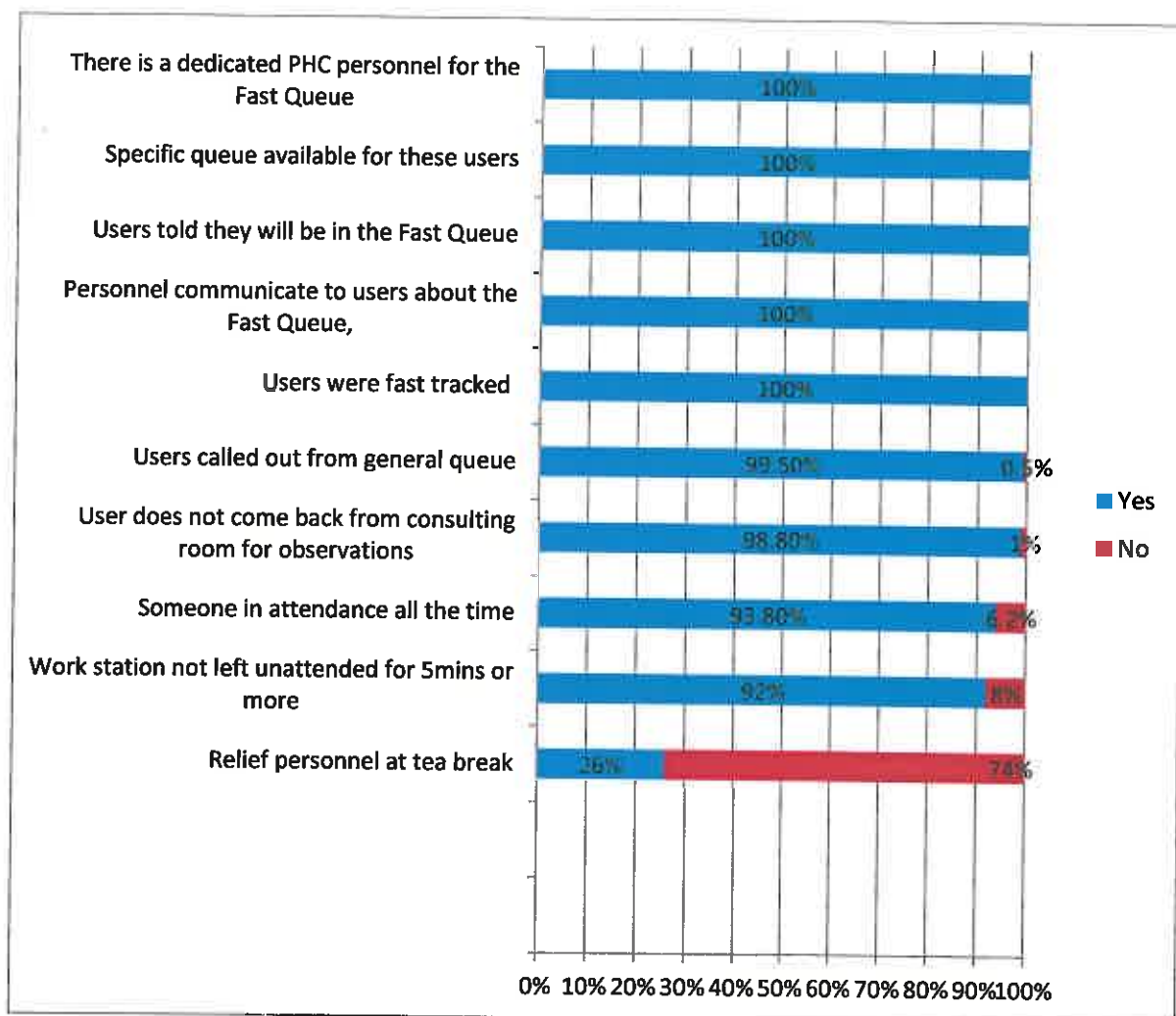


Figure 5.3: Observed activities

Reviews of adult users' records indicated that during consultations, the health care provider-patient interactions that were expected to take place were documented. It was found that almost all 99% (n=297) Fast Queue users had the next appointment booked. Prescriptions were documented correctly in 92% (n=276) of the charts. It was documented that users were asked about their health on the day of the visit in 56.3% (n=169) of the charts. However, records revealed that some interactions were not always documented as expected, for an example, the presence of side-effects of medications was only discussed with 25.3% (n=76) of the users, as well as presence of complications discussed with 22.7% (n=68) of users. Lifestyle modifications, such as dietary control and smoking, were according to the documentation, only discussed with 20% (n=61) of the users (Table 5.1).

Table 5.1: Recorded provider-user interactions in the Fast Queue of primary health care clinics

Interaction	YES	NO	Percentage
Referral	6	0	100%
Book next visit	297	3	99%
Correct prescription	276	24	92%
How user feels	169	131	56.3%
Presence of side effects	76	224	25.3%
Presence of complications	68	232	22.7%
Lifestyle modification	61	239	20.3%

A Chi-square goodness of fit test was applied to determine whether 'yes' or 'no' was selected significantly more often than expected in the total review of all the adults' records regarding health care provider-user interactions as shown in Table 5.2. These results were statistically significant at $p < 0.0005$ as in more than 50% of records interaction was documented. In 56% ($n=169$) of the records, users were asked how they felt, $p < 0.0005$ (χ^2 (1, $n=300$) =41.612). Similarly, prescriptions were written correctly in 92% ($n=276$) of the records; $p < 0.0005$ (χ^2 (1, $n=300$) =24.66). Booking of the next visit, correct prescription and asking the user about how they felt elements were recorded in more than 50% of records (Table 5.2). However, two of these elements were least often recorded $\leq 25\%$. The presence of side-effects was recorded in 25% ($n=76$) of the records; $p < 0.0005$ (χ^2 (1, $n=300$) =45.64) while the presence of complications was recorded in 22% ($n=68$) of records; $p < 0.0005$ (χ^2 (1, $n=300$) =57.25). In the same way lifestyle modifications were recorded in 20% ($n=61$) of the records; $p < 0.0005$ (χ^2 (1, $n=300$) =74.39) and those that required referral ($n=6$) were not referred.

Table 5.2: Differences in health care providers' interactions with Fast Queue users

Component	Yes	Percent	Chi square	P value
Correct prescription	276	92	24.66	0.0005
How user feels	169	56	41.61	0.0005
Presence of side effects	76	25	45.64	0.0005
Presence of complications	68	22	57.25	0.0005
Lifestyle modification	61	20	74.39	0.0005

Another category of users that were seen in the Fast Queue were those coming for contraception. The contraceptive users should be questioned to exclude pregnancy and other conditions that might contra-indicate the use of some contraceptives. This enquiry was not only limited to women seeking contraception but included all women within the child bearing age of 18 to 49 years. Results of the record reviews indicated that health care providers did not always record the last normal menstrual period (LNMP) as it was recorded only in 30% (n=41) of out 135 records.

Charts of 300 babies and children, below the age of 60 months, were reviewed in order to determine the quality of care, by checking if all required information had been captured, in accordance with the requirements of the Road to Health Book (RtHB) (Appendix 10). Sixteen components such as weighing the child and giving immunisations were identified according to the RtHB (Appendix 10) used for babies and children from birth to 59 months of age. The researcher used this 16-item checklist to identify whether a specific component had been recorded or not and, or if it was not indicated due to the baby's age.

Figure 5.4 indicates the overall results of the babies' record reviews. All babies who come to the health facility must be weighed and the weight must be plotted on the graph in the RtHB. Analysis of the 207 babies' records, who had come for immunisations, indicated that immunisation dates had been recorded, batch numbers and signatures had also been recorded in 100% (n=207) charts. Records indicated that 98.7% (n=296) of the babies were weighed and 71% (n=213) of the weights were 'plotted' in the RtHB. Depending on the reading of the graph, weights are used to classify growth according to the Integrated

Management of Childhood Illnesses (IMCI) protocol of the NDoH (2014). Classification of growth was recorded in 56.3% (n=169) of the charts. There is a requirement that the HIV status or exposure to HIV from the mother is performed on babies from three days to 10 weeks of age, and at six monthly intervals thereafter until 18 months of age and whenever necessary thereafter. There were 172 records in which this was expected to have been recorded, but the 'PMTCT\HIV status' was recorded only in 77% (n=133) children's charts. Health care providers were to enquire about feeding options from caregivers of babies aged zero to six months. Out of 137 babies' records, feeds were recorded in 73% (n=101) of these records. Prophylactic treatment should be given to babies from the age of six months and repeated every six months until the child is 60 months old. Baby charts indicated that 'vitamin A prophylaxis' was given to 99.3% (n=150) of the 151 babies and children and 'deworm prophylaxis' was recorded to have been given to 98.2% (n=112) of 115 babies and children who should have received these prophylactic treatments. These included babies and children who were due by age and those who were catching up because of having missed their prophylactic treatments. Caregivers were given return dates to bring babies for the next visit, as 'book next visit' was recorded in 90% (n=270) of the babies' records.

On the other hand, analysis of record reviews indicated that the following elements were least often recorded. According to the RtHB, babies' developmental milestones were assessed at the ages of 6 weeks, 14 weeks, 6 months, 9 months, 18 months, 36 months and 60 months. In the current study, milestones were recorded in 34% (n=51) of 152 records of children who were in the age groups when milestones should have been assessed. TB status should be assessed from the age of 14 weeks, but it was only recorded in 13% (n=27) out of the 214 records. Side-effects from immunisations and the management thereof should be discussed with caregivers at every immunisation session, whether it is informing them or checking their previous knowledge. This was found to be recorded as having been done only in 9.7% (n=20) of the 206 babies' charts. Oral health was supposed to have been assessed and recorded in 50 charts. However, it was not recorded in 100% of these charts.

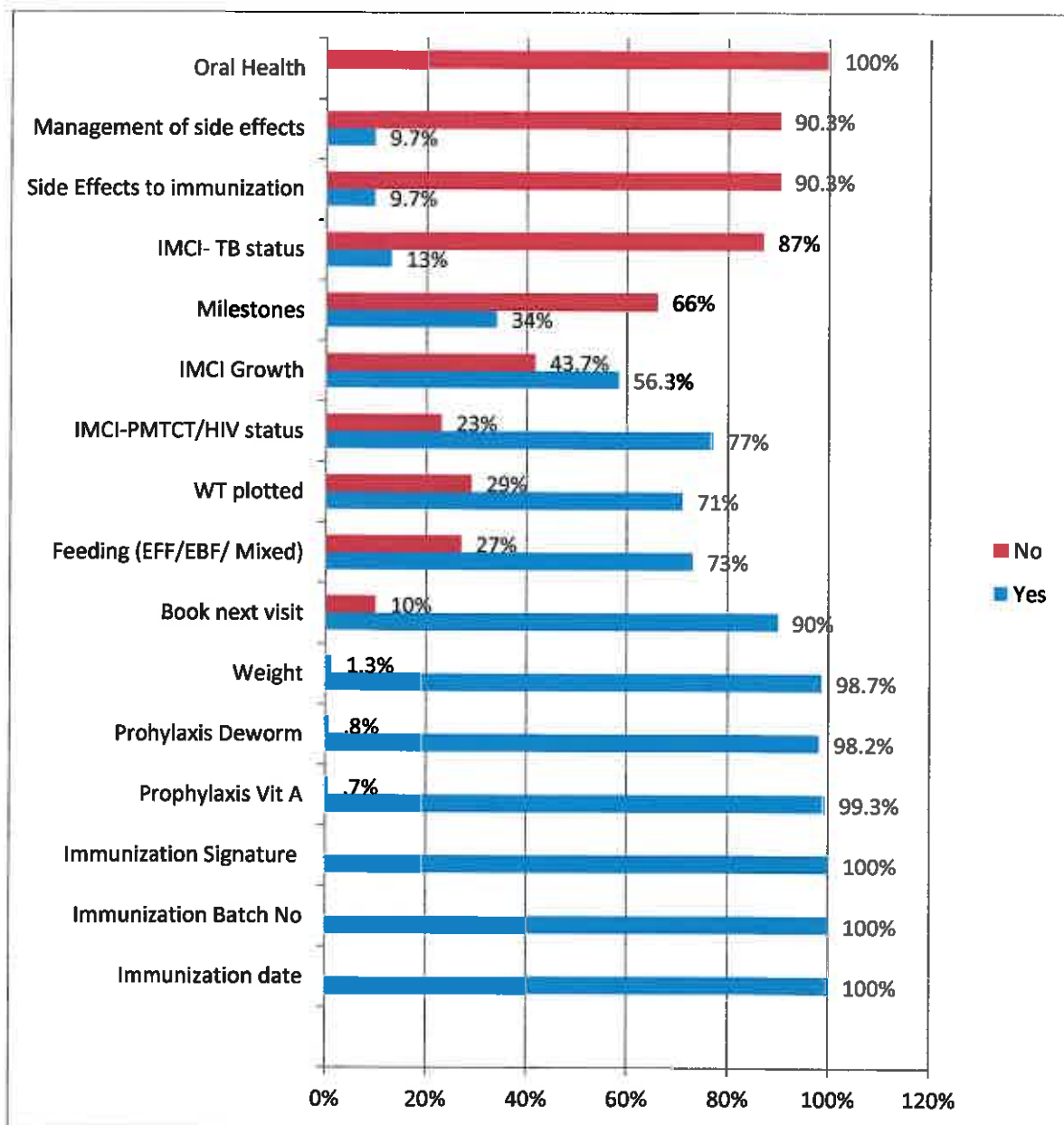


Figure 5.4 Recorded aspects of babies' and children's consultations

Table 5.3 indicates the Chi-square goodness of fit test, applied to determine whether 'yes' or 'no' was selected significantly more often than expected. Records indicated that immunisation dates, batch numbers and signatures were recorded in 100% of the records. According to the records 296 of the 300 babies were weighed. However, babies' weights were plotted in 213 baby charts $p < 0.0005$ (χ^2 (1, n=300) =56.904) and the weight implications were interpreted in 169 of the charts $p < 0.0005$ (χ^2 (1, n=300) =24.423). Most records (n=271) indicated that the next immunisation visit had been booked. These results were statistically significant at $p < 0.0005$ (χ^2 (1, n=300) =244.448). Feeds were found to be

recorded in 106 of the charts and this was statistically significant at $p < 0.0005$ (χ^2 (1, $n=138$) = 27.526). Worm prophylaxis was recorded as given in 113 charts $p < 0.0005$ (χ^2 (1, $n=115$) = 39.007). Side-effects to be expected from immunisation were recorded in 20 charts $p < 0.0005$ (χ^2 (1, $n=206$) = 69.591) and management thereof was recorded in 18 charts $p < 0.0005$ (χ^2 (1, $n=206$) = 98.241). TB status was recorded in 46 of the 187 charts of babies that were due for such classifications. These results were significant $p < 0.0005$ (χ^2 (1, $n=187$) = 69.591).

The results indicate that 75% of the 16 elements were recorded in the babies' charts. However, some aspects were seldom reported. Milestones were recorded in 51 of the 152 records where it was expected to be recorded but these results were not significant $p = .828$ (χ^2 (1, $n=152$) = 10.700). Records indicated that IMCI/PMTCT/HIV status was recorded in 133 of 177 of the charts of those babies whom this was indicated for. The results were not significant $p = 0.526$ (χ^2 (1, $n=177$) = 14.98). Oral health was not recorded in 100% ($n=154$) of charts of babies for whom this was indicated according to age.

Table 5.3 Children's record reviews Chi squares

Component	Yes	Percent	Chi square	P value
Immunisation Date (n=208)	208	100	87.472	0.0005
Signature for Immunisation (n=208)	208	100	87.471	0.0005
Immunisation Batch Number (n=208)	207	99.5	125.562	0.0005
Weight (n=300)	296	98.7	15.467	0.051
Book next visit (n=300)	271	90.3	244.448	0.0005
Feeds (n=138)	106	76.8	27.526	0.0005
Weight plotted (n=300)	213	71	56.904	0.0005
IMCI growth classification (n=293)	169	57.6	24.423	0.081
Prophylaxis Vit A (n=151)	150	99.3	43.819	0.0005
IMCI - PMTCT/HIV status (n=177)	133	77.3	14.98	0.526
Prophylaxis deworm (n=115)	113	98.2	39.007	0.0005
Milestones (n=152)	51	33.2	10.700	0.828
TB status (IMCI) (n=187)	46	24.5	69.591	0.0005
Side effects to be expected (n=206)	20	9.7	89.308	0.0005
Management of side effects (n=206)	18	8.7	98.241	0.0005
Oral health (n=154)	0	0	64.342	0.0005

During waiting time observations it was noted how long health care users waited before a consultation took place and how long the consultation lasted. This was carried out in all 20 facilities and a total of 600 waiting time observations, equally distributed across the three sub districts, were conducted. The maximum time waited before consultation with a health care provider was 120 minutes with the mean of 10.98 minutes and standard deviation of 9.377. Users finished their consultations in a maximum of 13 minutes with the mean of 4.30 minutes and a standard deviation of 1.979. The maximum total time waited from entering the Fast Queue, to leaving the clinic was 123 minutes with the mean of 15.27 minutes and a standard deviation of 9.809 (table 5.4).

Table 5.4: Waiting time range

	Minimum	Maximum	Mean	Std. Deviation
Time waited (mins)	0	120	10.98	9.377
Out in (mins)	1	13	4.30	1.979
Total time (mins)	3	123	15.27	9.809

The Mann Whitney U test (Table 5.5) was performed on pairs to check where significant differences could be identified when comparing the provincial and municipal PHC clinics. Health care users from municipal PHC clinics tended to wait significantly longer (328minutes) than those from provincial PHC clinics (273 minutes); $Z(n=600)=-2.143$, $p=.032$), corresponding with the length of consultations which were also significantly longer at municipal PHC clinics ($Z(n=600)=-5.394$, $p<.0005$).

Table 5.5 Mann-Whitney U Test – waiting times

	Time waited (mins)	Out in (mins)
Mann-Whitney U	40481.000	33751.000
Wilcoxon W	85631.000	78901.000
Z	-2.143	-5.394
Asymp. Sig. (2-tailed)	.032	.000

As indicated in figure 5.5, there were differences in waiting times between the facilities. The two facilities with the longest waiting times were NA2 where the waiting time was 21.10 minutes, followed by NA3 with a waiting time of 18.27 minutes. The two PHC facilities with the shortest waiting times were NB3 with 5.03 minutes followed closely by NC1 where the waiting time was 6.67 minutes.

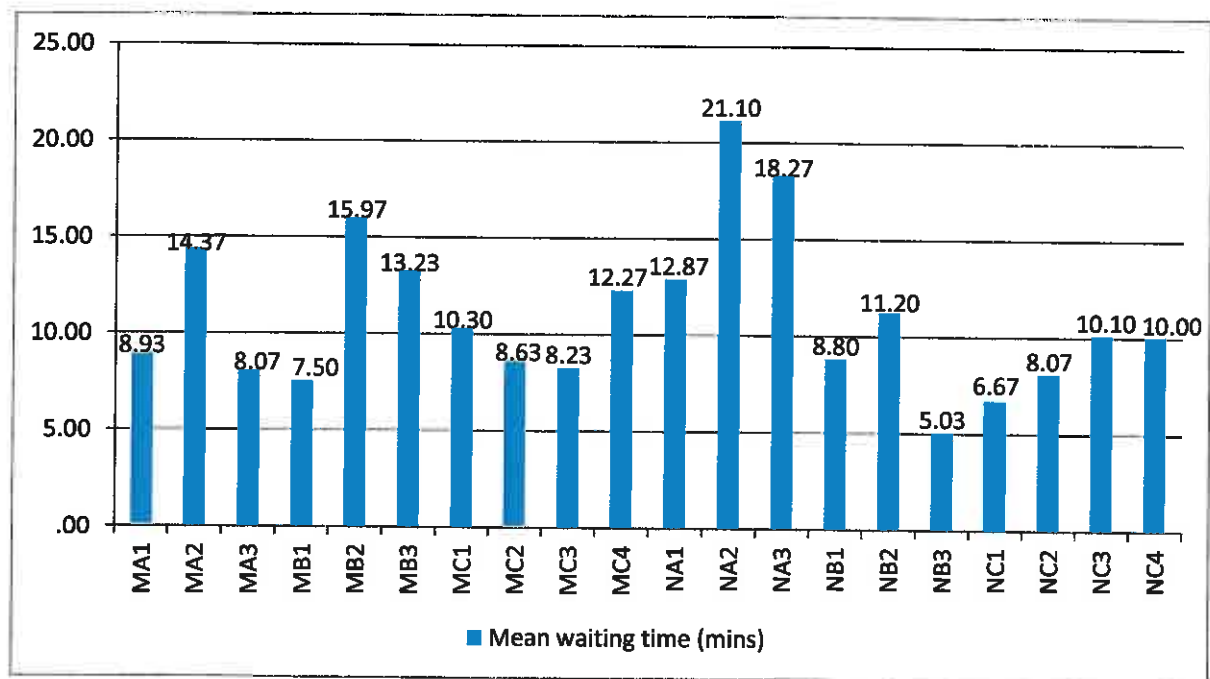


Figure 5.5: Mean waiting times by facility

The length of consultation time was observed in each facility as indicated in figure 5.6. The two facilities with the longest mean consultations were MB2 at 6.67 minutes and MA3 at 5.87 minutes. The facilities with the lowest mean consultation time were NC1 with 3.17 minutes and NB3 with 3.27 minutes.

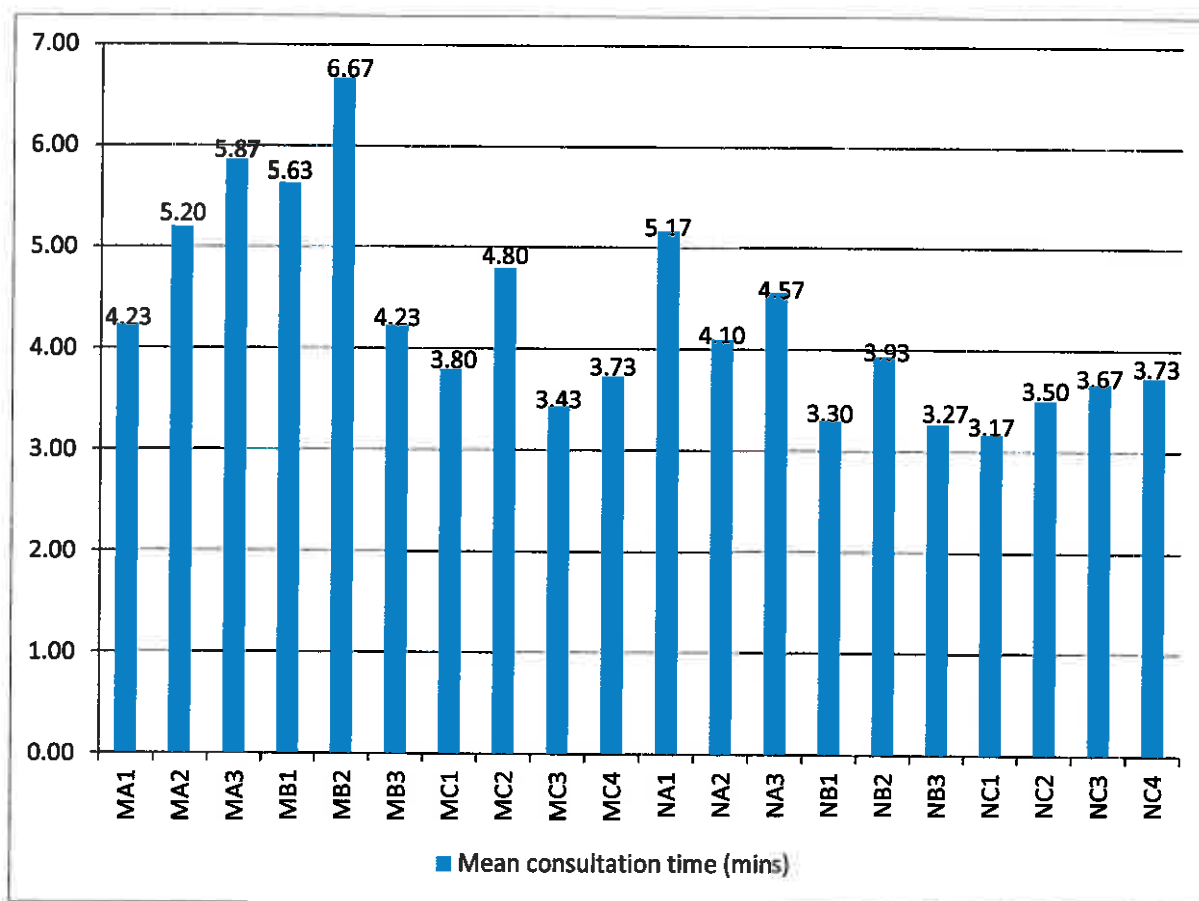


Figure 5.6: Mean duration of consultations by facility

Figure 5.7 indicates the mean total time waited at each facility. The two facilities with the longest mean total waiting times were NA2 with 25.20 minutes, NA3 with 22.90 minutes. The two facilities with the shortest mean total waiting times were NB3 with 8.30 minutes and NC1 with 9.83 minutes.

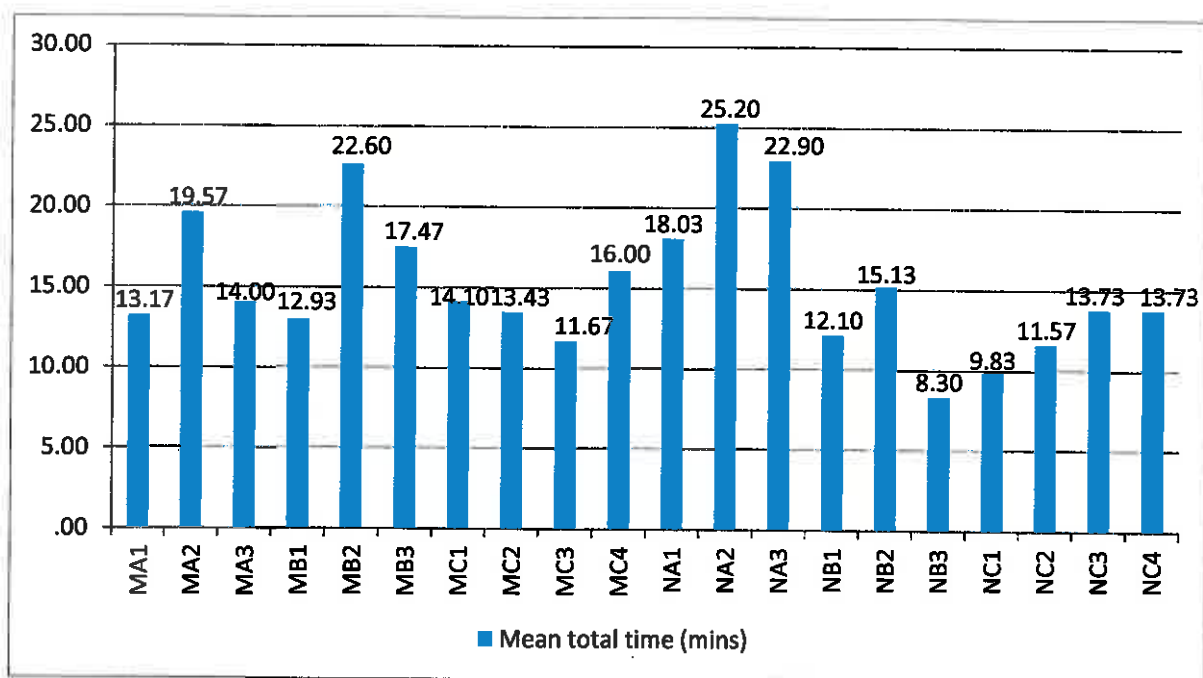


Figure 5.7: Mean total waiting times by facility

5.7 PATIENTS

The following is the description of patients who were seen in the Fast Queue, as compiled on the basis of information obtained from the patients' records.

5.7.1 Patient demographics

Record reviews were conducted on records of adults who were consulted in the Fast Queue and those of babies and children who had come to the well-baby clinic.

5.7.1.1 Gender

Gender of adult users

Figure 5.8 indicates the number of male and female records reviewed. Female records comprised the largest part of the sample 69% (n=207) and males comprised 31% (n=93) of the sample in the current study.

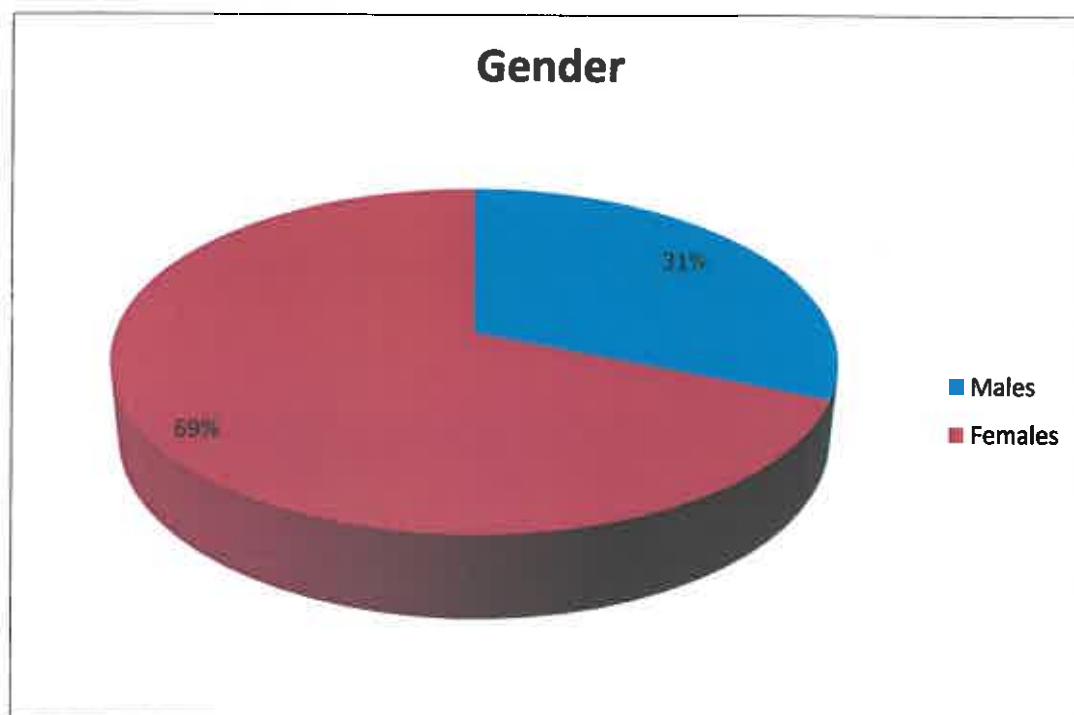


Figure 5.8: Gender of adult users of the Fast Queue services

Gender of children

Records of babies and children under five years of age who attended well-baby clinics were reviewed. Data were obtained from 300 children who came to the well-baby clinic either for weighing, immunisation, prophylaxis for intestinal worms and/or Vitamin A supplementation. As seen in figure 5.9, of 51% (n=153) children were females and 49% (n=147) were males.

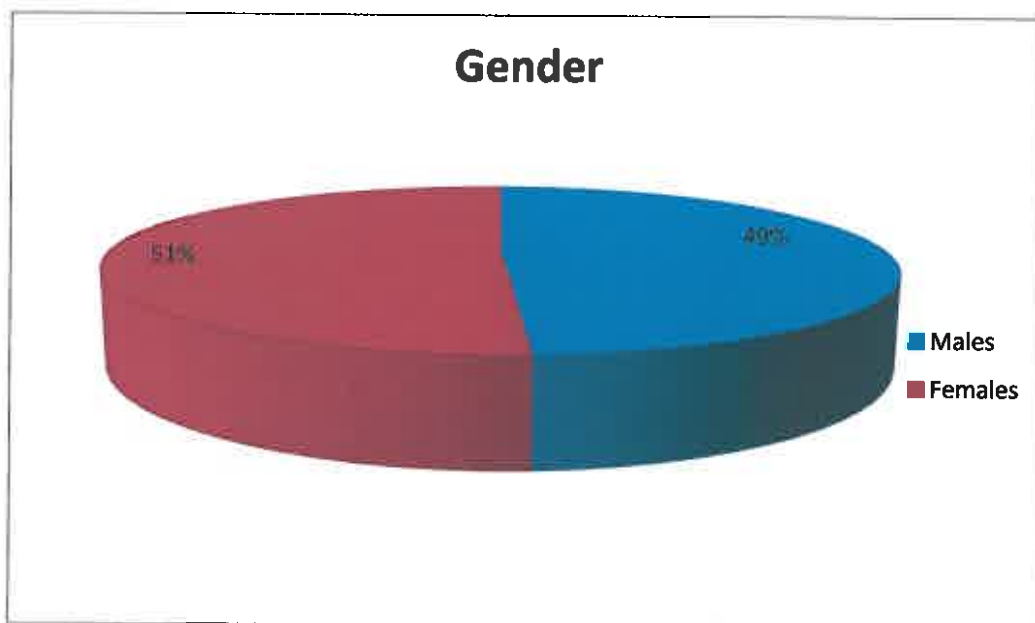


Figure 5.9: Gender of children

5.7.1.2 Age

Age of adults

The descriptive statistics of adult Fast Queue users' records indicated that the age of users ranged from 18 to 82 years. The mean age was 41.47 years with a standard deviation of 14.85. The age range was as follows: in the youngest group of 18-21 years they were 8.3% (n=25), and in 22-25 years they were 4.3% (n=13). The second largest group were the 26-29 year olds who were 12.3% (n=37), and

the largest group in the total sample were 30-34 year olds who were 14.3% (n=43). In the 35-38 year group they were 10% (n=30) while the 39-42 year olds were 9% (n=29). Of the total sample 3.6% (n=11) were 43-46 years old and 6% (n=18) were 47-50 years old. The 51-54 year olds were 7% (n=21) and the 55-58 year olds were 8% (n=24). The age group 59-62 years were 6.3% (n=19), whereas 5.6% (n=17) were 63-66 years old. In the sample 2% (n=6) were 67-70 years old and those that were 71-74 years old were only 1% (n=3). The very old health care users, aged 75-78 constituted 0.33% (n=1) while 79-82 years olds comprised 1% (n=3) (figure 5.10).

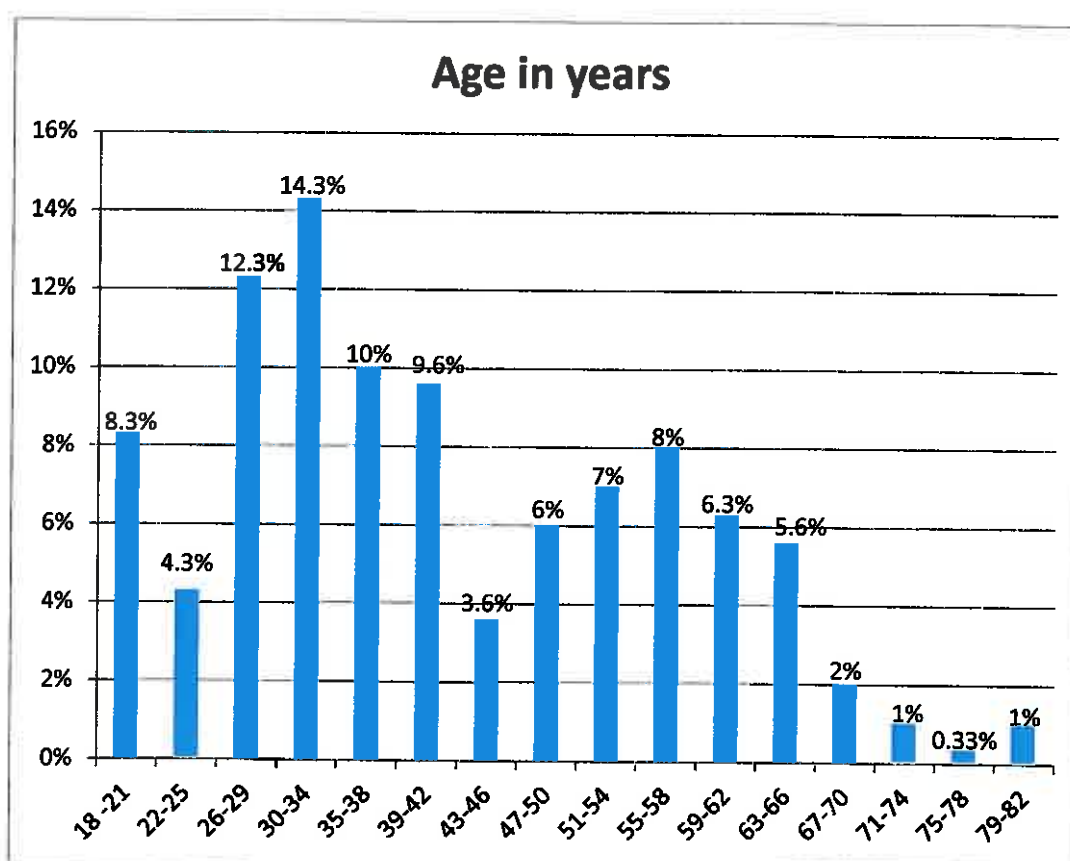


Figure 5.10 Ages of Adults

Ages of children

Figure 5.11 indicates that the majority of charts were those of the youngest group 0-5 months which comprised 35.3% (n=106). The records of the 6-12 months

group was the second largest 32.7% (n=98) group. Records indicated that 13.7% (n=41) of the children were in the 13-19 months age group. Charts of children in the 20-25 months age group were 6% (n= 18). The charts of 26-31 and 50 months old and above were 2.7% (n=8). Charts of babies that were in 32-37 and 44-49 months age group 3% (n=9). Records indicated that the smallest number of charts 1% (n=3) were for children in the 38-43 months age group (Figure 5.11).

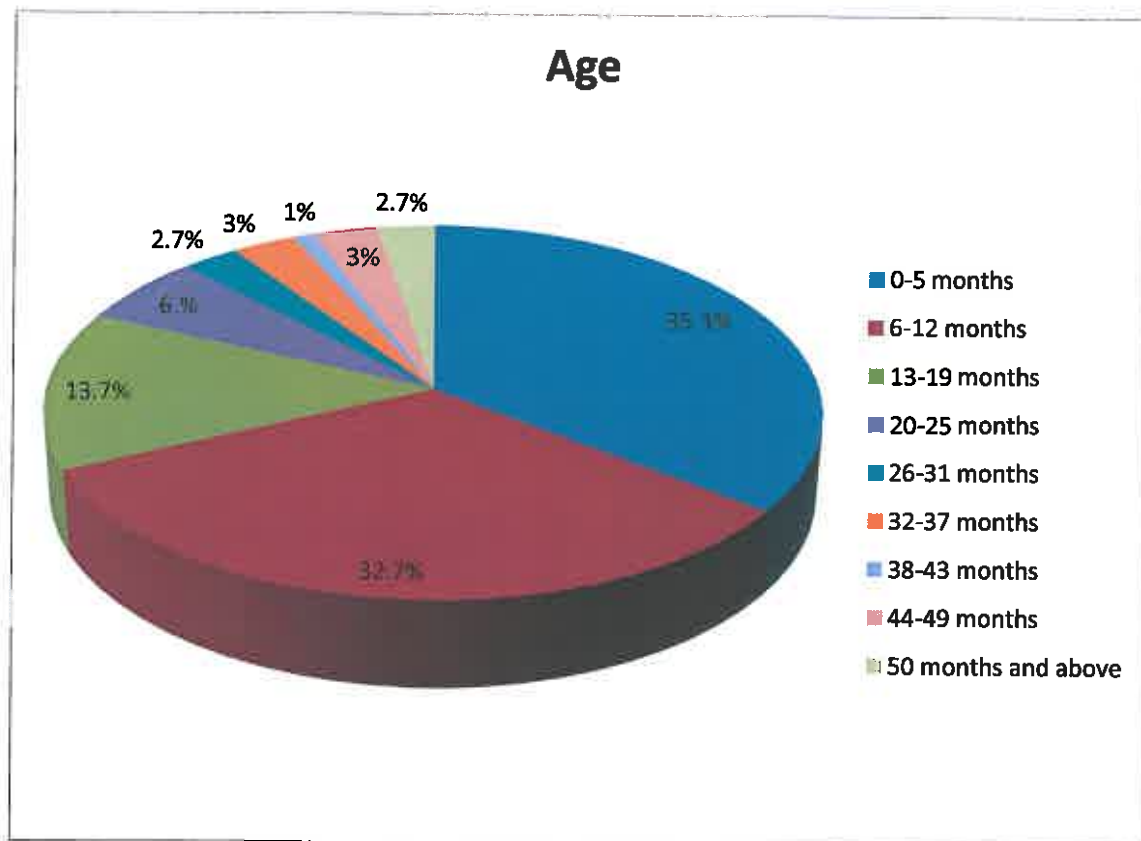


Figure 5.11: Ages of children

5.7.1.3 Diagnoses

Data about diagnoses were obtained from the Fast Queue users' records. The sampled records that were reviewed were those of users who had come to the facility with various diagnoses and were in the Fast Queue Service Point. Out of the total sample of 300 records, those of users who had hypertension constituted 17% (n=51), diabetics' records were 11.7% (n=35), TB 27.7% (n=83), AIDS 29.3% (n=88), asthma 3.3% (10), family planning 6.3% (19), mental health 2.7% (n=8), and epilepsy 2.0% (n=6) (figure 5.12).

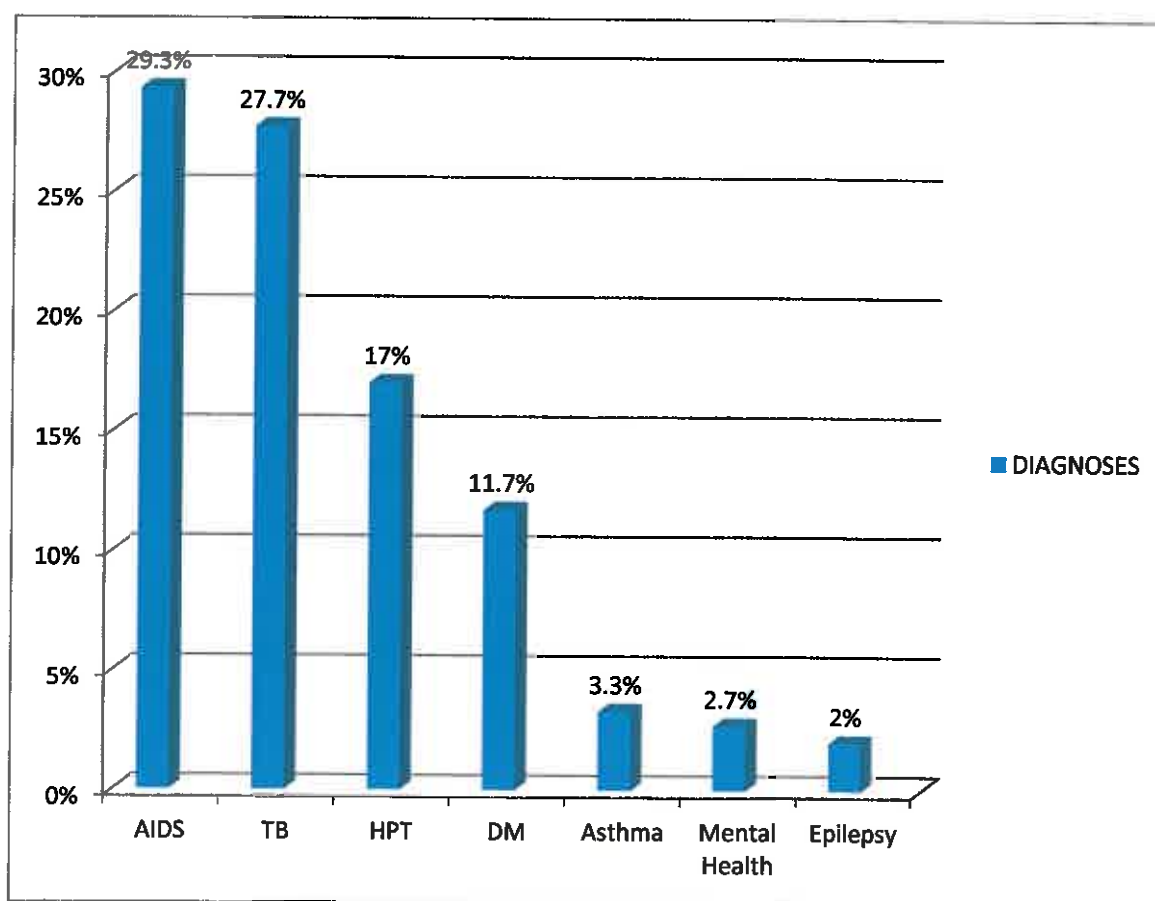


Figure 5.12: Adult patients' recorded diagnoses

Records of babies who had been reviewed were for those babies who came to the well-baby clinic. This is a clinic for those babies that are not sick and are coming for preventive and promotive health such as weighing, immunisations and Vitamin A prophylaxis. Out of the 300 babies' records that were reviewed 99% (n=298) were of babies who had come for immunisations, and would also receive routine prophylactic treatment of Vitamin A commenced at the age of six months and routine deworm medication which commences at twelve months and both these treatments are given six monthly thereafter.

The Fast Queue users that were **observed** at the PHC facilities had different diagnoses (figure 5.12). There were 8.8% (n=53) hypertensive users, diabetics were 5.8% (n=35), TB 14.2% (n=85), those that came for ART 13.29% (n=79), family planning 3.2% (n=19), arthritis 0.2% (n=1), asthma 1.2% (n=7), mental health 2.0%, (n=12) and epilepsy 1.8% (n=11) (see figure 5.13).

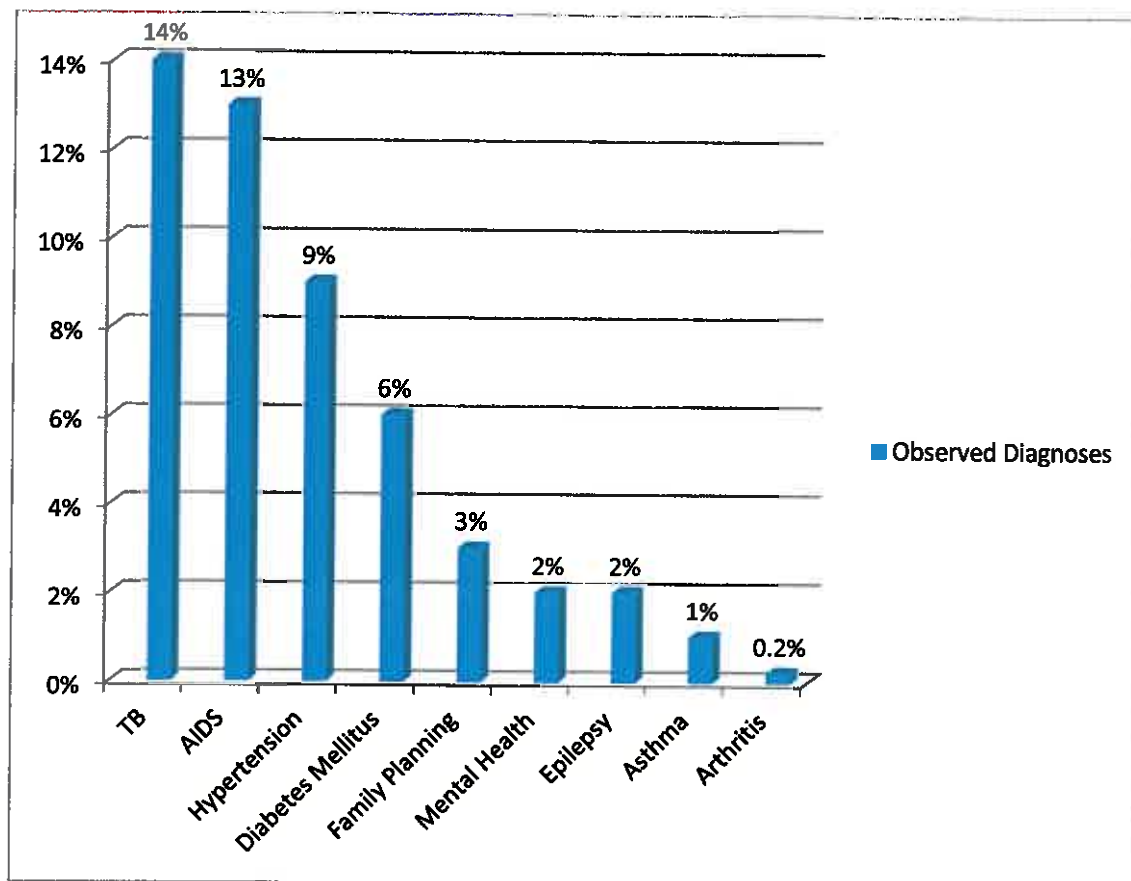


Figure 5.13: Adult diagnoses from observations

5.8 QUALITATIVE RESULTS

Qualitative data were collected to determine how personnel implemented the Fast Queue Service and what their views were towards this service. Qualitative data were also used to obtain clarity and in-depth information on the quantitative findings, where necessary (Appendix 5 and 15). Such cases were where the results indicated that there were good practices and also where most of the procedures were not carried out as expected. The organisation of these results was aligned with the elements of the Clinical Microsystems Model that guided the study. These elements were used as categories under which themes that were created from the data were discussed (Table 5.6).

5.8.1 PROFESSIONALS

Professionals in this study comprised all categories of health care providers that were allocated to the Fast Queue. In all health facilities, there was one clerk who registered the health care users and issued their clinic-based records. The Fast Queue Service had different categories of health care providers at different points. The 22 enrolled nursing assistants (ENAs) were at the forefront of the health facility after the clerks had issued cards they performed clinical tests required by the health care users.

In all health facilities, the enrolled nurses (25 ENs) were allocated to the injection rooms, where they administered different injections to health care users, including immunisations. The 35 registered/professional nurses (RNs/PNs) managed the health care users' consultations. There were 20 facility managers and the five facility supervisors who formed the middle management of the health care facility.

Data were analysed for content using codes such as descriptive codes from which themes were created as indicated in Table 5.6.

5.8.1.1 Age of professionals

The professionals (participants) of different age groups were interviewed as seen in table 5.7. The ages of the health care providers ranged from 27 to 56 years with an average of 42.4 years.

Table 5.7: The age distribution of professionals

Age group in years	Frequency
20 - 29	2
30 - 39	2
40 - 49	5
50 - 59	4

5.8.1.2 Years of experience of participants

Participants were asked how long they had been in the nursing profession and their years of experience is summarised in table 5.8. Years of experience ranged from 3 to 32 with an average of 15 years of experience.

Table 5.8: Years of experience of participants

Experience in years	Frequency
0-4	3
5-9	0
10-14	3
15-19	2
20-24	3
25-29	0
30-34	2

5.8.1.3 Personnel roles

There were different personnel in the facility allocated in this Fast Queue Service Point. They had clearly defined roles that they fulfilled contributing to the flow of work and eventually ensured that users at this service point received the desired care. Subthemes that emerged are in line with the different roles of professionals namely, a) supervision, b) administration and allocation of resources, c) patient and clinical care, d) wellness, preventive and promotive health and e) initial screening and prioritisation

a) Supervision

The facility supervisor has to supervise a number of facilities to support the facility managers and ensure that resources are available for work to be done accordingly. The facility manager reports directly to the facility supervisor who is located in an office away from the facility. She visits the facility regularly for supervision or communicates telephonically with the facility manager. When asked about their role in the Fast Queue, the facility supervisors expressed themselves in this way:

"I do not have a direct function in this queue but I have to make sure that the clinic manager ensures that this queue happens because it was introduced and accepted" (FS7).

"I am not directly involved with the queue as I am not always in the clinic; I rely on the clinic manager to see to the daily running of the clinic, including the Fast Queue" (FS4).

b) Management and allocation of resources

The facility manager is clinic-based; she ensures the smooth functioning of the facility and manages all staff in the facility. She allocates staff and resources and ensures that all areas of the facility are manned by suitably qualified staff. She also administers staff issues such as off duties, leave and sick leave and writes

reports to submit to the facility supervisor. The facility managers had this to say when asked about their roles:

"My core function is to allocate staff and make sure that all areas of the clinic are well staffed as required by the service. I have to make sure that patients are not delayed in the Fast Queue; therefore I allocate an ENA to check vital signs and a professional nurse to consult. I also make sure that medication is available all the time for these patients" (FM3).

"My function is actually to see that the clinic runs smoothly. I allocate staff to ensure that all stations of the Fast Queue are manned so that it can work as fast as it is intended" (FM13).

c) Patient and clinical care

Professional nurses work independently of the medical officer. They refer to the next level of care whenever necessary. The professional nurses (PN) report directly to the facility manager and perform daily duties in the facility. The professional nurses explained their role as follows:

"I consult, prescribe and issue medication, give health education and counselling about adherence to medication. With every patient that comes in, it is important that I ask this because I have to make sure that they have the information. It is important for patients not to default on their ARVs which can happen if they have problems and you have not asked them" (PN9).

"Screening patients and issuing of medication. I give them the return date" (PN10).

d) Wellness, preventive and promotive health

The ENs carried out procedures that had been prescribed by the professional nurse, or the doctor if the patient had been referred from another level of care. When asked about their role in the Fast Queue, the enrolled nurses had this to say:

"I give injections to family planning and TB clients and immunisations to babies" (EN12).

"I am responsible for the injection room. All injections in the clinic are given by me for family planning and TB clients and watch TB clients taking their Tablets. I also give immunisations to babies" (EN6).

e) Initial screening and prioritisation

The ENAs were tasked with checking the vital signs and managing the Fast Queue in that they would call users to check their clinical tests and direct them accordingly. The ENAs responded as follows:

"I check vital signs on all patients because the queue will not move fast if the professional nurse has to check them herself. I check the diagnosis and then see which clinical tests to check, sometimes they complain about something to the professional nurse then they need more clinical tests e.g. if they have hypertension and when they complain the professional nurse thinks they might be getting diabetes then they will ask me to check urine and prick the finger for blood sugar" (ENA11).

"Check vital signs and refer as urgent to the professional nurse, those that are very sick or who have abnormal clinical tests like high BP, high blood sugar or high temperature especially babies" (ENA8).

5.8.2 Purpose

All categories of health care providers that were interviewed agreed that the purpose of the Fast Queue Service Point was to reduce waiting times. They also felt that it was successful in fulfilling this purpose because the health care users that utilised this service point spent a reasonable amount of time in the clinic compared to their counterparts. The themes that emerged were: a) preventing delays and minimising clinic stays, b) ensuring compliance, c) quick service for those needing immediate attention and d) unintended consequences.

a) Preventing delays and minimising the duration of clinic stays

It emerged during interviews that this service point helped the users to spend minimal time in the facility. These users came to the clinic regularly to collect their chronic medications and they did not need to stay long in the consulting room. Moreover the clinical tests would be performed prior the consultation, therefore it becomes very quick. This is irrespective of whether the consultation provided quality care for the users; 'fast' is seen as good enough. Participants' views were expressed in the following excerpts:

"This queue prevents delays for patients who are regular clinic attendees and minimise clinic stay for patients who are only collecting medication" (PN2).

"For me the purpose of this queue is so that babies who come for immunisation do not wait with sick patients and so that they go home quickly before they catch infections from sick adults" (EN6).

"Patients here wake up very early, they sit miserably and hungry and sometimes having not taken medication for the day because they are rushing for the queue. That is why I do not want to waste their time. I consult them quickly and let them go home before they become irritable" (PN10).

b) Ensuring compliance

According to the participants, were it not for this service point that provides the service speedily, they would have seen many users defaulting treatment which would have had negative repercussions for the health system. Those with chronic conditions could develop complications such as strokes, multi-drug resistance TB, women at child bearing age would fall pregnant unintentionally, and children would contract infectious diseases. Interviewees felt that health care users got motivated to visit the health facility if they knew that they were going to receive a quick service. The views of participants were expressed as follows:

"Others come for injections for family planning and immunisation, these are commonly young clients who are either rushing to work or school. It will be

hard for a school girl to tell the teacher that they are late because they went to the clinic for family planning, if the service is not fast, they could fall pregnant” (PN9).

“This queue helps to care for patients quickly so that those that are rushing off to work or school are not delayed” (EN12).

“Patients that are coming to collect treatment are seen quickly because sometimes they are rushing to work especially family planning clients. Most male TB and ARV patients do not want to disclose at work, they want to collect medication and rush off. It is so much better with female patients. If they are not seen quickly they may not come again” (EN12).

c) Quick service for those needing immediate attention

It would seem that facilities had adapted the concept of the Fast Queue Service Point to the needs of the facilities. PHC clinics are small, and do not have a casualty section, all users come in through the same process. This service point is used mainly for users who collect treatment regularly. However, there are times when it is used to treat users requiring emergency care. To ensure that these users are not missed or delayed they are channeled through this service point. Participants' views were expressed in the following quotes:

“The purpose of this queue is to prioritise patients that need immediate attention and route them appropriately” (PN1).

“.....identify and treat patients that need immediate attention. Yes, they take long but it becomes fast for them to be seen because they are very sick, they have a separate sister than those that are collecting medication so, they are not delayed” (PN2).

“To provide quick service to those who are very ill.....” (FS4).

d) Unintended consequences

On the other hand, it was noted that babies that came for immunisations in one particular facility did not go home as quickly as expected. The researcher observed that there was a delay of up to an hour and the delay was not due to anything that benefited babies or caregivers directly. The health care provider confirmed the researcher's observation citing the following:

"Yes, they do not go home early, there are too many registers to write and it takes a lot of time to fill them including statistics, which is what the manager is most worried about" (EN6).

The issue of registers was corroborated by participants from a different facility, who also felt that they took too much of their time:

"There are two of us working in this room; one will not manage because of the registers that we have to fill in and statistics forms, it works better if there are two of us" (EN12).

These participants had also resorted to measures that would be unacceptable for quality care, to make the queue move fast. It was observed that users in this queue spent the shortest time ever in the injection room, and participants responded thus:

".....because we know that most family planning clients come for the 3 months injection, we draw it up before they get here, so, as soon as they come in, one gives the injection while the other is writing in the card and the registers and statistics" (EN12).

5.8.3 Patients

Users that are found in this queue are those that come for family planning, collecting medications for chronic illnesses, including but not limited to, hypertension and diabetes mellitus most of whom are elderly, TB, mental health, epilepsy, asthma and ART and babies coming for immunisations. Planning has been made for this particular group of users that they could be routed to this specific service point to meet their needs.

"It is those that come to collect treatment for chronic illnesses like TB, diabetes, hypertension, ARVs, family planning, and immunisations" (PN5).

"It is divided according to what the patient came to do e.g. FP, TB, ARVs, HPT, DM and immunisation" (FM3).

5.8.4 Process

At this service point, users are admitted by a clerk who hands them their clinic-based records, then they have clinical tests performed by the ENAs then they wait for consultation where they would be seen by either the EN or the PN. Themes that emerged from data regarding process are a) patient flow b) workload c) support d) nature of consultation.

a) Patient flow

Patient flow was well organised and understood by all participants including the facility managers and the facility supervisors, and was seen as a major part of quickly rendering this service. Participants were also clear that this process contributed to the short consultations thus minimising delays and reducing clinic stays for the users. Participants expressed their views as follows:

"After the patients have been clerked and clinical tests performed, they go to this queue where there they will be seen by the professional nurse and given medication" (FS4).

"Patients are first seen by the clerk who takes their details and gives them their cards, together with all other patients. They then go for checking of clinical tests, weight, blood sugar /blood pressure whichever applies and urine tests" (FM3).

"Patients get clerked and get their cards, then have their clinical tests performed by the ENA and they are then directed to their queue, the fast queue" (FM13).

Sometimes users were observed coming out of the consulting room for more observations and the response of the participants regarding this was as follows:

"I would check the vital signs according to the diagnosis that I see on the patients' cards, when the patients get in they complain to the professional nurse, if she thinks it is sugar for instance, she will send the patient back for me to check sugar from the finger prick and urine" (ENA8).

b) Workload

All participants complained about the workload, which they felt was too high. As a result they faced very ill users who had to be treated at this level. They also stated that there are conditions that were treated by doctors which nurses have now been trained to treat. The managers were aware of this but could not do much about it. The views of participants were expressed in the following excerpts:

"If one nurse is not in or the ENA to checks the vital signs, we have to do it ourselves or not do it at all, the manager has no staff to spare, everyone is allocated in their own area of work" (PN5).

"Everyone is allocated to a programme, so if you are too busy or short staffed nothing can be done because everyone is at their stations there is no extra staff. To top it all there are so many new programmes where we have to work alone with very sick patients. It is sometimes too much for us" (PN9).

"I check all vital signs alone even for more than 100 patients sometimes. It becomes a problem if I am not in; there is no one to take my place" (ENA8).

"Unfortunately, I cannot do much; the staff is stretched to the limit because of the many programmes that are now in the clinic. Patients that were treated in hospital before are now treated in the clinic by nurses. If someone is not at work, it becomes an impossible task to replace them" (FM13).

c) Support

To ensure that the process is flawless and to avoid bottlenecks, health care providers need support from the managers and other colleagues. Support would be in the form of staffing and equipment. Participants, including managers and supervisors, had different opinions about this issue as became evident from the following quotations:

"I get support from the staff, because sometimes they organise themselves if the clinic is too busy. They know who can work better for instance in TB, or ART clinic. I think by allowing them to be creative about how they man the clinic I am supporting them because they are at the cold face of the clinic they know what works better and what does not. They are professional nurses they know what they are doing" (FM3).

"The support I get is that I always have things to work with like uristix, blood glucose strips and BP machine" (ENA11).

"I do not get any support as I am the only EN in this clinic. I could be very busy and my queue can get very long, no one comes to help me. I do not need to even report as you can see I work opposite the manager's door, when she comes out she can see the long queue" (EN6).

d) The nature of the consultation

All participants felt that consultation times were shorter at the Fast Queue Service Point. The reason cited by participants was that the clinical tests had been performed before users got to the consulting room and they were regular attendees who came to collect medications or get their injections, they did not require long examinations. Opinions differed regarding what a 'short consultation' entailed regarding what was meant to take place during a consultation.

According to the different categories of personnel working in the Fast Queue, this happened for various reasons. The voices of professional nurses follow:

"We tell the mother about the baby's weight and ask about previous immunisation. We also emphasise that if the child gets a bit feverish she is not to worry unless it lasts for more than three days and how to manage fever at home. It does not take up a lot of time; the mother is not delayed by talking to her. It is important because from here they go to a staff nurse, I cannot trust her to do it, I want to do it myself" (PN1).

"When we issue medication we ask the patient to tell us how he/she is taking it. Also if they are new patients we ask if the medication is not giving them problems. If they are old regular patients there is no need for all that because they have been collecting medication for a long time. Medication would give them problems if they were still new patients. They are new within the first six months of starting medication after six months they are old patients" (PN2).

Other participants felt that no health information was required as most users are 'old patients', who had been on treatment for longer than six months, they would do it with 'new patients', those who are within six months of starting treatment.

"It depends; if the clinic is not busy I have time to talk to them. I ask if they have any problems and if the tablets are not giving them any problems and if they are taking their tablets correctly, especially if they are new patients. Those that have just started taking medication; maybe in their first six months. Sometimes they feel that tablets are not working if packaging has changed. We are supposed to tell them that it is the same medication it is the packaging that changed. We do not always do this like I said that if the clinic is full there is no time to talk. We have so many new programmes and the patients are so sick" (PN5).

"I consult and prescribe and issue medication and give health education and counselling about adherence to medication. With every patient that comes in it is important that I ask this because you have to make sure. It is important for patients not to default on their ARVs which can happen if they have problems and you have not asked them" (PN9).

In the injection room it would seem few or none of the expected provider-user interactions took place. The enrolled nurses would not discuss anything with

caregivers who brought babies for immunisations because they consulted a professional nurse first and they came to the enrolled nurse who gave immunisations and completed the records. The ENs expected that the PNs would have discussed the side-effects of immunisations and the management thereof with the caregiver. Similarly for users that came for family planning, not much was discussed by the ENs.

"When they come to me they have already been seen by the professional nurse, so I suppose they have been told everything there is to tell I just give injections and record" (EN6).

"We do not discuss anything because they are old clients they know everything so we just give the injections and write the return date. As I have said that these are old clients they no longer get their menses. The ones that come regularly know everything we do not need to tell them anything. They know that sometimes you gain weight on the injection. As I have already said, we have our old regular clients we do not worry about all that with them. Babies are assessed by the professional nurse first; all we do here is give immunisations. The professional nurse gives health education in the consulting room. It is their duty mine is to give injections" (EN12).

5.8.5 Patterns

Health care providers that work at this service point seemed satisfied with working with these users. They were happy to be making a difference in decongesting the facility and that they assisted users who would under different circumstances not even come to seek help from the facility. It helped that users had their clinical tests performed before consultations with the PNs, as it saved time for the PNs. Patterns included the leadership within this service point and subsequently the leadership of the facility as a whole. There were patterns in the Fast Queue Service Point that worried participants. For the lower categories of health care providers they had a PN to refer to if there were problems. In turn, the PNs referred to the clinic manager if there were technical issues interfering with their daily duties.

The facility manager had the facility supervisor to turn to if there were problems with the running of the facility.

"I rely on the clinic manager because I am unable to do the scheduled clinic visits because of other commitments like meetings which come at a spur of the moment and are unscheduled. They throw one off completely. As a clinic supervisor you come to the clinic to merely collect reports and statistics from the clinic manager" (FS7).

"There is so much to write for us clinic managers. When people from the national department of health come to check on National Core Standards, they want to see what you have written for the clinic and you are judged on that. Even my supervisor wants reports, statistics, and performance appraisal for staff" (FM3).

The support from facility management was important to the health care providers for this to be achieved. It would seem this was not the case as shown by the following excerpts:

"The support would be mainly to assist the clinic manager with motivating for posts if there are unfilled posts since there are new programmes and patients are so sick and staff is needed and nagging maintenance for equipment that went for repair because it goes for an unreasonably long time while there is nothing to use in the clinic" (FS7).

"To be honest we do not get time for supervision neither does the clinic manager, there is just too much that is required from us. What is most difficult is that everyone says they get instructions from above them, and then clinic work suffers" (FS4).

"Supervision is another task that is almost impossible. As a clinic manager, I have a lot of written work that I need to do, in fact I cannot manage to finish it during normal working hours, often I have to take work home and come in on weekends" (FM13).

5.9 SUMMARY

This chapter presented the results of both the qualitative and quantitative data, which will be integrated and discussed in the next chapter. During structured observations the health care providers weighed the Fast Queue users and measured their blood pressures, however if the blood pressure was very high urine tests were not checked for proteinuria. The observed clinical tests were not all documented in the Fast Queue user charts. Very few Fast Queue users that had diabetes mellitus had their blood sugar tested. None of the asthmatic users had their lung function measured as there were none documented in their records. Most times health care providers interacted with Fast Queue users about the Fast Queue as well as asking them about how they felt on the day. However there were other aspects that were omitted such as finding out about presence medication side effects and complications from the illness.

Babies' immunisations were well recorded including the dates, batch numbers and were signed for. Health care providers lacked in assessing babies if they had reached milestones according to the age as well as assessing them for TB which is a major challenge in South Africa. Caregivers were not told which side effects to look out for following immunisation of their babies as well as how they could manage them at home. Waiting time varied from one PHC clinic to another as well as between Fast Queue users. There is one who waited for 120 minutes, only to spend three minutes in the consulting room. In the next chapter these results will be discussed.

Chapter 6: DISCUSSION OF RESULTS

6.1 INTRODUCTION

This chapter discusses the results of both the qualitative and the quantitative strands of the study relating it to reviewed literature. In the discussion, results will be merged and the qualitative results will be used to support the quantitative results. The Clinical Microsystem Model is a framework that was used to structure the discussion applying its five elements, namely: patterns, process, purpose, patients and professional.

6.2 PATTERNS

In the current study, health care users in the Fast Queue had different chronic illnesses both communicable and non-communicable. According to WHO (2010), the challenge of the 21st century has been the rise in non-communicable chronic illnesses known as the diseases of lifestyle (WHO, 2010: 88). The simultaneous epidemic of communicable diseases such as HIV/AIDS and TB, especially in the developing countries, increases the burden of chronic diseases. The one common characteristic of these chronic conditions is that they are incurable and therefore require lifelong management and follow up treatments and medications (Levitt *et al.* 2011: 1690S).

The researcher observed that clinical tests that were supposed to be performed on all health care users who came to the health facility were performed. It was more importantly for health care users living with chronic illnesses seen in the Fast Queue such as hypertensive, diabetic and health care users on ART and TB treatment. Hypertension and diabetes mellitus are regarded as the global health burden, contributing to the pandemic of cardio vascular diseases (CVD) (Seedat and Rayner 2012: 61).

6.2.1 Blood pressure measurement

Blood pressure was supposed to be measured at every visit for health care users with hypertension and once a year for other health care users whose blood pressures were within normal limits on the first visit (Seedat and Rayner 2012: 64). In the current study, blood pressure was measured in 41.2% of the health care users. Parker, Steyn and Lombard (2012) found that in the Cape town PHC clinics, blood pressure was the most common clinical test performed, followed by weight and urine test (Parker, Steyn and Lombard 2012: 4). According to Kearney *et al.* (2005: 60), hypertension is a global health burden affecting developed and developing countries such as South Africa. The results of the current study found that one ENA could perform blood pressure measurements for as many as more than one hundred health care users in one day and some health care facilities still used manual equipment. In other facilities, blood pressure was not measured as health care providers did not have the necessary equipment at the time when the study was conducted. In PHC facilities, studied by Parker, Steyn and Lombard (2012: 4), if equipment was available it was inadequate and some PHC facilities had very few pieces of equipment resulting in overuse of available equipment and eventually having the same equipment breaking and being sent for repairs leaving the facility without equipment. This means that the other half, whose blood pressure was not monitored, might end up with complications should blood pressure rise without any one noticing because of lack of monitoring.

6.2.2 Weight

In this study, weight was checked in 63% of the total Fast Queue users. Hypertensive users comprised 7% of the total sample and weight was measured on 39% of them. The reasons cited by health care providers for not weighing all health care users were that if the nurse allocated to this work station was not on duty, they would not be replaced because of the shortage of staff and therefore there was a great possibility that weight would not be monitored. In some facilities, weight could not be monitored because the equipment had been sent for repairs and had not been returned and there was no replacement equipment.

Seedat and Rayner (2012), assert that weight monitoring is important to identify the risk of obesity which contributes to CVD in users with hypertension and diabetes mellitus (Seedat and Rayner 2012: 64). According to How (2014), weight monitoring is vital and also used as one of the measures for users suffering from debilitating chronic conditions such as TB and HIV/AIDS. Both these conditions are the archetypal wasting diseases. One of the signs that a person is suffering from a chronic debilitating disease is loss of appetite and subsequent loss of weight, hence weight gain is one of the signs of a good response to treatment. Furthermore, weight gain is seen as a cheap monitoring tool for patients on TB treatment (How 2014: 91). Similarly, Krapp *et al.* (2008: 1157) conducted a study in Peru on body weight gain as a predictor of treatment outcome and noted that slow weight gain is associated with unsuccessful treatment outcomes. Gler *et al.* (2013) found that when weight gain was used for determining the response to multi-drug resistant TB (MDR) treatment in the Philippines, during the first three months of treatment weight gain of more than 5% was an important predictor of treatment success in underweight patients (Gler *et al.* 2013: 947).

The TB guidelines stipulate that weight should be monitored monthly on all patients on TB treatment (WHO 2010: 91). Weight gain in these users indicates good responses to treatment and general health improvement. Weight was monitored in 73% of TB users in the current study. Some users were not weighed because one enrolled nursing assistant could not cope with the number of users in the clinic on any given day or there would be no functional scales, if they were broken and not been replaced.

In a study on weight gain with TB DOTS patients in India, it was found that body weight gain was significantly associated with cure and that young patients gained weight better than older patients (Vasanthi, Gopi and Subramani 2008: 7). In addition, in an Iranian TB clinic Khajedaluae *et al.* (2014) found that, weight gain during the first two months of treatment indicated that patient outcomes would be positive while it was predicted that patients who lost weight in the same period would have poor outcomes (Khajedaluae *et al.* 2014: 450). This clearly indicates that weighing of patients is one of the vital monitoring strategies especially for

those suffering from chronic illnesses. It would be expected that 100% of health care users suffering from TB, would be weighed because of the importance of improving TB outcomes.

In the current study, health care users who were on ART were also found in the Fast Queue. According to Gilks *et al.* (2006) ART had been scaled up and decentralised to PHC facilities, where they would be easily accessible to low income populations (Gilks *et al.* 2006: 505). The results of the current study indicated that 75% of health care users on ART were weighed. Leite and Sampaio (2009: 636) assert that weight monitoring in patients on ART is not only vital as an indicator of the response to treatment, but it can also contribute negatively to patients with dyslipidemia. Additionally, when weight is not measured, it may not be possible to monitor progress as well as excessive weight gain resulting from metabolic disorders associated with ART.

6.2.3 Urine testing

Urine was the least monitored clinical test in this study. It was measured in only 8% of the health care users who were due for monitoring. Urine analysis would be used to identify kidney damage in health care users with diabetes and hypertension. Previously it was also used to diagnose diabetes which is no longer the case with improvements in technology and evidence-based practice. Contrary to the stipulation of the hypertension guidelines by Seedat and Rayner (2012: 66), it was noted that health care users would go for more than a year without urinalysis which is in cases where blood pressure was elevated, urine was not checked for proteinuria.

An audit on the availability and efficacy of equipment at PHC facilities in Cape Town, revealed that blood pressure was the most used diagnostic test, followed by weight measurement, urine and lastly blood glucose (Parker, Steyn and Lombard 2012: 10).

6.2.4 Record reviews

Records of adult health care users were reviewed to check if the clinical tests that had been performed were recorded on health care users' charts. The results of the current study indicated that the clinical tests were not recorded in 100% of the user charts such as urinalysis which was recorded in 4% of charts while blood sugar was recorded in 40% and the peak expiratory flow rate was not recorded in 100% of the charts. According to Stevens and Pickering (2011: 1), the quality of the records kept by nurses denotes the quality of care given to patients. In addition, there is an ethical legal framework within which nurses practice their duties and require them to adhere to certain rules and regulations. The South African Nursing Council (SANC) is the body that regulates nursing practice in South Africa. It sets regulations regarding keeping of records for nurses and midwives (SANC 1978). In nursing, "if it is not recorded, it is not done" (Gasper 2011: 886). Regulation 2598 and regulation 2488 describe the scope of practice of a registered nurse and midwife and has clear guidelines on record keeping including enrolled nurses (SANC 1984), as a result a nurse who deliberately ignores to adhere to this regulation by not keeping clear, accurate records might face disciplinary action against her by the SANC as set out in Regulation 387 on Acts or omissions of a nurse (SANC 1985).

Health care user records are tools of communication between health care providers in the health care facilities at different levels (Figure 1.1). These records should contain all the necessary information for continuity of care even between different health care providers in the same facility; they must be legible and kept safely. High quality information recorded indicates good quality of care (Saranto and Kinnunen 2009: 473). Good records also assist the health care provider to make decisions regarding the management of the health care user in the current or future consultations. Furthermore, good record keeping is associated with good quality of care and poor recording constitutes professional misconduct and incompetency (Dimond 2008: 210).

The quality of records reflects the quality of care given (Rawles 2014: 43) while poorly written records cast doubt on the quality of care given (Stevens and

Pickering, 2011: 1). Poor recording is detrimental to patients' health and well-being and denotes poor quality of care (Law, Akroyd and Burke 2010: 1228). Accurate documentation is necessary for good record keeping (Paans *et al.* 2010: 2486). These authors further argued that the more experienced the nurse is, the better are the records. While it helped professional nurses that the clinical tests were performed before users were consulted, it did not serve the purpose when the clinical tests had not been recorded. Recording would assist professional nurses to assess the disease progression including complications and compliance to medication. It would also determine if the user warranted referral to the next level of care.

During interviews, all categories of nursing personnel complained about the amount of recording that they were expected to do, such that the amount of writing compromised nursing care they were supposed to render to health care users. Nurses were expected to write user information in the cards about the day's consultations and further to this, they had daily tally sheets which contained indicators for diseases in the province, chronic patient registers and immunisation registers. These would be able to assist in tracing defaulters. The clinic manager had to verify statistics collated by clerical staff from each health care provider, write facility and staff reports, as well as operating procedures. Davies, Homfray and Venables (2013: 3) found that in South African PHC clinics, important administrative duties such as maintaining patient registers and pharmacy records could not be done due to the busy schedules for patients needing initiation on ART. Similarly Georgeu (2012: 6) asserts that paperwork demands have increased in the health system as a whole; in addition NIMART increased paperwork further

6.3 PROCESS

Interaction between health care providers and health care users is vital as it creates a good relationship and trust between them. This interaction also influences care in that it can deter health care users from attending a PHC facility or it can encourage them to do so if these relationships are good.

6.3.1 Users told about the Fast Queue

In this study, if health care users were coming to the health facility for the first time, they might have been unsure whether or not they should join the Fast Queue. Health care providers needed to provide additional explanations as to who should join the Fast Queue. It was found that this was done all of the time (100%). In the Clinical Microsystems Model orientation of health care users to the facility is important for quality of health care when they know where to go for procedures to be carried out and consultation (Nelson *et al.* 2011: xxiv).

6.3.2 Dedicated personnel for the Fast Queue

There were dedicated personnel for the health care users in the Fast Queue and every work station in the Fast Queue had a health care provider allocated to provide care to the health care users. According to the studies conducted by Georgeu *et al.* (2012: 5) and Uebel *et al.* (2013: 8) in South Africa, patients were satisfied to be consulted in their own section of the clinic where they could avoid the long queues and could be seen by a specific nurse preferable the same one every time. Similarly for nurses as well it was easier to form good relationships with their patients if they were allocated to a specific programme rather than providing an integrated service (Uebel *et al.* 2013: 7). A study to assess infection control practices in South Africa, found that dedicated personnel were available in 31% of the PHC facilities and dedicated TB consulting rooms in 20% of facilities (Naidoo, Seevnarain and Nordstrom 2012: 1602).

It was indicated during interviews in the current study that every category of staff member in the Fast Queue knew their role where they were allocated and what was expected of them. As the health care users entered the health facility, they were met by the clerks that recorded their names in the daily attendance sheet and issued them with a clinic-based record before proceeding to where clinical tests were conducted. According to South Africa's National Health Act (no 61 of 2003), every health facility has an obligation to keep records of every user of health services (Republic of South Africa 2003: 24). The clerks also directed health care users to where they needed to go after they had received their cards.

There were three categories of health care providers who were met at the facilities. The one category was the enrolled ENAs who were trained for one year. The ENAs were allocated in the work station where initial screenings of health care users were done. They performed basic duties such as clinical tests in the form of measuring blood pressure, blood sugar, weight and urine testing before the health care users proceeded to consultation by the professional nurses. The SANC specifies the scope of practice for each category of nurses. The scope is those work procedures and processes that each category of nurses is legally permitted to perform in line with their level of training and expected competency prescribed by the Nursing Act (no 50 of 1978, as amended). It describes the roles and responsibilities of different cadres of nurses so that they are able to render the best possible quality of care therefore work allocation in facilities should be according to the scope of practice (Republic of South Africa 1978).

It was observed that health care providers in all facilities performed functions within their scope of practice. According to the scope of practice among other duties, ENAs performed the clinical tests such as blood pressure and they did so under the direct or indirect supervision of a registered nurse (Republic of South Africa 1978). In this study, the ENAs verbalised that their role was mainly that of initial screening and prioritisation as they checked vital signs and referred very sick users to the professional nurses to be consulted first. They were concerned that only one ENA was allocated at any given time in this work station and if that one ENA was not on duty, there was no one available to perform these tasks. In addition, they were concerned about the large numbers of health care users that they saw in one day and sometimes they did not have the equipment required to perform the expected functions.

Registered nurses or professional nurses (RNs/PNs) and midwives were nurses who were trained for four years either following diploma or degree programmes in nursing. Besides this basic training, registered nurses working at PHC level, undergo specialised training in clinical nursing science, health assessment, treatment and care according to regulation 48 of the Nursing Act (no 50 of 1978,

as amended). In this course registered nurses are taught clinical skills and knowledge to assess and treat patients thus work independently of a medical practitioner, this is an extended role of a registered nurse (Republic of South Africa 1978). The registered nurses consulted the Fast Queue health care users and issued medications. Health care users in this queue require efficient and effective care therefore health care providers should be able to meet this requirement.

ENs were trained for two years and they performed preventive and promotive duties and carried out nursing care and implemented nursing care plans under the direct or indirect supervision of the registered nurse and midwife (Republic of South Africa 1978). Enrolled nurses worked in the injection room where all users that needed injections which had been prescribed by the professional nurses were referred. These were users who came for contraceptives and babies for immunisations, in few occasions there would be a user who required an injection for TB and antibiotic injections for other illnesses. Enrolled nurses expressed that all injections in the facility were given by them and in most facilities there was only one EN allocated to the injection room.

The professional nurses consulted with the users and issued medications and gave them return appointments. The scope of practice allows them to diagnose and prescribe medications (SANC) which is what they said they did in the facility. Nkowane *et al.* (2009: 3) found that 92.3% of nurses in Sudan and (68.2%) in Zambia reported that all the duties that they performed at work were within their scope of practice and their job descriptions.

6.3.3 Relief personnel during tea breaks

In this study, in most of the observations health care workers did not take any tea breaks, in few situations in which the tea breaks occurred, fewer than 26% provided relief personnel and therefore those workstations were left unattended as there were no relief personnel available and this caused bottlenecks in the Fast Queue. Staff needs to take these breaks in order not to get fatigued and lose concentration. Fatigue which could be mental, physical or total and not

taking breaks reduce concentration and can compromise the quality of care for health care users by increasing the risk of errors and injuries (Pasupathy and Barker 2011: 28). Section 14 of the Labour Relations Act (no 75 of 1997) (Republic of South Africa 1997b: 9), specifies the basic conditions of employment and stipulates that workers should have at least an hour interval after five hours of work. Furthermore, an agreement can be reached to reduce this interval to not less than 30 minutes and the remaining 30 minutes used for smaller breaks in between work schedule or taken as time off. Staff shortage is a reality in South Africa. Health care providers did not abandon their allocated work stations except on official breaks.

6.3.4 Respect and dignity towards health care providers

The results of this study indicated that health care users were spoken to respectfully, this is one of the requirements by the National Core Standards (NDoH 2011b: 18). Respect and dignity is the sub domain of the first domain namely; patients' rights. It states that patients should be treated with respect and dignity, courtesy and empathy. The standard is that staff must treat patients with care and respect, with consideration for patient privacy and choice. The criteria for assessing this standard are that staff should treat patients with courtesy and empathy and there is zero tolerance for abuse and for observing privacy during treatment. It also stipulates that mental health patients should be treated in the least intrusive manner as well as try not to separate children from their parents or caregivers during treatment (NDoH 2011b: 18).

Politeness is a general sign of respect towards a fellow human being and influences the relationship that develops between people. The nurse-patient relationship is influenced by personal characteristics, cultural and educational background, because what one may do as a sign of respect might not be perceived as such by the others. In six European countries, Papastavrou *et al.* (2012: 375) found that there was lack of convergence between nurses' and patients' opinions on respectful behaviour provided and received in clinical care. In their study, a lack of and the minimum frequency of communication experienced by patients meant a lack of respect from nurses. Similarly, patients

in South African PHC clinics viewed any form of communication by health care providers as a sign of respect (Sokhela *et al.* 2013: 5) and acknowledgement that patients are also human beings like everybody else. Koskenniemi, Leino-Kilpi and Suhonen (2012: 14) found that in Southern Finland, elderly participants got distressed with nurses' silence while there was a need to treat older patients with patience and kindness. Participants regarded receiving care without even asking for it as a sign of respect from nurses. This made patients and their relatives feel free to ask questions and express their wishes. However, participants were of the opinion that the nursing culture was no longer the same as before when nurses were motivated and willing to help (Koskenniemi, Leino-Kilpi and Suhonen 2012: 14).

6.3.5 Prescription of medications

The results of record reviews in the current study indicated that prescriptions were documented correctly in 92% (n=276) of records. The regulating body for nurse practice stipulates how a legal prescription should be written. Regulation 2418 of section 45 of the Nursing Act (no 50 of 1978 as amended and section 56 (6) of the Nursing Act 33 of 2005 as promulgated) relate to the keeping, supply (*sic*), administering and prescribing of medicines by registered nurses. This regulation stipulates that the following should be included in a prescription; date of prescription, schedule and name of drug, strength, dose, amount, frequency, route and duration. The prescriber should attach his/her signature; print his/her name and qualification. Nurses should adhere to these regulations throughout their practice as it is legally binding.

Despite complaints during the semi-structured interviews about too much writing, health care providers were able to perform at their best when writing prescriptions. This is an important part of the registered nurses' practice, these records could be required in a court of law in cases of litigation, it is therefore very important that this is done correctly. In addition to the regulation, the standard treatment guidelines (STG) and essential medicine list (EML) should be used by nurses and doctors working at PHC facilities. The STG and EML provide guidelines for management of common conditions, specify medications and dose

calculations in the form of tables and indicate mg/kg body weight as well as in terms of age and weight bands (NDoH 2008a: xvi and xvii).

6.3.6 How Fast Queue users feel and lifestyle modifications

In everyday life when one meets a person whom one knows one would greet a person and find out how he/she was feeling on that particular day. The same was practiced in health facilities, and importantly so because health care users came to the clinic for a specific purpose of needing assistance regarding their health. This was when the health care users would be able to verbalise anything with which they were dissatisfied, either regarding their health or the medications they were taking and even new health problems.

Lifestyle modifications are vital for the control of chronic diseases therefore patient education is vital for health care users suffering from non-infectious chronic diseases as successful behaviour changes can have positive impacts on these users' health status. Health care providers, however, are so focused on finishing long queues of health care users that this does not happen optimally (Jarvis *et al.* 2010: 14). On the contrary, according to Courtenay, Carey and Stenner (2009: 1211) during a consultation nurses listened to their patients and also provided information about relevant lifestyle issues. This strengthened the relationship between nurses and patients and impacted positively on their management decisions.

Lifestyle modifications, such as dietary control and smoking, were recorded only in 20% of records. Communication with health care users about their general health is very important in the treatment of health care users with chronic illnesses. The results of the study conducted by Kaariainen and Kyngas (2010: 551) on patient education indicated that 74% of nurses had good communication skills and they had a good command of verbal and individual health education methods. In Cameroon all diabetic patients who participated in a study were counselled about lifestyle modifications by nurses (Labhardt *et al.* 2010: 6). In addition, Gill *et al.* (2008: 609) found that patients' HbA1_c improved only on health education with no change in treatment. HbA1_c measures the blood glucose level

that is bound to component 1c of the blood haemoglobin of the preceding eight to 12 weeks (Chakraborty *et al.* 2015: e5).

Health education communication improves knowledge of patients about their diseases and adherence to their medications (Lu *et al.* 2015: 12). Non-compliance is not limited to failure of taking medications but also to failure to adhere to lifestyle modifications. Compliance can be enhanced through patient education. Discussions with health care users are very important, when the users understand their diseases and the importance of taking medications; adherence levels increase (Van Camp *et al.* 2011: 1311).

6.3.7 Side-effects of treatment and complications

It was found in this study that only 25% of health care users were asked whether they had experienced any side-effects from their medications. Participants indicated that if the health care user was new; within the first six months of collecting treatment in their facility, they would discuss side-effects and presence of complications of the disease. Wanyenze *et al.* (2010: 442) concurred that new health care users were those who were within six months of initiation of treatment and the stable ones were those who had been on treatment for more than six months. If health care users experienced side-effects to medications they might be reluctant to take it.

Health care providers need to be able to detect side-effects and discuss them and their impact on the patients' quality of life (Kalogianni 2012: 1). When health care users suffer from side-effects and complications from medications, they might not show up for their follow-up appointments. This might result in the development of resistance to treatment for users who collect ART or anti-TB medications. In South Africa, treatment success for TB was very low in 2008, despite the availability of medications (WHO 2008: 45). One of the contributory factors was experiencing side-effects which, in most instances, had not been discussed with health care users causing the patients to stop taking their anti-TB treatment.

6.3.8 Booking of follow-up visits

Effective management of medical disorders is affected by patients' non-attendance of follow-up visits (Adeponle *et al.* 2007: 610). It was important to tell the health care users about their next appointments and to have it written in their carrier cards as reminders that they needed to get to the health facility on a specific day. The date of the next appointment was booked in 99% of the adult records whereas in baby records 'book next visit' (Appendix 10: 2) was recorded in 90% of the records. Similarly, in Saudi Arabia, all diabetic participants were given follow-up dates, but not all participants honoured these dates. Only 7.9% were found not to have missed any follow-up date in the past year, while more than half of participants had missed follow-up appointments once or twice during the past year (Khan *et al.* 2012: 28). Missing an appointment has an adverse effect on compliance to medication and on the health of a user that misses the appointment.

Furthermore, the death rate is higher in non-compliant health care users with chronic illnesses than those who comply (Khan *et al.* 2012: 26). Patients may miss their appointments because they fell ill, had work commitments or simply forgot. In addition, the further apart the appointments are, the more likely that it will be forgotten. Age had a role in missing appointments, younger patients defaulted on appointments more than the older ones (Kunutsor *et al.* 2010: 7). On the other hand, Adeponle *et al.* (2007: 614), found that patients did not return for follow-up visits because they were feeling better, or taking alternative treatments or because medication from the clinic did not make them feel better.

6.3.9 Baby feeding options

Records of babies and children under five years of age were reviewed as they were seen in the Fast Queue. The new Road to Health Book (RtHB) (Appendix 10) for girls and for boys commenced in 2010 and provides a table with all the assessments that should be conducted on a child at specific time periods and spaces to record the information and results obtained from the assessment (Appendix 10). The RtHB is based on the WHO's (2006b: 2) growth standards,

which describe the growth of healthy children under optimal conditions. The point of reference of normal growth which children should be compared to is a breast fed child, hence exclusive breastfeeding for at least six months is recommended for all mothers whether HIV-positive or not. Malnutrition is associated with 60% of child deaths worldwide and is caused by insufficient food intake and/or a lack of micronutrients in the diet. Hence breastfeeding is promoted to provide proper nutrition to babies (NDoH 2012: 57). In South Africa, infant morbidity and mortality rates are decreasing at a very slow pace (UNICEF 2011: 6).

Health care providers were to ask about feeding options (Appendix 10: 7) from caregivers of infants and babies that were up to six months old. The results indicated that asking about feeds was documented in 73% of records. In South Africa, it is common practice to introduce solids to babies at a very young age before they are six months old, thus amounting to mixed feeding, especially for the low socio-economic and illiterate communities and exclusive breastfeeding is rarely practiced (NDoH 2012: 61). Exclusive breastfeeding is the recommended feeding option for all mothers, irrespective of their HIV status.

Previously mothers were given an option to formula feed if they were HIV infected and to exclusively breastfeed for six months and to discontinue breastfeeding when they introduced solids. In 2011 the 2010 HIV policy was adopted by the Minister of Health whereby HIV-infected mothers were to receive lifelong ART and breastfeed while babies received low doses of Niverapine to prevent mother-to-child-transmission of HIV (MTCT) until two weeks after cessation of breastfeeding. The South African government in 2011 declared support for breastfeeding in all health establishments in the Tshwane Declaration (NDoH 2012: 61).

6.3.10 Weighing, weight plotting and growth classification

To assess the pattern of growth in infants, babies and children from birth to below the age of 60 months, different anthropometric tests are used. These include weight for age which is the most commonly used, height for age, body mass index (BMI) for age, head circumference (WHO 2006b: vxiii) and measuring the mid

upper arm circumference (MUAC) for children six to 59 months old, which is the latest addition to the anthropometric tests. MUAC is most useful in detecting subcutaneous fat or muscle wasting or both from the arm. It is an easy and quick non-invasive tool to evaluate the nutritional status of children (Boshoff 2014: 86).

Malnutrition remains one of the causes of morbidity and mortality in children under the age of five years in Africa. In this study almost all babies (99%) that came to the health facility were weighed as directed by the RtHB (Appendix 10: 21-27). It is crucial to detect malnutrition early through regular weighing because many diseases and deaths could be prevented if malnutrition is detected early and addressed effectively (IMCI South Africa 2009: 56). In addition, if weight-for-age and length/height-for-age are not plotted and interpreted (Appendix 10: 14-16), children with malnutrition and at high risk of contracting infections can be missed. These children can easily die from common curable illnesses such as diarrhoea and pneumonia.

The results of this study indicated that all babies were weighed. However, these weights were plotted in 71% of baby charts (Appendix 10: 14). The lines on the graph represent the expected weight of normal children of that age group. Plotting of the weight on the graph makes it easier to determine the child's growth and to classify the baby for malnutrition according to where the weight is placed on the lines of the graph. The RtHB is more user friendly than the previously used Road to health chart (RtHC) which was smaller making it difficult to plot the weight.

In addition, the RtHB gives a better understanding of the nutritional status and growth of the child as it is larger and therefore helped to improve growth monitoring in health facilities assisting in the fight against malnutrition (Cloete *et al.* 2013: 142). Only 56% of the weights were classified according to IMCI (Appendix 10: 14). Weighing the baby alone does not help if weight is not interpreted because only then will the health worker know if the child is growing well or not. Additionally, the classification of growth directs the health worker to the relevant/suitable intervention for the child's nutritional status. This is similar to the findings of Thandrayen and Saloojee (2010: 76) indicating that in PHC clinic in

the rich city in South Africa, all babies were weighed but not all those weights were plotted or interpreted.

The classifications are as follows: not low weight if the baby's weight follows the growth curve and is on or above the $\bar{2}$ line, low weight if weight is below the $\bar{2}$ line and very low weight if weight is below $\bar{3}$ line. These lines also assist with the interpretation of the growth curve which compares the previous weights of the child to determine the pattern of the child's growth (Republic of South Africa 2009: 60). Inability to interpret the weight means the necessary intervention will not be executed timeously and the baby might end up in hospital with severe malnutrition or another illness or he/she might even die. Contrary to the results of this study, it was envisaged that the RtHB would increase the likelihood to interpret weight and classify growth (Cloete *et al.* 2013: 144).

6.3.11 Worm prophylaxis and Vitamin A

Worm infestation affects the child's growth and consequently the general health in poor countries and regular deworming significantly reduces worm infestation and improves children's growth (Saloojee 2014: 357). Deworming prophylaxis medicine should be given to babies from the age of twelve months and at six monthly intervals thereafter until 59 months of age. 'Deworm prophylaxis' (Appendix 10: 9) was recorded as given in 98.2% of the babies' charts. In India, compliance to six monthly deworming of children was 86% and after two years of treatment there were significant weight gains in children (Awasthi *et al.* 2013: 5). Worm infestation contributes to anaemia and poor growth. This is supported by the results of the study that was conducted in Nigeria which found that 26% of children had normal haemoglobin levels above 12mg%. However, after deworming with a single dose of albendazole tablet 400mg, the number of children with normal haemoglobin increased to 57.3% (Sufiyan, Sabita and Mande 2011: 9).

Records indicated that in this study Vitamin A was given according to 99.3% of babies' and children's records (Appendix 10: 9). These results are contrary to Thandrayen and Saloojee's (2010: 76) findings where growth monitoring and

Vitamin A supplementation were not administered regularly. Worldwide young children suffer from Vit A deficiency, in South Africa a high percentage of children aged one to nine years were found to have Vit A deficiency. The NDoH commenced Vit A capsule supplementation in the PHC clinics of South Africa in 2001 for children aged six to 59 months on the recommendation from the WHO, UNICEF and IVACG Taskforce (1997). Its administration was to be six monthly from the age of six months and was to coincide with immunisation to minimise clinic visits for these children (NDoH 2012: 10). Vitamin A supplementation was initiated to reduce the number of deaths from measles, diarrhoea and overall mortality of children below five years of age (NDoH 2012: 2). To ensure further distribution of Vitamin A, even to the low socio-economic communities, the South African government mandated fortification of staple food; maize meal and wheat flour and those products that contain 90% of these foods such as bread (NDoH 2012: 10).

6.3.12 Immunisation, batch numbers, dates and signatures

Immunisations are given at scheduled intervals as prevention for certain communicable diseases. The South African Expanded Programme on Immunisation (EPI) is based on the WHO immunisation schedule and these guidelines are not legal requirements in South Africa (Saloojee 2014: 368). There are ten vaccine preventable diseases which include; TB, Polio, measles, diphtheria, pertussis, tetanus, haemophilus influenza type b, hepatitis B rotavirus and pneumococcal conjugate vaccines.

In the current study, record reviews indicated that all babies (100%) that were due for immunisations had been immunised and the immunisation date and batch number were documented and the health care providers had signed (see Appendix 10: 6) in the children's charts confirming that the immunisations had been administered. The RtHB is an important document which should be legible and completed with care as it contains the baby's history. In addition, when the baby has an adverse reaction to an immunisation, it is important to have the batch number of the vaccine available. This will enable all vaccines with the same batch number can be checked and babies who received immunisations from the

same batch monitored. Roberts *et al.* (2011: 151) found that in South Carolina, immunisations were not always recorded, making it difficult to determine the child's immunisation status.

Side-effects to immunisations and management thereof were least often recorded 9.7%. These were to be discussed with the caregiver informing her or checking her knowledge so that the caregiver is not alarmed when the child has side-effects. The caregiver should know which side-effects could be managed at home and for which side-effects she should take the baby to the health facility. Effective communication with caregivers is important, as it will could reduce the number of visits to the health care facility for minor side-effects that could be managed at home (Donovan and Bedford 2013: 18).

6.3.13 Milestones

According to the RtHB, milestones should be assessed on babies at 6 weeks, 14 weeks, 6 months, 9 months, 18 months, 36 months and 59 months of age (Appendix 10: 13). Developmental milestones are achieved at different stages of growth and development at a pace unique to each baby such as crawling. Sometimes milestones can be considerably delayed and if this happens the child needs thorough investigations (Saloojee 2014: 350). In this study milestones were recorded in only 34% of the records of children who were within the age that milestones are assessed. Milestone assessment should be performed regularly to monitor child development and to identify developmental problems as early as possible. This could be done through observing the child during the physical assessment and by asking relevant questions from the caregiver (Dosman, Andrews and Goulden 2012: 1). As only a small number of assessed milestones (34% in the current study) were recorded, delayed milestones might be missed by health care providers. These results are corroborated by those found by Thandrayen and Saloojee (2010: 76) in the Johannesburg PHC facilities, where developmental assessments were found to be inadequate in both sick and well babies as such milestones were recorded only in 26% of babies' charts.

6.3.14 PMTCT/HIV and TB status (IMCI)

Records indicated that 'PMTCT/HIV status' was recorded in 77% of the child charts as required in the RthB (Appendix 10: 7 and 8). Similarly, TB status was to be assessed from the age of 14 weeks and it was found to be recorded in only 13% of the children's records in the current study. Currently HIV and TB are a major health problem in South Africa. There are strategies in place to try and curb these diseases such as the 10 point plan whose priority number ten of the health sector aims to accelerate implementation of the HIV/AIDS strategy and to reduce infant mortality due to TB and associated diseases. In order to improve maternal and child health, in 2009, HIV and TB services were integrated into maternal and child health (NDoH 2010a: 1).

According to the RthB, health care providers were to assess the HIV status or exposure to HIV for babies from three days to 10 weeks of age, and thereafter at six monthly intervals until 18 months of age and whenever the need might arise. Babies present at health facilities at six weeks for immunisation, for practicality the PCR HIV test has been aligned with this visit (NDoH 2010a: 10).

6.3.15 Oral health

Children suffer from tooth decay from a very young age hence their teeth need to be cared for from as early as one year of age. In this study oral health was supposed to have been assessed and recorded in 50 charts of children who qualified for this assessment as determined by their age. This assessment would be conducted from the time the first teeth erupt and yearly until the child is 60 months old (see Appendix 10: 20). However it was observed that it was not recorded in 100% of the charts. Kumarihamy *et al.* (2011: 4) agrees that screening of dental caries should be conducted as soon as the first primary teeth erupt but not later than one year of age.

The early childhood caries are a challenge throughout the world, and described as the presence of one or more primary teeth with caries which may result in loss of teeth. It is important for primary or milk teeth to be looked after because they keep space for permanent teeth (Kumarihamy *et al.* 2011: 1). In Sri Lanka

32.19% of children that were found to have dental caries were between the ages of 1-2 years and further to this, caries were highest in children aged 18 to 24 months than the younger children and this was linked to dietary changes at this age (Kumarihamy *et al.* 2011: 3).

Vamos *et al.* (2014: 208), asserted that health care workers were uncomfortable with assessing oral health or treating babies with oral problems who were younger than three years of age as they were seen as being too young to have dental and oral problems. Similarly, for the same reason, by one year of age, parents had not commenced dental care such as brushing of the teeth. Both parents and health care workers might fail to take care of oral health of young babies and children. This implies that these children could develop dental caries and other oral problems, without being noticed, until they are at an advanced stage and interfere with the child's nutrition and/or cause chronic infections of the mouth and throat and even of the entire gastro-intestinal tract.

6.3.16 Waiting times

Several studies which have been conducted in South Africa revealed that long waiting times were common and had become a norm in South African public PHC facilities (Kagee and Delport 2010; Wanyenze *et al.* 2010; Sokhela *et al.* 2013). This long waiting costs the patients a day's work and losing out on a day's salary and this also exposes them to the risk of losing their jobs because of "absenteeism". Given the high rate of unemployment in South Africa, health care users may decide to forego their clinic appointments rather than lose their jobs. During interviews, participants did express that some health care users had not disclosed their illnesses to their employers and they needed to be issued their medication quickly and go to work without raising suspicions from the employer.

Other health care users were school children who would come for their chronic medications and/or contraceptives and would not want the teachers to know that they visited the health care facility regularly for these services. There is no official standard of waiting time that is set but usually waiting time is experienced by health care users. There is a strong relationship between waiting times and

patient satisfaction. When waiting time is minimised, patient satisfaction improves and those patients may recommend the facility to others (Eilers 2004: 42). Time waited before consultation and the length of the consultation were calculated for all health users in all health care facilities. Waiting time is mostly used to measure the quality of the service and patients' satisfaction levels with the service.

The perception is that long waiting times have negative effects on patients and also play a role in determining whether patients honour their follow-up appointments or not. Long periods of waiting in overcrowded waiting areas also expose users to potential infections from other users in the waiting area. This is particularly important in the case of babies and young children and elderly people. However, in this study the longest mean time waited before consultation was 21.10 minutes and the shortest mean time waited was 5.03 minutes. This was the time health care users waited for consultations after the clinical tests had been completed at the work stations.

The Gauteng Member of the Executive Council (MEC) for Health and Social Development, Mrs. Q. Mahlangu, pronounced in August 2009, that she was going to ensure reduction of waiting by means of Fast Queues for the elderly, people with disabilities and pregnant women, with the use of queue marshals (Republic of South Africa 2009). To indicate their commitment to reducing patients' waiting time, various NDoH documents have been developed, namely: the National Core Standards (NDoH 2011b: 19), the PHC package for South Africa a set of Norms and Standards (NDoH 2001: 10) and the National Health Insurance Policy (Republic of South Africa 2011a: 9).

Consultation is the time the health care user spends with the health care provider while delivering health care service through history taking, assessment and managing the illness. It was noted in this study that some consultations were very short with the mean of 3.17 minutes and others were longer with the mean 6.67 minutes. Because health care users come for different reasons to the health facility, it is assumed that the duration of time spent in consultation will vary. Another factor that might affect consultation time is completeness of care, a

health care provider who would provide all care necessary for the specific health care user might take longer than one who does not provide complete care.

Health care users were happy with the fast consultations, irrespective of whether complete care had been provided or not (Sokhela *et al.* 2013: 7). According to Venkatesh *et al.* (2010: 1337), nurses had shorter consultation times than doctors while providing the same quality of health care. Contrary to other studies (Jarvis *et al.* 2010 and Kaariainen and Kyngas 2010) found that nurse consultations lasted longer than those of doctors because of the interaction nurses had with patients. Similarly Courtenay Carey and Stenner (2009: 1213), found that nurses offered extensive health education to patients making their consultations longer. In the current study, the ENs in the injection room had their own way of ensuring a quick service. They prepared a few of the contraceptive injection beforehand, and administered these without asking any questions, as long as the health care user had previously received the same contraceptive injection. According to the participants, they did this to help users get a quick service. They were supposed to have enquired about the last normal menstrual period and whether any problems were experienced with the contraceptive method. As such, according to Gonzalez (2011: 2) clients coming for contraceptive services indicated that they wanted to obtain these services within the shortest waiting times possible.

Contrary to the findings of the current study that of short waiting time for contraceptive services, Sannisto *et al.* (2010: 249) found that in a Finland health centre there were long waiting times and contraceptive counseling was missing. Mohamad-Alizadeh (2007: 331) had similar results that waiting times were long and health care users were the passive recipients of contraceptive methods. They did not have opportunities to ask questions and when questions were asked, they were closed-ended. Hutchinson, Do and Agha (2011: 7) indicated that in public PHC facilities, the waiting times for contraceptive services were 69.5 minutes compared to a non-profit organisation (NGO) where it was 25.4 minutes.

In the eThekweni district, TB patients waited for a median time of 97 minutes which was said to be a long waiting time (Naidoo, Seevnarain and Nordstrom, 2012: 1602). In this study, participants attributed long waiting times to their high

workloads. The workload is described as the number of patients the professional nurse attends to daily at a health facility. According to Reagon and Igumbor (2010: 592), facilities and service points showed wide variations of waiting times and some of the causes of these long waiting times were found to be high workload, flow problems, queueing problems and high demands at specific peak times such as during workers' lunch times.

Quality of care might be compromised if professional nurses have a very high number of attendees to care for. In 2007/2008, the average clinical workload for the metropolitan areas was 28.9 up to 40.8 in Cape Town. However, in better resourced districts, the nurse workload was much lower and health care users realise this and want to be cared for in these facilities (Smith 2008: 28).

The nurses' clinical workloads measure the number of patients seen by a professional nurse per day. Barron, Day, Loveday, and Monticelli (2005: 9), suggested that the target nurse workload should be about 35 patients per day, but in certain districts 92 patients might be seen by each professional nurse per day. Task shifting of doctors' work to nurses such as NIMART and initiating chronic medication has increased the workload not only of nurses but other categories of staff as well such as the reception clerks, pharmacists and laboratory technicians and dieticians (Georgeu *et al.* 2012: 8).

Health care facilities began experiencing high caseloads with the increased access to PHC facilities. In 1994 free health services were introduced for children up to six years of age and pregnant and nursing mothers and extended to all PHC users in 1996 (African National Congress 1994b: 67). Subsequently in 2004, free ART was introduced in South African hospitals where medical doctors initiated patients on ART. Doctors could not cope with the number of patients needing ARVs; as a result in 2006 patients were referred to PHC level once they were stable on treatment (WHO 2013: 95).

Further to this, in December 2009 the South African president announced decentralisation of ART services to PHC facilities (Republic of South Africa 2010: 1). Ridde and Morestin (2010: 8) noted that preparation for the implementation of

increased access was not done. There was no corresponding increase in the resources to meet the increased needs of the communities such as the number of health care providers, drugs and equipment. In 2010 nurses were trained in nurse-initiated management of ART (NIMART) (Fairall *et al.* 2012: 89) as part of the HIV/AIDS prevention strategy announced by the South African president in December 2009 (Republic of South Africa 2010: 1).

Health care providers at PHC facilities also had to initiate, manage, monitor and refer patients on ART. With the introduction of NIMART, no extra staff was made available to provide the service, there were widespread shortages of professional nurses and they could not cope with the workload (Davies, Homfray and Venables 2013: 3). If staff had a high workload, patients had to wait longer as there would be too many patients to be attended to by too few staff members.

This is consistent with what the participants in this study had to say concerning the high workload and long waiting times. Health care providers attributed this to many programmes that introduced at PHC level that had been previous hospital-based programmes. Task shifting in the form of referrals from hospitals to PHC clinics and the introduction of new services at the clinics, were done without the matching increase in the numbers of staff members.

It was found during interviews that nurse shortage was a major factor in the health care facilities, that contributed to long waiting times. In South Africa, 40% of nursing posts were vacant in 2020 (George, Quinlan and Reardon 2009: 17), and up to 50% of nurses' time was taken up by tasks that could be performed by lower categories of staff such as administrative duties (Hirschhorn 2006: 14). Health care users expect quality care when they visit the health care facility, irrespective of the availability of staff. According to the statistics of the SANC (2010), the ratio of ENA: EN: RN was 3:2:1. Davies, Homfray and Venables (2013: 3) found that there were nurse shortages when NIMART was introduced, this shortage was compounded by the lack of lower categories of staff that could assist with administrative and basic clinic tasks, and this compromised the quality of care provided to patients. Nurses were unable to initiate enough patients on ART and this resulted in delays for patients needing ART and other patient groups.

Georgeu *et al.* (2012: 7) found that there was an overall shortage of all categories of nurses at all sites including clerks, when doing a study on the implementation of NIMART in South Africa. Staffing is linked to quality of care rendered to patients with non-communicable chronic illnesses (Griffiths, Maben and Murrells 2011: 1204). The results of a study in Gauteng province found that facility supervisors were frustrated and disappointed because they were not allocated extra human resources which they needed to effectively implement NIMART (Davies, Homfray and Venables 2013: 3). The lower categories of staff were in short supply making it difficult to delegate basic clinic tasks. This resulted in a compromised quality of care and increased waiting times for patients.

6.4 PATIENTS IN THE FAST QUEUE

Patients who were in the Fast Queue were adults with chronic illnesses or who came for contraceptive services and children who came to the well-baby clinic.

6.4.1 Demography of adult patients

The adult patients' health records indicated that of the Fast Queue health care users, 69% were females and 31% were males. Women visited the health facility more frequently than males. This might be because women generally have a role of being caregivers. Many health programmes are directed at specifically at women (Myburgh 2011: 2) such as antenatal care, contraceptive services and the PMTCT programme. Noone and Stephens (2008: 717), posited that the health seeking behaviour of men in New Zealand and in the United States of America is similar to that of African men. These men felt that visiting a clinic is a sign of weakness since clinics are for women. They denied themselves health care because they did not want to be regarded as being in a weak and vulnerable state, as a result many men only present at the clinic during the advanced stages of the illnesses. Children whose records were reviewed comprised 51% females and 49% males.

The health care users' ages ranged from 18 to 82 years with the majority being 26 to 42 years old totalling 47% of the sampled records. In recent years there has

been an emergence of HIV and AIDS and TB co-infections which increased the number of younger chronic PHC users. According to the HIV Prevalence Report (Shisana *et al.* 2014: xxv), HIV prevalence is highest among the 25 to 49 year olds at 25.2% with younger females more often affected than males.

In children's records, the majority of the charts were those of the youngest group, aged 0-5 months which comprised 35.3%. The reason for this high number at this age might be that there are regular immunisations scheduled from birth to 14 weeks at four weekly intervals. Furthermore, since these babies were very young, the caregivers still needed guidance from health care providers regarding various issues such as feeding.

The records of the 6-12 months old group were the second largest at 32.7%. At this age, the immunisations are far apart. Although children need to be weighed every month, it seems that weighing is not as important as receiving immunisations. Records indicated that 13.7% were in the 13-19 months age group. Prophylactic treatment is aligned with immunisations which would be due at 18 months for this age group. If the caregiver felt that it was not important to weigh the baby they would bring the baby to the clinic once in this age group. As the children grew older, visits to the health care facility became less frequent, hence, charts of children in the 20-25 months age group were 6% and those of 26-31 months age group were 2.7%. The results of the current study indicated that the older the child gets, the less often he/she is seen at the PHC clinic.

Baby records became fewer as the age progressed, as such records of children that were 32-37 and 44-49 months old were 3% while those in the 38-43 months age range were only 1%. Records indicated that the smallest number of children (2.7%) at this service point were 50 months old and older. The slight increase in this category could be that previously there was immunisation that was given at 60 months. However, in 2009 the expanded programme of immunization (EPI) was revised including moving the five year immunisation to six years of age (NDoH 2010: 6). Some parents were unaware of this change and also in preparation for pre-school; caregivers wanted to ensure that the child is up to date with his/her immunisations. Contrary to this reasoning, according to Dyosop

(2012: 1) since the 1990s in South Africa, like many other countries, immunisation coverage had dropped after the changes in the immunisation schedule were implemented. This author further argues that, whilst the immunisation coverage figures are high for South Africa (96%), the accuracy of the Department of Health's figures is being questioned as it differs significantly from those published by the WHO and UNICEF, which estimate immunization coverage to be 64%.

6.4.2 Diagnoses

Diagnoses from health care users' records and from structured observations consisted of both non-communicable and communicable chronic diseases. These were hypertension, diabetes mellitus, TB, AIDS, asthma, mental health and epilepsy. There is a multiple disease burden experienced by Sub-Saharan Africa with the emergence of non-communicable chronic diseases and their risk factors. These non-communicable diseases are becoming common as lifestyles change with increased urbanisation. The concurrent emergence of HIV/AIDS with TB co-infection has made the situation worse, although people are no longer dying from these conditions as the scaling up of ART increases the life expectancy of sufferers (WHO 2013: 80).

According to the WHO Report, 9 million new TB cases were reported globally in 2013 and TB remains a major problem in most developing countries (WHO 2014: 3). The report further stated that out of the 9 million people that were diagnosed with TB in 2013; 1.1 million were co-infected with HIV. Of these 720 000 were in South Africa (WHO 2014: 141). All these chronic conditions have been incorporated into the comprehensive PHC package of care. This means that these health care users visit the PHC clinics on a regular basis to collect medication. Mental health was decentralised and integrated into PHC in the White paper for the transformation of health care in South Africa (NDoH 1997: 137). As most mental health patients require lifelong treatment and regular monthly re-assessments of their conditions, these patients added another time-consuming dimension to services rendered at PHC clinics.

Some healthcare users visited the PHC clinic for contraceptive services. Most of these health care users, who were regular attendees, were consulted by ENs, as all of them used contraceptive injections. According to Sarayloo (2015: 172) most women would choose a contraceptive method because of its efficiency. However, the choice of a contraceptive method is based on the advantages it has for the user. All users in this study had chosen injections, this could be because of its efficiency or because women are required to visit the health care facility once in three months.

6.5 PROFESSIONALS IN THE FAST QUEUE

6.5.1 Age

The results indicated that the proportion of older professionals was more than that of the younger ones. Two professionals were within the age range of 20-29 years. According to SANC (2013) there were only 4% of nurses in the SANC register that were younger than 30 years of age (SANC 2013). In this study, there were also two in the 30-39 year age range, five in the 40-49 years age range and four in the 50-59 years age range. Globally, school leavers no longer seem interested in a nursing career (George, Quinlan, Reardon and Aguilera 2012: 31). Furthermore, in South Africa the younger generation does not see nursing as a lucrative career (NDoH 2008b: 11). This might be because there is a wide variety of career options available for the youth compared to more limited opportunities in the past. The older females are the majority on the nurses' roll (SANC 2013), the highest being the 50-54 year olds followed closely by the 60-64 year olds.

6.5.2 Gender

The results of the current study indicate that the sample of 13 participants comprised 12 females and only one male. This is indicative of the social perception that nursing is a profession for females and has always been a traditionally female dominated profession. According to Vere-Jones (2008: 19),

barriers preventing males from considering nursing as a profession include; males seeing nursing as a 'Florence Nightingale' profession, that is female dominated, with low salaries and the fact that caring is a female duty and fears of the perceptions of society seeing a man who is a nurse. In 2013, there were 238 000 female nurses of all categories in the SANC register compared to 22 698 males (SANC 2013).

Clow, Ricciardelli and Bartfay (2014: 450) found other reasons that could deter males from nursing. Men were irritated by the implication that doctors are more important than nurses and that doctors disrespect nurses. If males get into nursing, they choose departments that are more specialised and exclusive such as the operating theatre, intensive care unit, orthopaedics and teaching, which is where they feel more comfortable. They find it hard to work in areas like maternity wards because patients tend to be uncomfortable with male nurses. According to these authors, female nursing students had a positive attitude toward male nurses because they worked with them, whereas non-nursing males had a more negative attitude towards male nurses than non-nursing female students (Clow, Ricciardelli and Bartfay 2014: 452).

6.5.3 Years of experience

The years of experience of professionals who participated in the study ranged from 3 to 32 years. There were three participants who had 0-4 years' experience in a PHC setting. A larger proportion of participants had quite a number of years' experience in a PHC setting. Three of the participants had 10-14 years' experience while two had 15-19 years' experience. There were three participants who had a PHC experience of 20-25 years and two with 30- 34 years' experience.

According to the Dreyfus Model of Skill Acquisition, the individual's experience does not only mean their length of service but denotes the expertise they have acquired in a certain field. As such, individuals draw from their experience to perform in or tackle certain situations and are able to work independently. The more experienced the person is, the easier and quicker it is for them to judge the situation and act accordingly (Benner 2001: 34).

6.5.4 Facility supervisor and facility manager

The main function of the facility supervisor was to support and supervise the PHC facilities, through scheduled visits at least once a month. After this visit the facility supervisor would write a report and give feedback to staff in order to improve areas that require improvements. These visits are one of the quality determinants of the facility. According to Smith (2008) the facility supervisor should assist staff in trying to resolve problems in a facility (Smith 2008: 41). However, according to this author, supervisory visits remained low in 2007/2008 while KZN was found to have the highest number of (60%) supervisory visits. The results of the current study indicated that both the facility supervisors and managers were unable to conduct the scheduled supervisory visits because of other pressing issues such as unscheduled meetings. The facility supervisors relied on the facility managers who managed without any support from them. The facility managers verbalised that too much writing, taking up a lot of their time, made it difficult to actually manage the daily functioning of the PHC facility. As a result professional nurses working in the PHC clinics became creative regarding work allocation to ensure that the work continued.

Pillay (2009: 182) posits that in South Africa, management capacity is lacking in the public sector. This is contrary to the findings from Sudan and Zambia where child health services supervision was found to be regular 76.9% and 72.7% of the time in these two countries respectively (Nkowane *et al.* 2009: 3). In South Africa nurses complained that middle and upper management did not offer them the support they needed to sustain their clinic work Georgeu (2012: 8). Nurse managers need to be able to lead in addressing issues of the disease burden in South Africa (Rispel and Moorman 2010: 14). Furthermore, nurse managers have to understand the South African population and its health needs such that the services meet these needs (Jooste and Jasper 2012: 57).

6.6 PURPOSE OF THE FAST QUEUE

The main purpose of the Fast Queue was, according to the participants, very clear that it was to reduce waiting times.

a) Preventing delays and minimising the duration of clinic visits

All health care users seen in the Fast Queue came for brief consultations as they were there to collect medications, injections or pills for family planning and babies that came to the well-baby clinic. The purpose was therefore to consult them quickly. As a result, they were called out of the general queue to have their clinical tests performed and sent to the waiting area where they waited for their consultations. Participants ensured that those health care users who were regular attendees for chronic care and children who came to the well-baby clinic were not delayed. Some health care providers verbalised being overwhelmed by too much recording that they needed to do while consulting health care users and this resulted in delays. Delays pertain to how the patient physically flows through the health facility from the point of entry to discharge. If delays could be prevented and patient flow improved, the microsystem would achieve its goal of a quick service (Hall 2013: 9).

Patients go through several service points in the health facility thus causing several bottlenecks in order to be moved along for consultation thus contributing to long waiting time (Fomundam and Herrmann 2007: 14). Delays contribute negatively to the experiences of health care users of the health care facility (Sokhela *et al.* 2013: 6). The results of the study revealed that good organisational skills by health care providers played an important role in the flow of the users through the PHC clinic. Where health care providers were able to channel users in a logical manner, work happened smoother and faster. Babies and children that came for immunisations did not wait with sick patients so that they could go home quickly before they could catch infections from sick adults.

b) Quick service for those needing immediate attention

Providing service on time is key in PHC (Dobson Hasija and Pinker 2011: 455). According to the participants, health care users needing urgent attention were also consulted in the Fast Queue. Appointments made for the regular chronic health care users were for the date not the exact time slot. The Fast Queue would have delays while the health care provider attended to the very sick who could not wait in the general queue in between consulting those that were

expected on the day (Dobson, Hasija and Pinker 2011: 456). Urgent patients would disrupt the established routine care of chronically ill health care users. These health care users would require more consultation time because of the complexity of the illness and comprehensive clinical care they needed and would seem to cause delays in this queue. According to Tobi *et al.* (2008: 1456), having the ART programme away from the general clinic would ease the load off the nurses of the very sick patients and reduce demands on general services. Very sick patients require more in-depth and comprehensive assessments and might therefore take longer in the consulting room thus delaying the queue (Georgeu *et al.* 2012: 8).

6.7 RECOMMENDATIONS

Process

Communication of health messages: Health care providers need to strengthen communication with health care users regarding their illnesses, side-effects to medication and management thereof, including complications due to medications or diseases to improve compliance and effectiveness of medication. This could help to improve and increase self-care and self-reliance when health care users understand their condition and treatment, thus reducing unnecessary clinic visits and the workload for health care providers.

Continued training: Health care providers need to receive in-service training on the use of the RtHB; the assessment of well babies should be emphasised and the importance thereof to improve child mortality and morbidity rates which remain a challenge in South Africa. If health care providers carried these out the country could be near to conquering some obstacles of reaching the MDG 4.

Recording: The importance of recording needs to be emphasized for continued care. Recording also implies good quality of care. Records are communication tools among health care providers. If an activity is not recorded it means it has not been done.

Task shifting: More health care providers of lower categories such as ENAs should be provided to support registered and enrolled nurses and relieve them of the high workload. They would carry out duties such as entering of health care users' information in the registers. Numerous entries are required such as entering users' names and details in the immunisation register, chronic register for adults and any other register that the health care providers carrying out procedures write so that they can dedicate more time to caring for the health care users.

Support: There should be structured support systems to assist personnel in the PHC clinics. Scheduled facility visits should be carried out by facility supervisors and also be available whenever required such as in cases of crises in the facility, to give support to the facility manager who is faced with the daily struggles of the functioning of the facility.

Purpose

The purpose of the Fast Queue is to reduce clinic waiting time for users without compromising the quality of the service rendered. Emergency care users may need to be cared for separately from the "normal" fast queue users. Hence, a registered nurse should be allocated daily or weekly to attend to health care users requiring urgent/immediate attention, to minimise delays in the Fast Queue Service.

Patterns

Availability of equipment: Adequate equipment that is in good working order should be made available to the health care providers. The PHC facility supervisor and manager should follow up on equipment that has gone for repairs and to ensure that there is spare equipment to use in the meantime. Regular servicing of equipment should be conducted and it should be overseen by the PHC facility supervisor to prevent dysfunction or breaking of equipment. Professional nurses are dependent on the clinical tests of users to be able to manage them effectively.

The NCS: These are fairly new in health facilities, but they are vigorously driven and supported by the highest management in the health department. However, nurse managers are unsure what is required of them, hence the complaints with audits and reports. It would be of great value not to lose the momentum and clinic managers given support in terms of mentoring them on aspects which are crucial in achieving the required standards.

Professionals

Training: Training of ENs needs to be reviewed to expand their scope of practice, to allow them to perform duties they have not been performing before within the legislative framework that governs their practice, taking on some duties that are performed by professional nurses such as issuing of medication for chronic illnesses.

Patients

Arrival time: Waiting time would be perceived as very long because of the tendency of health care users to arrive at the PHC clinic very early in the morning. Health care providers need to stagger health care user arrival times when booking their next appointments so that they do not arrive at the same time as this would assist in making the waiting to be perceived as short and also reassure them that they will be consulted even when they come in the noon. Health care providers will be unable to consult all of them at the same time and this will result to some of the patients having to wait for a long while the first ones to arrive are still being consulted. This will give health care providers time to discuss health issues such as lifestyle modifications, side-effects of medications and immunisations and the presence of complications.

TB and AIDS: There is a high burden of these diseases in South Africa either alone or as coinfections. There are strategies in place to curb these infections yet they remain high among communities. Concerted and purposeful implementation of strategies such as screening for TB suspects, directly observed treatment (DOT), HIV counseling and testing (HCT) policy, medical male circumcision

(MMC), elimination of mother to child transmission of HIV (EMTCT) and ART programmes would go a long way toward improving the population's health status. Emphasis should be placed on adhering to these strategies in order to curb the rate of infection.

6.8 LIMITATIONS OF THE STUDY

The study was conducted in one of the nine districts of the KZN province. Therefore results and recommendations cannot be generalised to other districts. According to the health care providers, seriously ill patients were consulted in the Fast Queue; however the study excluded these health care users. It would be vital to monitor the quality of care for these health care users as well. The study assessed that the necessary clinical tests were performed but not how they were performed. Health outcomes of health care users were not measured in terms of whether chronic illnesses were well controlled or not.

6.9 SUMMARY

PHC brings health to the communities, and the ability of increasing the package of care is beneficial to them. Treatment for most conditions, especially chronic conditions, is available at the PHC clinics, thus enabling health care users to obtain treatment near their homes. This contributes to the improvement of the general health of populations as well as the patients' outcomes. Long waiting times are a norm in public health facilities and they are a source of discontentment. Health care users are given the dates to return, and not specific times in the day which results in overcrowding if they all arrive at the same time. On another hand, health talks with health care providers did not happen as often as it should, this could affect the control of chronic conditions.

Health care should be patient-centred, because the success of management and treatment outcomes depends on it. On the other hand, health care providers got to know and understand their customers over time and could plan management around individual needs. The flow in the Fast Queue Service was smooth and there were no bottlenecks. Flow from one point to the next was clear and known

by all health care providers involved. If health care providers were on duty they were at their work stations and doing their designated duties and they all knew their roles within the facility and within the Fast Queue.

Well-baby care is an important component of a PHC facility. Child morbidity and mortality is high in South Africa in babies and children below the age of five years and the country is working hard to meet MDG4 of reducing child mortality rates. Recommendations were made on how the lower categories of health care providers can assist so that health care providers spend enough time on completing assessment of babies. For a child, all assessments are critical as the child's future depends on them; it could become a major issue if these aspects are not completed, recorded and acted upon in case abnormalities were detected or missed. Oral health was not assessed and oral problems may result in malnutrition and malnutrition affects the growth and development of the child.

Health care providers have a huge responsibility on their hands; they cannot do this all by themselves without the support of the facility manager. In turn the facility manager is powerless without the guidance and support from the facility supervisor who could negotiate for more resources including both human resources and equipment on the request and recommendations of the facility manager who is faced with the crisis of staff shortage and patients' complaints in her daily work. A team effort is necessary to achieve the quality of health care required by health care users.

CHAPTER 7: DEVELOPMENT OF A FRAMEWORK FOR CONTINUOUS QUALITY IMPROVEMENT IN IMPLEMENTING A FAST QUEUE SERVICE IN PHC SETTINGS

7.1 INTRODUCTION

The purpose of the study was to evaluate the implementation of the Fast Queue Service Point process in order to analyse the quality of care rendered by PHC personnel and ultimately develop a framework for continuous quality improvement based on the findings. Quality improvement requires collaboration from all members within the clinical microsystem – a PHC clinic in this study. These include patients and their relatives, professionals and everyone involved in the care of patients (Nelson *et al.* 2011: 4). The clinical microsystem which is the framework that was used to guide this study uses the smallest replicable health care units which consist of a small group of people working together regularly providing care to a specific category of patients. The principles for improving the performance of a microsystem are

- a) Involving everyone in the microsystem in continuous work improvement,
- b) Intelligent use of data,
- c) Extensive understanding of the needs of the patients served by the microsystem and
- d) Establishing and maintaining good relationships with other microsystems which have a role in the care of these patients (Nelson 2008: 233).

The results of the study have indicated areas that are lacking in the rendering of care for the Fast Queue health users and have highlighted areas where improvements are required. The goal of continuous quality improvement would be to ensure that health care users are consulted timeously without compromising quality and ensuring optimal and effective utilisation of health care providers.

7.2 KEY AREAS OF INTERVENTION

There are key areas of intervention that have been identified and are presented in the framework (Figure 7.1) in line with the elements of the Clinical Microsystems Model, namely; minimising delays, communication, in-service training, supportive supervision, equipment, programmes and human resources.

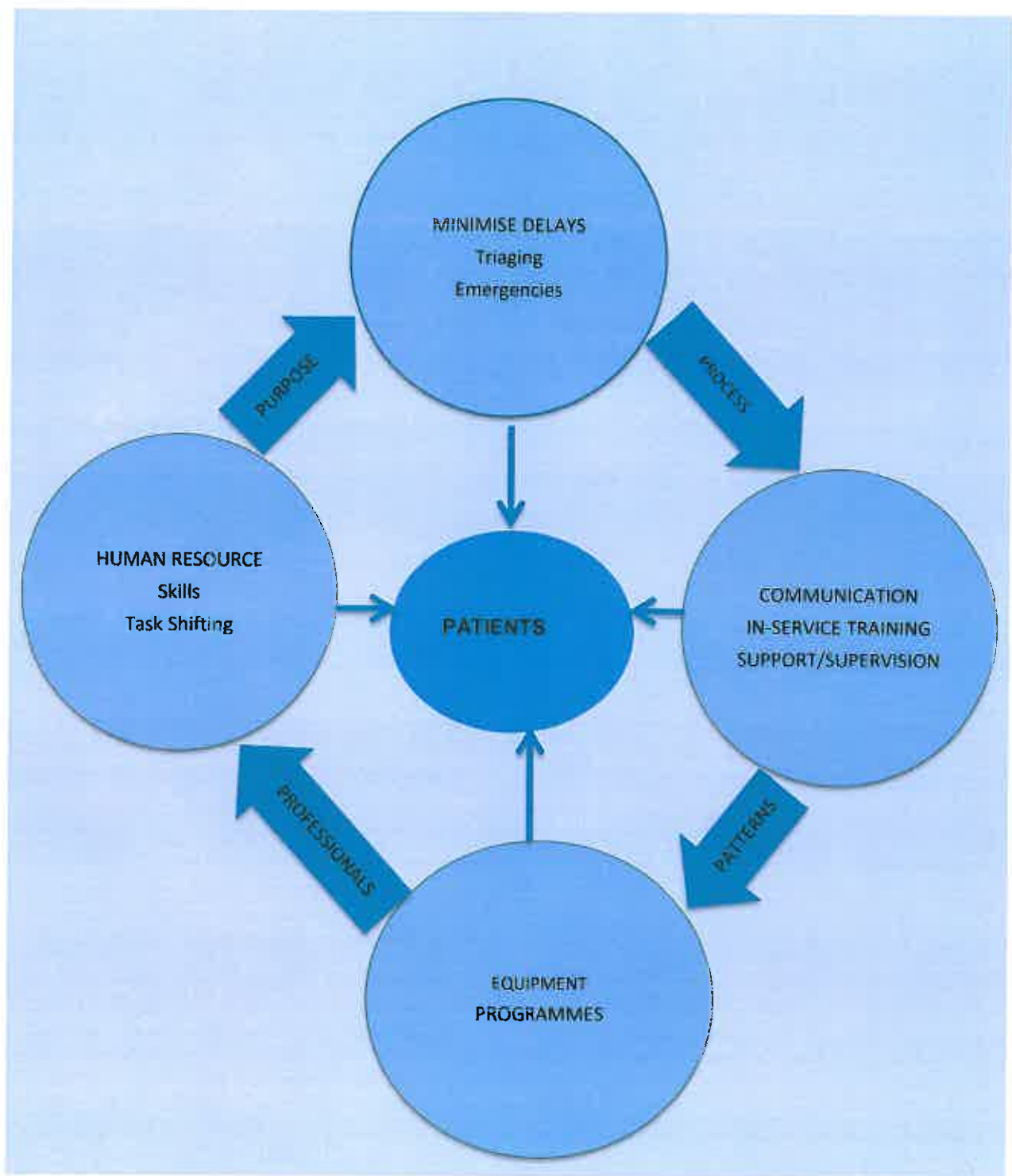


Figure 7.1: The framework for continuous quality improvement in the Fast Queue Service Point as a Clinical Microsystem.

7.2.1 PROCESS

Communication

Effective communication of health messages to patients or their relatives and caregivers of babies and children. This will increase knowledge and encourage self-care and self-reliance. Review collection of statistics by health care providers. Statistics are necessary and useful at different levels of the health care system. There should be a rationale for the many registers and statistic sheets that keep health care providers from doing their core function of patient care. It should be important to check if all registers are necessary and there is no duplication.

In-service training

Extensive ongoing training should be conducted to equip health care workers with knowledge and skills to work independently. In-service education should be conducted regularly to keep health care providers abreast of new developments. They should also be afforded an opportunity to request in-service education on areas of uncertainty as well as about new problems that they might encounter in their day to day engagement with health care users such as interpreting weights for babies and assessment of their milestones and oral health.

Support and supervision

An effective supervisory system should be devised by facility supervisors and they should have controls and measures of accountability at all levels. Facility supervisors need to be visible in the health facilities to support the facility manager. Managers have the power to authorise resource allocation and deployment; if they do not physically visit the facilities they may not have an idea of how desperate the situation is at the functional level. Supervision should be planned and not sporadic, there should be objectives for each visit so that these can be measured afterwards to evaluate if the visit was successful. Managers should encourage feedback from their subordinates and use it to support and improve the working environment of the health care providers.

7.2.2 PROFESSIONALS

Human resources

Increased accessibility of the PHC facilities should match the resources vital in the rendering of quality care; namely human resources. The staff compliment of all categories should be increased to meet the needs of the community. There is no legislation or regulation that stipulates how many ENAs for instance can be employed in a PHC facility, yet employing them may be very beneficial to the quest for quality health care.

Task shifting

Task shifting is a term used when non-complex duties are delegated to less specialised personnel to enable the others to attend to more specialised duties. This has happened over the years without the corresponding increase in human resources. Transition of work from one category to the next must be managed so that it is a smooth process. Nurses need to be prepared well for the 'new' roles. Failure to manage task shifting with resultant transition of work from one category of health care providers to another is bound to result in frustrations when nurses are faced with complex illnesses that they are unable to manage. According to the WHO (2008: 2) task shifting is a response to the global shortage of nurses. Furthermore task shifting increases access to health services especially for countries with the high burden of HIV.

Skills Development

Equip lower categories of nurses with skills that will allow them to obtain wider competencies so that they are able to assist and support professional nurses such as performing some of the administrative and non-complex duties. Facility managers should define methods for measuring performance to determine the needs of health care providers which can be measured through evaluation of training to ensure that the skill that was obtained is retained. This could be conducted during consultations with health care users or during reviews of users' records.

7.2.3 Patterns

Equipment

Adequate essential equipment should be made available in good working order to enable health care providers to perform their duties.

Programmes

New programmes such as the NCS which is the Department of Health's initiative to improve quality of care in health establishments should be introduced such that health professionals understand what is required of them and how they can reach compliance to these standards. There should be a team in place to support the facility managers with the requirements of the NCS until it is well established and understood by the facility personnel.

7.2.4 Purpose

Triaging

Regular rapid appraisal of all waiting patients by a professional nurse to identify urgent patients and direct them accordingly. Prioritization of very sick patients is important to reduce waiting time for non-urgent patients. Consulting these patients may cause delays if specific plans are not made to consult them separately.

Minimize delays

There should be one health care provider to perform triage functions and consult very ill and urgent health care users. These patients are bound to require longer consultations because of the complexity of their illness. This health care provider must be allocated additional duties while there is no urgent consultation and can be paired with the nurse from the lower category to support and assist the professional nurse or can even be asked to call for help if required.

7.2.5 Patients

Patients are central to the delivery of health care. They have the right to, and deserve, quality care. The PHC facility is a place where patients, families and

professionals interact. It is crucial to know the needs of the patients so that care is planned around their individual needs. Health care providers should empower the communities they serve with information, so that the patients or their relatives know what to expect from the health care provider and can make informed choices while taking responsibility for their health. They should be able to ask for the care they deserve to improve the accountability of health care providers. Health care providers can work smarter by allowing patients to arrive at different times in the clinic so that at no point do they wait long because they cannot all be consulted at the same time. Those who are unable to arrive early in the morning should be allowed to come to the clinic at midday or early afternoon such as the very old and frail.

7.3 SUMMARY

Effective team work and good planning are central to quality care. Care should be coordinated and should involve all functional areas of the PHC facility because they all impact and affect the quality of care. Work should be coordinated so that the PHC clinic, as a microsystem, functions seamlessly. The framework could be adapted and utilised by the health care providers to improve on areas that were found to be lacking in their facilities to improve the quality of care for health care users.

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Appendices

Appendix 1a: DUT Ethics approval



INSTITUTIONAL RESEARCH ETHICS COMMITTEE (IREC)

7 June 2013

IREC Reference Number: REC 33/13

Ms D G Sokhela
19 Berkshire Dales
51 Berkshire Drive
New Germany
3610

Dear Ms Sokhela

The Fast Queue Service Point: the analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal

I am pleased to inform you that Full Approval has been granted to your proposal REC 33/13.

The Proposal has been allocated the following Ethical Clearance number IREC 047/13. Please use this number in all communication with this office.

Approval has been granted for a period of one year, before the expiry of which you are required to apply for safety monitoring and annual recertification. Please use the Safety Monitoring and Annual Recertification Report form which can be found in the Standard Operating Procedures [SOP's] of the IREC. This form must be submitted to the IREC at least 3 months before the ethics approval for the study expires.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the IREC according to the IREC SOP's. In addition, you will be responsible to ensure gatekeeper permission.

Please note that any deviations from the approved proposal require the approval of the IREC as outlined in the IREC SOP's.

Please note that you may continue with validity testing and piloting of the questionnaire. Research on the proposed project may not proceed until IREC reviews and approves the final questionnaire.

Yours Sincerely



Dr D F Naude
Chairperson: IREC

Appendix 1b: DUT Acknowledgement of pre-testing the tool



INSTITUTIONAL RESEARCH ETHICS COMMITTEE (IREC)

24 July 2013

IREC Reference Number: REC 33/13

Ms D G Sokhela
19 Berkshire Dales
51 Berkshire Drive
New Germany
3610

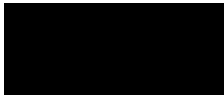
Dear Ms Sokhela

The Fast Queue Service Point: the analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal

The Institutional Research Ethics Committee acknowledges receipt of your notification regarding the piloting of your data collection tools.

Please note that you may now proceed with research on the proposed project.

Yours Sincerely,



Prof J K Adam
Chairperson: IREC

Appendix 2a: Letter to request permission from eThekwini District office



Durban University of Technology

P O Box 1334

Durban

4000

7 June 2013

The eThekwini District of Health
Jan Smuts Highway
Durban
4001

Sir/Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am a Masters student registered at the Durban University of Technology for Doctor of Technology in Nursing. My field of study is Primary Health Care (PHC). The topic is: Fast Queue Service Point: the analysis of the quality of care for users in primary health care facilities in eThekwini district, KwaZulu-Natal. The purpose of the study is to evaluate the implementation of the Fast Queue Service Point process in order to analyse the quality of care rendered by PHC personnel. The objectives are to:

1. Explore if the observations in the Fast Queue Service Point are done in line with the protocol
2. Determine how the PHC personnel implement the Fast Queue Service Point process
3. Describe the experiences of PHC personnel working in the Fast Queue Service Point and
4. Develop a framework for continuous quality improvement based on the findings.

The two-phase explanatory mixed methods study will be used to obtain the quantitative data, conducting record review and observing the process of this service point.

The health personnel will not be informed directly about the observations, this so that they do not change their behaviour during the research, however a blanket statement will be made in the form of a poster with the information that there will be a research carried out on patient management. Data analysis will be followed by qualitative face to face semi-structured interviews of personnel to clarify issues from the quantitative phase and to describe the experiences of personnel of the Fast Queue Service Point. The interview guide will consist of a few open ended questions.

Names of facilities used and respondents will not be attached to the interview guide; instead codes will be allocated for confidentiality. All respondents will be given an information letter to read, after which they will voluntarily sign a written consent and these will only be used for the purpose of research ethics and will therefore be kept confidential by researcher. Respondents will be assured of voluntary participation. Furthermore respondents will be informed that they could refrain from answering questions that they are not comfortable with and could withdraw from participating at any stage of the study if they so wished. They will be assured that their participation would not compromise them in the way. Respondents will not be expected to pay for participating in the study and they will in turn not receive any payment for their participation.

The results of the study will assist the profession in that since there is a shortage of health personnel in the country, the findings of the study will enhance the implementation of the Fast Queue Service Point relieving the facilities of overcrowding Furthermore if there is no overcrowding, health personnel will be less stressed and will be able to render good quality care.

For more information you may contact the supervisor Dr NM Sibiyi at 031 373 2032

Thank you.

Yours Faithfully,

.....
D.G. Sokhela (Researcher)

Appendix 2b: Support letter form eThekweni District



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Postal Address: Private Bag X54318 Durban 4000
as: 83 Jan Smuts Highway, Mayville, Durban 4001
Tel. 031 2405308; Fax: 031 2405500
Email: nan.hoosain@kznhealth.gov.za
www.kznhealth.gov.za

Enquiries: Ms Jabu Hlazo
Tel: 031 240 5303
Date: 12 June 2013

Attention: D.G. Sokhela : dudus@dut.ac.za

REQUEST TO CONDUCT RESEARCH:

"Fast queue Service Point : The analysis of the quality of care for users in Primary Health Care facilities in eThekweni district KwaZulu Natal."

Support is hereby granted to conduct research on the above topic.

Please note the following:

1. Please ensure that you adhere to all the policies, procedures, protocols and guidelines of the Department of Health with regard to this research.
2. This research will only commence once this office has received confirmation from the Provincial Health Research Committee in the KZN Department of Health.
3. Please ensure that this office is informed before you commence your research.
4. The District Office will not provide any resources for this research.
5. You will be expected to provide feedback on your findings to the District Office.


For The District Manager
eThekweni Health District
Telephone: 031 2405303
Fax: 031 2405500
Email: jabulishwe.hlazo@kznhealth.gov.za

uMnyango Wezempilo . Departement van Gesondheid
Fighting Disease, Fighting Poverty, Giving Hope

Appendix 2c: Letter to request permission from KZN DoH



Durban University of Technology

P O Box 1334

Durban

4000

12 June 2013

KwaZulu-Natal Department of Health

Private Bag X9051

Pietermaritzburg

3200

Sir/Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am a Masters student registered at the Durban University of Technology for Doctor of Technology in Nursing. My field of study is Primary Health Care (PHC). The topic is: Fast Queue Service Point: the analysis of the quality of care for users in primary health care facilities in eThekweni district, KwaZulu-Natal. The purpose of the study is to evaluate the implementation of the Fast Queue Service Point process in order to analyse the quality of care rendered by PHC personnel. The objectives are to:

1. Explore if the observations in the Fast Queue Service Point are done in line with the protocol
2. Determine how the PHC personnel implement the Fast Queue Service Point process
3. Describe the experiences of PHC personnel working in the Fast Queue Service Point and
4. Develop a framework for continuous quality improvement based on the findings.

The two-phase explanatory mixed methods study will be used to obtain the quantitative data, conducting record review and observing the process of this service point.

The health personnel will not be informed directly about the observations, this so that they do not change their behaviour during the research, however a blanket statement will be made in the form of a poster with the information that there will be a research carried out on patient management. Data analysis will be followed by qualitative face to face semi-structured interviews of personnel to clarify issues from the quantitative phase and to describe the experiences of personnel of the Fast Queue Service Point. The interview guide will consist of a few open ended questions.

Names of facilities used and respondents will not be attached to the interview guide; instead codes will be allocated for confidentiality. All respondents will be given an information letter to read, after which they will voluntarily sign a written consent and these will only be used for the purpose of research ethics and will therefore be kept confidential by researcher. Respondents will be assured of voluntary participation. Furthermore respondents will be informed that they could refrain from answering questions that they are not comfortable with and could withdraw from participating at any stage of the study if they so wished. They will be assured that their participation would not compromise them in the way. Respondents will not be expected to pay for participating in the study and they will in turn not receive any payment for their participation.

The results of the study will assist the profession in that since there is a shortage of health personnel in the country, the findings of the study will enhance the implementation of the Fast Queue Service Point relieving the facilities of overcrowding. Furthermore if there is no overcrowding, health personnel will be less stressed and will be able to render good quality care.

For more information you may contact the supervisor Dr NM Sibiyi at 031 373 2032

Thank you.

Yours Faithfully,

.....

D.G. Sokhela (Researcher)

Appendix 2d: Approval letter from KZN DoH



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg, 3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM 173/13
Enquiries : Mr X Xaba
Tel : 033 – 395 2805

Dear Ms DG Sokhela

Subject: Approval of a Research Proposal

1. The research proposal titled 'The fast queue service point: The analysis of the quality of care for primary health care users in the eThekweni district, KwaZulu Natal' was reviewed by the KwaZulu-Natal Department of Health.

The proposal is hereby approved for research to be undertaken at PHC facilities in eThekweni District.

2. You are requested to take note of the following:
 - a. Make the necessary arrangement with the identified facility before commencing with your research project.
 - b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200 and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely

Dr E Lutge

Chairperson, Health Research Committee

Date: 24/06/2013.

uMnyango Wezempilo . Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope

Appendix 2e: Letter to request permission form eThekweni Municipality

Durban University of Technology

P O Box 1334

Durban

4000

The Head of Health

EThekweni Municipality Health Unit

9 Archie Gumede Place

Durban

4001

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am a student at the Durban University of Technology registered for a Doctor of Technology Degree in Nursing. My field of study is Primary Health Care (PHC). The topic is: The Fast Queue Service Point: The analysis of the quality of care for users primary health care facilities in eThekweni district, KwaZulu-Natal.

The purpose of the study is to evaluate the implementation of the Fast Queue Service Point process in order to analyse the quality of care rendered by PHC personnel. The objectives are to:

1. Explore if the observations in the Fast Queue Service Point are done in line with the protocol
2. Determine how the PHC personnel implement the Fast Queue Service Point process
3. Describe the experiences of PHC personnel working in the Fast Queue Service Point and
4. Develop a framework for continuous quality improvement based on the findings.

The two-phase explanatory mixed methods study will be used to obtain the quantitative data, conducting record review and observing the process of this service point. The health personnel will not be informed directly about the observations, this so that they do not change their behaviour during the research, however a blanket statement will be made in the form of a poster with the information that there will be a research carried out on patient management. Data analysis will be followed by qualitative face to face semi-structured interviews of personnel to clarify issues from the quantitative phase and to describe the

experiences of personnel of the Fast Queue Service Point. The interview guide will consist of a few open ended questions.

Names of facilities used and respondents will not be attached to the interview guide; instead codes will be allocated for confidentiality. All respondents will be given an information letter to read, after which they will voluntarily sign a written consent and these will only be used for the purpose of research ethics and will therefore be kept confidential by researcher. Respondents will be assured of voluntary participation. Furthermore respondents will be informed that they could refrain from answering questions that they are not comfortable with and could withdraw from participating at any stage of the study if they so wished. They will be assured that their participation would not compromise them in the way. Respondents will not be expected to pay for participating in the study and they will in turn not receive any payment for their participation.

The results of the study will assist the profession in that since there is a shortage of health personnel in the country, the findings of the study will enhance the implementation of the Fast Queue Service Point relieving the facilities of overcrowding. Furthermore if there is no overcrowding, health personnel will be less stressed and will be able to render good quality care.

For more information you may contact the supervisor Dr NM Sibiya at 031 373 2032

Thank you.

Yours Faithfully,

.....
D.G. Sokhela

.....
MN Sibiya (Promoter)

.....
NS Gwele (Co-promoter)

Appendix 2f: Approval from eThekweni Municipality



HEALTH, SOCIAL SERVICES Health Unit

9 Archie Gumede Place
P O Box 2443, Durban, 4000
Durban, 4001
Tel: 031 311 3523, Fax: 031 311 3530
www.durban.gov.za

Dear Ms. D. Sokhela

3 September 2013

Subject: Approval of a research proposal.

The research proposal titled: **The Fast Queue Service Point: The analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal** was reviewed by the eThekweni Municipal Health Department research Committee. The study is hereby **approved**.

The following to be noted:

- Submission of the indemnity form obtainable from the EThekweni Municipality Health Unit before commencement of the study.
- Prior arrangements to be made with the facility and an assurance that all services will not be disrupted.
- No staff member should be used for collecting data for the researchers.
- Progress reports to be provided and the final report of the study to the eThekweni Municipality Health Unit or emailed to: grace.mufamadi@durban.gov.za
- Obtain permission from the eThekweni municipality health department for press releases and release of results to communities/stakeholders.
- The department has to receive recognition for the assistance given.
- Any amended to the study to be communicated with the eThekweni Municipality Health Unit and the relevant amendment form obtainable from the unit to be submitted.
- Withdrawal of permission to conduct research will be left to the discretion of the eThekweni Municipality Health Unit.

Yours faithfully

Dr N. Ngomane

Deputy Head: Clinical Support

Signature

Date: 05.09.2013

Appendix 3a: Information letter and consent to participants for use of records



LETTER OF INFORMATION

Dear Sir/Madam,

Thank you for taking part in the study.

Title of the Research Study: The Fast Queue Service Point: The analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal

Principle Investigator/s/researcher: Ms D. Sokhela (M Tech: Nursing)

Co-Investigator/s/supervisor/s: Dr N. Sibiya (D Tech: Nursing)

Brief Introduction: I will be conducting the study about the quality of care that you are getting at the clinic as you are in the Fast Queue. I would like to find out if the nurses do all that they are supposed to do and do it correctly according to the guide they were given, also to determine how the is the process of your queue. At the end I will try and develop guideline for quality improvement for your care depending on the results I obtain.

Purpose of the Study: The purpose of this study is to check that everything that is supposed to be done to you when you come to the clinic is done and recorded properly in your chart.

Outline of the Procedures: Firstly I will ask you to read this information letter, ask questions where you do not understand and I will then ask you to sign the consent agreeing to take part in the study. I will check your chart to see how the recording has been done. Secondly I will be checking on you as you go along in the queue to see how you are treated and what they do to you and whether it is done correctly or not.

Risk or Discomforts to the Subject: You will not experience any risk or discomfort because I will be checking the charts only.

Benefits: What you will gain from this study is that if there is anything that I find that needs to be corrected I will recommend that it is corrected to make sure that the level of quality you get in the clinic is good, and you get everything that you are supposed to get.

Reason/s why the Subject May Be Withdrawn from the Study: You are allowed not to give me permission to use your chart and I will not use it. There will be no adverse consequence to you.

Remuneration: You will not be given any money or any reward for participating in the study. You will be doing this on your free will.

Costs of the Study: All costs, that is transport, stationery, etc, will be borne by myself as the researcher

Confidentiality: Codes will be used in information documents no names will be used. The information gathered from your chart will only be used for this study only and all papers containing the information will be kept under lock and key and electronic information will be kept in a password locked computer.

Research-related Injury: No compensation, however you will not suffer any injuries because I will be checking the charts only.

Persons to Contact in the Event of Any Problems or Queries: For any queries please contact me on 031 3732292 or the study supervisor: Dr N. Sibiya on 031 373 2032 or the Institutional Research Ethics administrator on 031 373 2900.

General: Once again you are assured that participation is voluntary. If you are willing to participate in the study may I request that you sign the agreement in the next page.



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, about the nature, conduct, benefits and risks of this study -Research Ethics Clearance Number: **Rec 33/13**
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

**Full Name of Participant
 Right Thumbprint**

Date

Time

Signature /

I, _____ herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher

Date

Signature

Full Name of Witness (If applicable) Date

Signature

Full Name of Legal Guardian (If applicable) Date

Signature

Appendix 3b: Incwadi yolwazi locwaningo nesivumelwano sokusebenzisa amakhadi



INCWADI YOKUNIKA ULWAZI

Sawubona,

Ngiyabonga kakhulu ngokuthi ube ingxenywe yalolucwaningo.

Isihloko socwaningo: Umugqa osheshayo: ukubhekelela izinga lokunakekelwa kwabasebenzisa lomugqa emitholampilo yaseThekwini, KwaZulu-Natal

Umcwaningi omkhulu: Ms D. Sokhela (M Tech: Nursing)

Obheke Umcwaningi: Dokotela N. Sibiya (D Tech: Nursing)

Isingeniso: Ngicela ukukwazisa ngocwaningo engizolwenza kulomtholampilo. Ngizoqala ngokubheka ikhadi lakho ukuthi konke okwenziwe kuwena kuyahambisana yini nomgomo obhalwa kusomqulu wezempilo owabhalwa ngonyaka ka 2001 obekiwe ukuthi kuhambisane nawo. Ngizobe ngenza ucwaningo ngokuzobheka ukuthi uhlelo lwalomugqa osheshayo luhamba kanjani.

Inhloso yocwaningo: Inhloso ngqangi ukuba ngithole ukuthi nibhekeke ngendlela esezingeni yini. Ekugcineni ngizosebenzisa imininingwane engiyitholile ukwakha uhlaka oluzophucula izinga lempatho kulomugqa osheshayo.

Uhlaka lokuzokwenziwa: Ukuthola ikhadi lakho ukuthi ngilisebenzise uzofunda lencwadi uyizwe ubuze kumcwaningi uma ungaqondi kahle bese ushicilela isivumelwano sokuvuma ukuthi uyathanda ukuba ingxenywe yocwaningo ngokuba kusetshenziswe ikhadi lakho.

Amathuba okungaphatheki kahle: Awekho amathuba okuzizwa ungasaphathekile kahle, ngoba ngizobheka ikhadi kuphela wena ngeke ngikwenze lutho.

Inzuzo: Wena uzozuza ngokuthi ngizobhala ngemiphumela yalolucwaningo emabhukwini ongakwazi nawe ukuwafunda. Bese ngibeka izincomo uma ngithole okungahambi kahle ukuthi kungalungiswa kanjani ukuze uthole ukunakekelwa okuyikho.

Isizathu sokuhoxiswa kulolucwaningo: Ungakwazi ukunqaba ukuthi ngisebenzise ikhadi lakho. Futhi lokho ngeke kube ngemiphumela engaba mibi kuwena.

Iholo: Ayikho imali etholakalayo ngokuba ingxenywe yocwaningo.

Izindleko zocwaningo: Zonke izindleko zocwaningo zibhekene nami njengomcwaningi, akukho lutho obhekeke ukuthi ukukhokhe wena.

Imfihlo: Amagama awuzusetshenziswa kulolucwaningo. Ngizoba nendlela eyimfihlo yoku khombisa ukwehlukana kwamakhadi njengokubahal inombolo esikhundleni segama.

Ukulimala okungenziwa ucwaningo: Akukho kuhlawulwa, kepha akukho ukulimala njengoba ngizosebenzisa ikhadi kuphela kungekho lutho oluzokwenziwa kuwena.

Ongabathinta uma kunenkinga noma kukhona ofuna ukukubuza: Thintana nami uNks D. Sokhela kulenombolo yocingo 031 3732292 noma umqaphi u Dokotela N. Sibiya kulenombolo 031 373 2032 noma ikomidi eliphakeme lokubhekele ukuvikeleka kocwaningo kulenombolo 031 373 2900.

Okuvulelekile: Uma uvuma ukuba ingxenye yocwaningo ngicela ukuthi usayine imvume ekhasini elilandelayo.



ISIVUMELWANO

Isivumelwano sokuba yingxenywe yocwaningo

- Ngiyaqinisekisa ukuthi ngitsheliwe Umcwaningi **uDudu Sokhela**, ngendlela yokuqhutshwa kocwaningo, inzuzo nokuphathelene nokungaphephi kwalolucwaningo – Inombolo yemvume yekomiti: **REC 3313**.
- Ngitholile futhi, ngafunda ngazwisisa incwadi yolwazi engaphezulu (Incwadi yabazongenela ucwaningo) ngalolucwaningo.
- Ngiyazi ukuthi imiphumela yalolucwaningo, kanye nakho konke okuqondene nami njengobulili, iminyaka, usuku lokuzalwa, iziqalo zamagama ami, isifo esingiphethe kuzogcinwa kuyimfihlo embikweni kulolucwaningo.
- Ngokubhekelela izidingo zalolucwaningo, ngiyavuma ukuthi ulwazi oluzoqoqwa kulolucwaningo Umcwaningi angalufaka ku khomputha ukuze athole imiphumela.
- Ngingaphuma kulolucwaningo, ngibuyisele emuva imvume, nokuba ingxenywe yalolucwaningo noma kunini ngaphandle kokuthola ukungaphatheki ngendlela.
- Ngibe nethuba elanele lokubuza imibuzo (ngokuzivumela mina ngingaphoqwanga) ngiyazinikela ukuthi ngikulungele ukuba ingxenywe yalolucwaningo.
- Ngiyaqonda ukuthi imiphumela ezotholakala ngenxa yalolucwaningo ephathelene nokuzinikela kwami ukuba yingxenywe yalo ngiyokwazi ukuyithola.

Full Name of Participant
Right Thumbprint

Date

Time

Signature /

I, **uDudu Sokhela** herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Dudu Sokhela

Full Name of Researcher

Date

Signature

Full Name of Witness (If applicable)

Date

Signature

Full Name of Legal Guardian (If applicable)

Date

Signature

Appendix 3c: Information letter and consent to participants for use of children's records



LETTER OF INFORMATION

Dear Sir/Madam,

Thank you for taking part in the study.

Title of the Research Study: The Fast Queue Service Point: The analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal

Principle Investigator/s/researcher: Ms D. Sokhela (M Tech: Nursing)

Co-Investigator/s/supervisor/s: Dr N. Sibiya (D Tech: Nursing)

Brief Introduction: I will be conducting a study in the clinic. I would like to use your child's chart to check that everything that is supposed to be done to the child in the clinic is done and recorded properly in the child's chart. Secondly I will also be checking as you go along the queue in the clinic, how you and your child are treated and what is done to the child and whether it is done correctly or not.

Purpose of the Study: The main purpose of doing this study is to check the level of the quality of care that the child receives.

Outline of the Procedures: I will ask you to read and understand this letter, ask questions where you do not understand and I will request you to sign that you agree that I check your child's chart. I will not be asking you any questions and I will not ask you to do anything else after you have signed and agreed that I check the chart.

Risk and Discomfort to the Subject: Your child will not experience any risk or discomfort because I will be checking the chart only, and will not ask any questions.

Benefits: What you will gain from this study is that if there is anything that I find that needs to be corrected I will recommend that it is corrected to make sure that the level of quality your child gets in the clinic is good, and he/she gets everything that he/she is supposed to get.

Reason/s why the Subject May Be Withdrawn from the Study: You are allowed not to give me permission to use your child's chart and I will not use it. There will be no adverse consequence to you or your child.

Remuneration: You will not be given any money or any reward for allowing me to use your child's chart. You will be doing this on your free will.

Cost of the study: All costs of the study will be borne by me, the researcher you are not expected to pay anything for participating.

Confidentiality: Codes will be used in information documents no names will be used. The information gathered from your child's chart will only be used for this study only and all papers containing the information will be kept under lock and key and electronic information will be kept in a password locked computer.

Research-related Injury: No compensation, however: You or your child will not suffer any injuries because I will be checking the charts only.

Persons to Contact in the Event of Any Problems or Queries: For any queries please contact me on 031 3732292 or the study supervisor: Dr N. Sibiyi on 031 373 2032 or the Institutional Research Ethics administrator on 031 373 2900.

General: If you are willing to participate in the study may I request that you sign the agreement in the next page.

CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, _____ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____.
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Right Thumbprint	Date	Time	Signature /

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher	Date	Signature

Full Name of Witness (If applicable)	Date	Signature

Full Name of Legal Guardian (If applicable)	Date

Signature

Appendix 3d: Incwadi yolwazi locwaningo nesivumelwano sokusebenzisa amakhadi ezingane



INCWADI YOKUNIKA ULWAZI

Sawubona,

Ngiyabonga kakhulu ngokuthi ube ingxenye yalolucwaningo.

Isihloko socwaningo: Umugqa osheshayo: ukubhekelela izinga lokunakekelwa kwabasebenzisa lomugqa emitholampilo yaseThekwini, KwaZulu-Natal

Umcwaningi omkhulu: Ms D. Sokhela (M Tech: Nursing)

Obheke Umcwaningi: Dokotela N. Sibiyi (D Tech: Nursing)

Isingeniso: Ngizoqala ngokubheka ikhadi lomntwana wakho ukuthi konke okwenziwe kuyena kuyahambisana yini nongomo obhalwa kusomqulu wezempilo owabhalwa ngonyaka ka 2001 obekiwe ukuthi kuhambisane nawo. Ngizobe ngenza ucwaningo ngokuzobheka ukuthi uhlelo lwalomugqa osheshayo luhamba kanjani.

Inhloso yocwaningo: Inhloso ngqangi ukuba ngithole ukuthi umntwana ubhekeke ngendlela esezingeni yini. Ekugcineni ngizosebenzisa imininingwane engiyitholile ukwakha uhlaka oluzophucula izinga lempatho kulomugqa osheshayo.

Uhlaka lokuzokwenziwa: Ukuthola ikhadi lomntwana wakho ukuthi ngilisebenzise uzofunda lencwadi uyizwe kahle, ubuze kimina uma ungaqondi kahle bese ushicilela isivumelwano sokuvuma ukuthi uyathanda ukuba ingxenye yocwaningo ngokuba kusetshenziswe ikhadi lomntwana wakho.

Amathuba okungaphatheki kahle: Awekho amathuba okuthi wena noma umntwana nizizwe ningasaphathekile kahle, ngoba ngizobheka ikhadi kuphela wena nomntwana ngeke nginenze lutho, ngeke Futhi ngimbuze imibuzo.

Inzuzo: Wena nomntwana nizozuza ngokuthi ngizobhala ngemiphumela yalolucwaningo emabhukwini ongakwazi nawe ukuwafunda. Bese ngibeka izincomo uma ngithole okungahambi kahle ukuthi kungalungiswa kanjani ukuze umntwana athole ukunakekelwa okuyikho.

Isizathu sokuhoxiswa kulolucwaningo: Ungakwazi ukunqaba ukuthi ngisebenzise ikhadi lomntwana wakho. Futhi lokho ngeke kube ngemiphumela engaba mibi kuwena noma ku:mntwana.

Ihlo: Ayikho imali etholakalayo ngokuba umntwana wakho abe ingxenye yocwaningo.

Izindleko zocwaningo: Ayikho imali ozoyikhokha ngokuba umntwana wakho abe ingxenye yocwaningo.

Imfihlo: Amagama awuzusetshenziwa kulolucwaningo. Ngizoba nendlela eyimfihlo yoku khombisa ukwehlukana kwamakhadi njengokubhala inombolo esikhundleni segama.

Ukulimala okungenziwa ucwaningo: Akukho ukulimala njengoba ngizosebenzisa ikhadi kuphela kungekho lutho oluzokwenziwa kuwena noma kumntwana.

Ongabathinta uma kunenkinga noma kukhona ofuna ukukubuza: Thintana nami uNks D. Sokhela kulenombolo yocingo 031 3732292 noma umqaphi u Dokotela N. Sibiya kulenombolo 031 373 2032 noma ikomidi eliphakeme lokubhekele ukuvikeleka kocwaningo kulenombolo 031 373 2900.

Okuvulelekile: Uma uvuma ukuba ingxenye yocwaningo Ngicela ukuthi usayine invume ekhasini elilandelayo.

ISIVUMELWANO

Isivumelwano sokuba yingxenye yocwaningo

- Ngiyaqinisekisa ukuthi ngitsheliwe Umchwani u_____ (igama lomchwani), ngendlela yokuqhutshwa kocwaningo, inzuzo nokuphathelele nokungaphephi kwalolucwaningo – Inombolo yemvume yekomiti: _____.
- Ngitholile futhi, ngafunda ngazwisisa incwadi yolwazi engaphezulu (Incwadi yabazongenela ucwaningo) ngalolucwaningo.
- Ngiyazi ukuthi imiphumela yalolucwaningo, kanye nakho konke okuqondene nami njengobulili, iminyaka, usuku lokuzalwa, iziqalo zamagama ami, isifo esingiphethe kuzogcinwa kuyimfihlo embikweni kulolucwaningo.
- Ngokubhekelela izidingo zalolucwaningo, ngiyavuma ukuthi ulwazi oluzoqoqwa kulolucwaningo Umchwani angalufaka ku khomputha ukuze athole imiphumela.
- Ngingaphuma kulolucwaningo, ngibuyisele emuva imvume, nokuba ingxenye yalolucwaningo noma kunini ngaphandle kokuthola ukungaphatheki ngendlela.
- Ngibe nethuba elanele lokubuza imibuzo (ngokuzivumela mina ngingaphoqwanga) ngiyazinikela ukuthi ngikulungele ukuba ingxenye yalolucwaningo.
- Ngiyaqonda ukuthi imiphumela ezotholakala ngenxa yalolucwaningo ephathelelele nokuzinikela kwami ukuba yingxenye yalo ngiyokwazi ukuyithola.

Full Name of Participant
Right Thumbprint

Date

Time

Signature /

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher

Date

Signature

Full Name of Witness (If applicable)

Date

Signature

Full Name of Legal Guardian (If applicable)

Date

Signature

Appendix 3e: Information letter and consent to participants for interviews



LETTER OF INFORMATION

Dear Sir/Madam,

Thank you for taking part in the study.

Title of the Research Study: The Fast Queue Service Point: The analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal

Principle Investigator/s/researcher: Ms D. Sokhela (M Tech: Nursing)

Co-Investigator/s/supervisor/s: Dr N. Sibiyi (D Tech: Nursing)

Brief Introduction: I will be conducting a study in the clinic. I would like to find out if the nurses do all that they are supposed to do and do it correctly according to the guide they were given, also to determine how the is the process of your queue. I would like to interview you to get clarity on what I have observed in the queue and or in the charts, which I did to check that everything that is supposed to be done to health care users in the Fast Queue Service Point was done and recorded properly in the chart.

Purpose of the Study: The purpose of this study is to check that everything that is supposed to be done to you when you come to the clinic is done and recorded properly in your chart.

Outline of the Procedures: I will ask you to read and understand this letter, ask questions where you do not understand and I will request you to sign that you agree that I interview you. The interview will take place in the clinic in a room that is not used for privacy. I will be with you for about 15 - 20 minutes. The interviews will be audio recorded and later transcribed verbatim.

Risk and Discomfort to the Subject: I hope that you will not experience any risk or discomfort because I will be asking you questions and you will not answer those questions that you are uncomfortable with.

Benefits: What you will gain from this study is that if there is anything that I find that needs to be corrected I will recommend that it is corrected to make sure that the level of quality that is rendered in the clinic is good.

Reason/s why the Subject May Be Withdrawn from the Study: You are allowed not to give me permission to interview you. There will be no adverse consequence to you.

Remuneration: You will not be given any money or any reward for participating in the study. You will be doing this on your free will.

Cost of the study: All costs of the study will be borne by me, the researcher you are not expected to pay anything for participating.

Confidentiality: Codes will be used in information documents, no names will be used. The information gathered from you will only be used for this study only and all papers containing the information will be kept under lock and key and electronic information will be kept in a password locked computer.

Research-related Injury: No compensation, however you will not suffer any injuries because I will be asking you questions only.

Persons to Contact in the Event of Any Problems or Queries: For any queries please contact me on 031 3732292 or the study supervisor: Dr N. Sibiya on 031 373 2032 or the Institutional Research Ethics administrator on 031 373 2900.

General: If you are willing to participate in the study may I request that you sign the agreement in the next page.



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, _____ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **REC 33/13**
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Right Thumbprint	Date	Time	Signature /

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher	Date	Signature

Full Name of Witness (If applicable)	Date	Signature

Full Name of Legal Guardian (If applicable)	Date	Signature

Appendix 3f: Information letter and consent to participants for the use of records (Pre-testing the tool)



LETTER OF INFORMATION

Dear Sir/Madam,

Thank you for taking part in the study.

Title of the Research Study: The Fast Queue Service Point: The analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal

Principle Investigator/s/researcher: Ms D. Sokhela (M Tech: Nursing)

Co-Investigator/s/supervisor/s: Dr N. Sibiyi (D Tech: Nursing)

Brief Introduction: I will be conducting a pilot study in this clinic. This means that the information that I will obtain from you will not be used for the actual study. This is to check if all the procedures that are set to be carried out for the actual study will work. The study is about the quality of care in the Fast queue. I would like to find out if the nurses do all that they are supposed to do and do it correctly according to the guide they were given, also to determine how the is the process of your queue. At the end I will try and develop guideline for quality improvement for your care depending on the results I obtain.

Purpose of the Study: The purpose of the study is to check that everything that is supposed to be done to you when you come to the clinic is done and recorded properly in your chart.

Outline of the Procedures: Firstly I will ask you to read this information letter, ask questions where you do not understand and I will then ask you to sign the consent agreeing to take part in the study. I will check your chart to see how the recording has been done. Secondly I will be checking on you as you go along in the queue to see how you are treated and what they do to you and whether it is done correctly or not.

Risk and Discomfort to the Subject: You will not experience any risk or discomfort because I will be checking the charts only.

Benefits: What you will gain from this study is that if there is anything that I find that needs to be corrected I will recommend that it is corrected to make sure that the level of quality you get in the clinic is good, and you get everything that you are supposed to get.

Reason/s why the Subject May Be Withdrawn from the Study: You are allowed not to give me permission to use your chart and I will not use it. There will be no adverse consequence to you.

Remuneration: You will not be given any money or any reward for participating in the study. You will be doing this on your free will.

Costs of the Study: All costs pertaining to the study will be borne by me the researcher. You will not be expected to pay any money for the involvement in the study.

Confidentiality: Codes will be used in information documents no names will be used. The information gathered from your chart will only be used for this study only and all papers containing the information will be kept under lock and key and electronic information will be kept in a password locked computer.

Research-related Injury: No Compensation, however you will not suffer any injuries because I will be checking the charts only.

Persons to Contact in the Event of Any Problems or Queries: For any queries please contact me on 031 3732292 or the study supervisor: Dr N. Sibiyi on 031 373 2032 or the Institutional Research Ethics administrator on 031 373 2900.

General: If you are willing to participate in the study may I request that you sign the agreement in the next page.



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, _____ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **Rec 33/13**
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Right Thumbprint	Date	Time	Signature /

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher	Date	Signature

Full Name of Witness (If applicable)	Date	Signature

Full Name of Legal Guardian (If applicable) Date	Signature

Appendix 3g: Incwadi yolwazi locwaningo nesivumelwano sokusebenzisa amakhadi (Pre-testing the tool)



INCWADI YOKUNIKA ULWAZI

Sawubona,

Ngiyabonga kakhulu ngokuthi ube ingxenywe yalolucwaningo.

Isihloko socwaningo: Umugqa osheshayo: ukubhekelela izinga lokunakekelwa kwabasebenzisa lomugqa emitholampilo yaseThekwini, KwaZulu-Natal

Umcwaningi omkhulu: Ms D. Sokhela (M Tech: Nursing)

Obheke Umcwaningi: Dokotela N. Sibiya (D Tech Nursing)

Isingeniso: Ngizokwenza ucwaningo kulomtholampilo. Namhlanje ngisazosebenzisa konke okuzosebenza kucwaningo lwangempela ukubona ukuthi kuyosebenza kahle yini. Lonke ulwazi engizoluqoqa namhlanje ngeke ngilisebenzise emiphumeleni yocwaningo lwangempela. Ngizogala ngokubheka ikhadi lakho ukuthi konke okwenziwe kuwena kuyahambisana yini nongomo obhalwa kusomqulu wezempilo owabhalwa ngonyaka ka 2001 obekiwe ukuthi kuhambisane nawo. Ngizobe ngenza ucwaningo ngokuzobheka ukuthi uhlelo lwalomugqa osheshayo luhamba kanjani.

Inhloso yocwaningo: Inhloso ngqangi ukuba ngithole ukuthi umntwana ubhekeke ngendlela esezingeni yini. Ekugcineni ngizosebenzisa imininingwane engiyitholile ukwakha uhlaka oluzophucula izinga lempatho kulomugqa osheshayo.

Uhlaka lokuzokwenziwa: Ukuthola ikhadi lakho ukuthi ngilisebenzise uzofunda lencwadi uyizwe ubuze kumcwaningi uma ungaqondi kahle bese ushicilela isivumelwano sokuvuma ukuthi uyathanda ukuba ingxenywe yocwaningo ngokuba kusetshenziswe ikhadi lakho.

Amathuba okungaphatheki kahle: Awekho amathuba okuzizwa ungasaphathekile kahle, ngoba ngizobheka ikhadi kuphela wena ngeke ngikwenze lutho.

Inzuzo: Wena uzozuza ngokuthi ngizobhala ngemiphumela yalolucwaningo emabhukwini ongakwazi nawe ukuwafunda. Bese ngibeka izincomo uma ngithole okungahambi kahle ukuthi kungalungiswa kanjani ukuze uthole ukunakekelwa okuyikho.

Isizathu sokuhoxiswa kulolucwaningo: Ungakwazi ukunqaba ukuthi ngisebenzise ikhadi lakho. Futhi lokho ngeke kube ngemiphumela engaba mibi kuwena.

Ihlo: Ayikho imali etholakalayo ngokuba ingxenywe yocwaningo.

Izindleko zocwaningo: Zonke izindleko eziqondene ngocwaningo kuyoba ezami njengomcwaningi, akukho zindleko zocwaningo ezidingeka kuwena.

Imfihlo: Amagama awuzusetshenziswa kulolucwaningo. Ngizoba nendlela eyimfihlo yoku khombisa ukwehlukana kwamakhadi njengokubahal inombolo esikhundleni segama.

Ukulimala okungenziwa ucwaningo: Akukho ukulimala njengoba ngizosebenzisa ikhadi kuphela kungekho lutho oluzokwenziwa kuwena.

Ongabathinta uma kunenkinga noma kukhona ofuna ukukubuza: Thintana nami uNks D. Sokhela kulenombolo yocingo 031 3732292 noma umqaphi u Dokotela N. Sibiya kulenombolo 031 373 2032 noma ikomidi eliphakeme lokubhekele ukuvikeleka kocwaningo kulenombolo 031 373 2900.

Okuvulelekile: Uma uvuma ukuba ingxenye yocwaningo Ngicela ukuthi usayine imvume ekhasini elilandelayo.

ISIVUMELWANO

Isivumelwano sokuba yingxenywe yocwaningo

- Ngiaqinisekisa ukuthi ngitsheliwe Umcwaningi u _____ (igama lomcwaningi), ngendlela yokuhutshwa kocwaningo, inzuzo nokuphathelele nokungaphephi kwalolucwaningo – Inombolo yemvume yekomiti: **Rec 33/13**
- Ngitholile futhi, ngafunda ngazwisisa incwadi yolwazi engaphezulu (Incwadi yabazongenela ucwaningo) ngalolucwaningo.
- Ngiyazi ukuthi imiphumela yalolucwaningo, kanye nakho konke okuqondene nami njengobulili, iminyaka, usuku lokuzalwa, iziqalo zamagama ami, isifo esingiphethe kuzogcinwa kuyimfihlo embikweni kulolucwaningo.
- Ngokubhekelela izidingo zalolucwaningo, ngiyavuma ukuthi ulwazi oluzoqoqwa kulolucwaningo Umcwaningi angalufaka ku khomputha ukuze athole imiphumela.
- Ngingaphuma kulolucwaningo, ngibuyisele emuva imvume, nokuba ingxenywe yalolucwaningo noma kunini ngaphandle kokuthola ukungaphatheki ngendlela.
- Ngibe nethuba elanele lokubuza imibuzo (ngokuzivumela mina ngingaphoqwanga) ngiyazinikela ukuthi ngikulungele ukuba ingxenywe yalolucwaningo.
- Ngiaqonda ukuthi imiphumela ezotholakala ngenxa yalolucwaningo ephathelelele nokuzinikela kwami ukuba yingxenywe yalo ngiyokwazi ukuyithola.

Full Name of Participant
Right Thumbprint

Date

Time

Signature /

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher

Date

Signature

Full Name of Witness (If applicable)

Date

Signature

Full Name of Legal Guardian (If applicable)

Date

Signature

Appendix 3h: Information letter and consent to participants for use of children's records (Pre-Testing the tool)



LETTER OF INFORMATION

Dear Sir/Madam,

Thank you for taking part in the study.

Title of the Research Study: The Fast Queue Service Point: The analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal

Principle Investigator/s/researcher: Ms D. Sokhela (M Tech: Nursing)

Co-Investigator/s/supervisor/s: Dr N. Sibiya (D Tech: Nursing)

Brief Introduction: I will be conducting a pilot study in the clinic. This means that the results of this study are not going to be used in the main study. I would like to use your child's chart to check that everything that is supposed to be done to the child in the clinic is done and recorded properly in the child's chart. Secondly I will also be checking as you go along the queue in the clinic, how you and your child are treated and what is done to the child and whether it is done correctly or not.

Purpose of the Study: The main purpose of doing this study is to check the level of the quality of care that the child receives.

Outline of the Procedures: I will ask you to read and understand this letter, ask questions where you do not understand and I will request you to sign that you agree that I check your child's chart. I will not be asking you any questions and I will not ask you to do anything else after you have signed and agreed that I check the chart.

Risk and Discomforts to the Subject: Your child will not experience any risk or discomfort because I will be checking the chart only, and will not ask any questions.

Benefits: What you will gain from this study is that if there is anything that I find that needs to be corrected I will recommend in the actual study, that it is corrected to make sure that the level of quality your child gets in the clinic is good, and he/she gets everything that he/she is supposed to get.

Reason/s why the Subject May Be Withdrawn from the Study: You are allowed not to give me permission to use your child's chart and I will not use it. There will be no adverse consequence to you or your child.

Cost of the study: all costs pertaining to the study will be borne by me the researcher. No costs will be expected to be borne by you.

Remuneration: You will not be given any money or any reward for allowing me to use your child's chart. You will be doing this on your free will.

Confidentiality: Codes will be used in information documents no names will be used. The information gathered from your child's chart will only be used for this study only and all papers containing the information will be kept under lock and key and electronic information will be kept in a password locked computer.

Research-related Injury: No compensation, however you or your child will not suffer any injuries because I will be checking the charts only.

Persons to Contact in the Event of Any Problems or Queries: For any queries please contact me on 031 3732292 or the study supervisor: Dr N. Sibiya on 031 373 2032 or the Institutional Research Ethics administrator on 031 373 2900.

General: If you are willing to participate in the study may I request that you sign the agreement in the next page.



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, _____ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____.
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Right Thumbprint	Date	Time	Signature /

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher	Date	Signature

Full Name of Witness (If applicable)	Date	Signature

Full Name of Legal Guardian (If applicable)	Date	Signature

Appendix 3i: Incwadi yolwazi locwaningo nesivumelwano sokusebenzisa amakhadi ezingane (Pre-testing the tool)



INCWADI YOKUNIKA ULWAZI

Sawubona,

Ngiyabonga kakhulu ngokuthi ube ingxenye yalolucwaningo.

Isihloko socwaningo: Umugqa osheshayo: ukubhekelela izinga lokunakekelwa kwabasebenzisa lomugqa emitholampilo yaseThekwini, KwaZulu-Natal

Umcwaningi omkhulu: Ms D. Sokhela (M Tech: Nursing)

Obheke Umcwaningi: Dokotela N. Sibiyi (D Tech: Nursing)

Isingeniso: Namhlanje ngisazosebenzisa konke okuzosebenza kucwaningo lwangempela ukubona ukuthi kuyosebenza kahle yini. Lonke ulwazi engizoluqoqa namhlanje ngeke ngilisebenzise emiphumeleni yocwaningo lwangempela. Ngizogala ngokubheka ikhadi lomntwana wakho ukuthi konke okwenziwe kuyena kuyahambisana yini nongomo obhalwa kusomqulu wezempilo owabhalwa ngonyaka ka 2001 obekiwe ukuthi kuhambisane nawo. Ngizobe ngenza ucwaningo ngokuzobheka ukuthi uhlelo lwalomugqa osheshayo luhamba kanjani. Ekugcineni ngizosebenzisa imininingwane engiyitholile ukwakha uhlaka oluzophucula izinga lempatho kulomugqa osheshayo.

Inhloso yocwaningo: Inhloso ngqangi ukuba ngithole ukuthi umntwana ubhekeke ngendlela esezingeni yini.

Uhlaka lokuzokwenziwa: Ukuthola ikhadi lomntwana wakho ukuthi ngilisebenzise uzofunda lencwadi uyizwe kahle, ubuze kimina uma ungaqondi kahle bese ushicilela isivumelwano sokuvuma ukuthi uyathanda ukuba ingxenye yocwaningo ngokuba kusetshenziswe ikhadi lomntwana wakho.

Amathuba okungaphatheki kahle: Awekho amathuba okuthi wena noma umntwana nizezwe ningasaphathekile kahle, ngoba ngizobheka ikhadi kuphela wena nomntwana ngeke nginenze lutho, ngeke Futhi ngimbuze imibuzo.

Inzuzo: Wena nomntwana nizozuza ngokuthi ngizobhala ngemiphumela yalolucwaningo emabhukwini ongakwazi nawe ukuwafunda. Bese ngibeka izincomo uma ngithole okungahambi kahle ukuthi kungalungiswa kanjani ukuze umntwana athole ukunakekelwa okuyikho.

Isizathu sokuhoxiswa kulolucwaningo: Ungakwazi ukunqaba ukuthi ngisebenzise ikhadi lomntwana wakho. Futhi lokho ngeke kube ngemiphumela engaba mibi kuwena noma kumntwana.

Iholo: Ayikho imali etholakalayo ngokuba umntwana wakho abe ingxenye yocwaningo.

Izindleko zocwaningo: Zonke izindleko zocwaningo ziyobhekana nami njengomcwaningi. Ayikho imali ozoyikhokha ngokuba umntwana wakho abe ingxenye yocwaningo.

Imfihlo: Amagama awuzusetshenziswa kulolucwaningo. Ngizoba nendlela eyimfihlo yoku khombisa ukwehlukana kwamakhadi njengokubhala inombolo esikhundleni segama.

Ukulimala okungenziwa ucwaningo: Akukho ukulimala njengoba ngizosebenzisa ikhadi kuphela kungekho lutho oluzokwenziwa kuwena noma kumntwana.

Ongabathinta uma kunenkinga noma kukhona ofuna ukukubuza: Thintana nami uNks D. Sokhela kulenombolo yocingo 031 3732292 noma umqaphi u Dokotela N. Sibiya kulenombolo 031 373 2032 noma ikomidi eliphakeme lokubhekele ukuvikeleka kocwaningo kulenombolo 031 373 2900.

Okuvulelekile: Uma uvuma ukuba ingxenye yocwaningo Ngicela ukuthi usayine invume ekhasini elilandelayo.

ISIVUMELWANO

Isivumelwano sokuba yingxenywe yocwaningo

- Ngiaqinisekisa ukuthi ngitsheliwe Umcwani u _____ (igama lomcwani), ngendlela yokuqhutshwa kocwaningo, inzuzo nokuphathelene nokungaphephi kwalolucwaningo – Inombolo yemvume yekomiti: _____.
- Ngitholile futhi, ngafunda ngazwisisa incwadi yolwazi engaphezulu (Incwadi yabazongenela ucwaningo) ngalolucwaningo.
- Ngiyazi ukuthi imiphumela yalolucwaningo, kanye nakho konke okuqondene nami njengobulili, iminyaka, usuku lokuzalwa, iziqalo zamagama ami, isifo esingiphethe kuzogcinwa kuyimfihlo embikweni kulolucwaningo.
- Ngokubhekelela izidingo zalolucwaningo, ngiyavuma ukuthi ulwazi oluzoqoqwa kulolucwaningo Umcwani angalufaka ku khomputha ukuze athole imiphumela.
- Ngingaphuma kulolucwaningo, ngibuyisele emuva imvume, nokuba ingxenywe yalolucwaningo noma kunini ngaphandle kokuthola ukungaphatheki ngendlela.
- Ngibe nethuba elanele lokubuza imibuzo (ngokuzivumela mina ngingaphoqwanga) ngiyazinikela ukuthi ngikulungele ukuba ingxenywe yalolucwaningo.
- Ngiaqonda ukuthi imiphumela ezotholakala ngenxa yalolucwaningo ephathelene nokuzinikela kwami ukuba yingxenywe yalo ngiyokwazi ukuyithola.

Full Name of Participant
Right Thumbprint

Date

Time

Signature /

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher

Date

Signature

Full Name of Witness (If applicable)

Date

Signature

Full Name of Legal Guardian (If applicable)

Date

Signature

**Appendix 3j: Information letter and consent to participants for interviews
(Pre-testing the tool)**



LETTER OF INFORMATION

Dear Sir/Madam,

Thank you for taking part in the study.

Title of the Research Study: The Fast Queue Service Point: The analysis of the quality of care for primary health care users in eThekweni District, KwaZulu-Natal

Principle Investigator/s/researcher: Ms D. Sokhela (M Tech: Nursing)

Co-Investigator/s/supervisor/s: Dr N. Sibiya (D Tech: Nursing)

Brief Introduction: I will be pre testing the tool in the clinic about the quality of care that you are getting at the clinic as you are in the Fast Queue. I would like to find out if the nurses do all that they are supposed to do and do it correctly according to the guide they were given and recorded properly in the chart. also to determine how the is the process of your queue. At the end I will try and develop guideline for quality improvement for your care depending on the results I obtain. The results from today's study will not be used in the actual study.

Purpose of the Study: The purpose of this study is to check that everything that is supposed to be done to you when you come to the clinic is done and recorded properly in your chart.

Outline of the Procedures: I will ask you to read and understand this letter, ask questions where you do not understand and I will request you to sign that you agree that I interview you. I will be with you for about 15 - 20 minutes. The interviews will be audio recorded and later transcribed verbatim.

Risk and Discomforts to the Subject: I hope that you will not experience any risk or discomfort because I will be asking you questions and you will not answer those questions that you are uncomfortable with.

Benefits: What you will gain from this study is that if there is anything that I find that needs to be corrected I will recommend that it is corrected to make sure that the level of quality that is rendered in the clinic is good.

Reason/s why the Subject May Be Withdrawn from the Study: You are allowed not to give me permission to interview you. There will be no adverse consequence to you.

Remuneration: You will not be given any money or any reward for participating in the study. You will be doing this on your free will.

Cost of the study: all costs related to the study will be borne by me the researcher. No costs will be expected to be borne by you.

Confidentiality: Codes will be used in information documents, no names will be used. The information gathered from you will only be used for this study only and all papers containing the information will be kept under lock and key and electronic information will be kept in a password locked computer.

Research-related Injury: No compensation, however you will not suffer any injuries because I will be asking you questions only.

Persons to Contact in the Event of Any Problems or Queries: For any queries please contact me on 031 3732292 or the study supervisor: Dr N. Sibiya on 031 373 2032 or the Institutional Research Ethics administrator on 031 373 2900.

General: If you are willing to participate in the study may I request that you sign the agreement in the next page.



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, _____ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____.
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Right Thumbprint	Date	Time	Signature /

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher	Date	Signature

Full Name of Witness (If applicable)	Date	Signature

Full Name of Legal Guardian (If applicable)	Date	Signature

Appendix 4: Information letter and consent for the research assistant

Durban University of Technology

P O Box 1334

Durban

4000

Dear Sir/Madam

I am a student registered at the Durban University of Technology for Doctor of Technology in Nursing. My field of study is Primary Health Care (PHC). The topic of the study is: Fast Queue Service Point: the analysis of the quality of care for users in primary health care facilities in eThekweni district, KwaZulu-Natal. The purpose of the study is to evaluate the implementation of the Fast Queue Service Point process in order to analyse the quality of care rendered by PHC personnel. The objectives are to:

1. Explore if the observations in the Fast Queue Service Point are done in line with the protocol
2. Determine how the PHC personnel implement the Fast Queue Service Point process
3. Describe the experiences of PHC personnel working in the Fast Queue Service Point and
4. Develop a framework for continuous quality improvement based on the findings.

I am requesting you to participate in the stage of the study where quantitative data will be obtained, conducting observations of waiting time in the Fast queue Service Point. The sample size will be twenty facilities; ten from each health authority namely the local and the provincial health authorities. Thirty observations will be conducted in each facility totalling 600 observations. You will record the time the user sits in the queue outside the consulting room and will also record the time the user enters the consulting room. You will be trained by the researcher to observe those users who will be identified by holding the information letter. A trial run will be conducted at the pilot site where the researcher will do the time observation simultaneously with you to ensure that you understand and know what to do. If you agree to participate in the study, you will be requested to sign the agreement. You are also required to keep all information that comes to your knowledge confidentially, and you will be requested to sign an agreement to this effect.

For more information you may contact the supervisor Dr NM Sibiya at 031 373 2032

Thank you.

Yours Faithfully,

.....

.....

.....
D.G. Sokhela
supervisor)

MN Sibiya (Promoter)

NS Gwele (Co-

Statement of Agreement to Participate in the Research Study (as research assistant):

I,.....research assistant's full name,

ID number..... have read this document in its entirety and understand its contents. Where I have had any questions or queries, these have been explained to me by Ms Sokhela to my satisfaction. I, therefore, voluntarily agree to participate in this study as a research assistant.

Research assistant's name (print):

.....

Research assistant's signature:.....

Date:.....

Researcher's name (print):.....

.....

Researcher's

signature:.....Date:.....

Witness name (print) signature:

.....

Witness signature:

.....Date:.....

Appendix 5: Interview Guide

Section A: Demographic Data

Category: Experience: Gender:

Age:

Section B: Questions

1. What is the purpose of the Fast Queue Service Point?
2. Briefly describe this service point
3. What is your core function in this service point?
4. What support do you get in this service point?
5. Describe the patients in this service point?

Probing where necessary:

Elaboration probes

Continuation probes

Clarification probes

Attention probes

Completion probes

Tell me more about....."

"What happened then..."

Could you explain.....

Some questions will be to further explain quantitative results

Appendix 6: Letter from statistician

From: Catherine Comiskey (<mailto:CCOMISKE@tcd.ie>)
Sent: 22 October 2012 01:28 PM
To: Dudu Gloria Sokhela
Cc: Catherine Comiskey
Subject: RE: Sampling

Dear Dudu

Based on the details we spoke about I have completed a preliminary power analysis to provide you with some information on numbers of observations you may require within your study. Given the following conditions:

One, you are interested in estimating the prevalence of quality at each client visit

Two, that you believe that at most 50% of visits will have a full quality result

Three, that you have 102 centres within your list of provincial and urban districts

Then using Naing et al (2006) (see reference and sample calculator attached) it is estimated that you require a total of 385 observations of visits within your study.

For practical reasons I would suggest you include 400 observations in your study and that you obtain these over 10 sites or centres randomly selected from your list of 102. Therefore you will observe 40 within each site.

I hope this is of some help to you in your study.

Best regards

Catherine

Professor Catherine Comiskey,

Director, Centre for Practice and Healthcare Innovation (CPHI) Professor of
Healthcare Statistics, School of Nursing and Midwifery, Trinity College Dublin,
24 D'Olier St.

Dublin 2,

Ireland.

Tel +353 1 8962776

Fax +353 1 8963001

Appendix 7: Record review tool for adults

Facility:

Date:

Municipality/KZN

Key: Yes: 1 No: 0 N/A

U S E R	Age	Gender	Diagnosis	WT	BP	BS	Urine	LMMP	PEFR	How user feels	Lifestyle Modifi cation	Presence of Compli cations	Presence of Side effects	Correct Prescrip tion	Referral	Book next Visit
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

Appendix 8: Structured observation tool

Facility:

Date:

Municipality/KZN

Key: Yes: 1 No: 0 N/A

N O	ACTIVITY / EVENT	PERFORMED			PERFORMED		
		No 0	YES 1	N/A	No 0	YES 1	N/A
1.	Users called out from general queue.						
2.	Is there someone in attendance all the time at this point?						
3.	Is there relief personnel at tea break?						
4.	Is station left unattended for more than 5 minutes?						
5.	Users are fast tracked?						
6.	Users told they will be in the Fast Queue Service Point						
7.	Vital observations conducted before consultation;						
8.	User does not come back from consulting room for observation						
9.	Personnel communicate to users about FQSP						
10.	Specific queue available for these users						
11.	There is a dedicated PHC personnel for this service Point						
12.	Users are spoken to politely if they ask questions						
13.	Other						

Appendix 9: Record review tool for children

Facility:

Date:

Municipality/KZN

Key: Yes: 1 No: 0 N/A

CHILD	Age	Gender	Wt.	Wt. Plot	IMCI classification			Feeds	Immunisation Given			Side Effects To expect	Management of side effect	Prophylaxis		Mile stones	Oral Health	Next Visit
					growth	PMTCT/ HIV status	TB status		Date	Batch No	Signature			Vit A	De worm			
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Boy's Weight-for-Age Chart

Watch the direction of the curve showing the child's growth:

GOOD: Means the child is growing well.

VERY DANGEROUS: Child may be ill. Needs extra care.

DANGER: STOP! Not gaining weight. Feed not well. Refer child to hospital.

Write on the chart

- Any illness e.g. diarrhoea, ARI, etc.
- Admission to hospital.
- Stools bloodstained.
- Breastfeeding stopped.
- Birth of next child, etc.

like this:

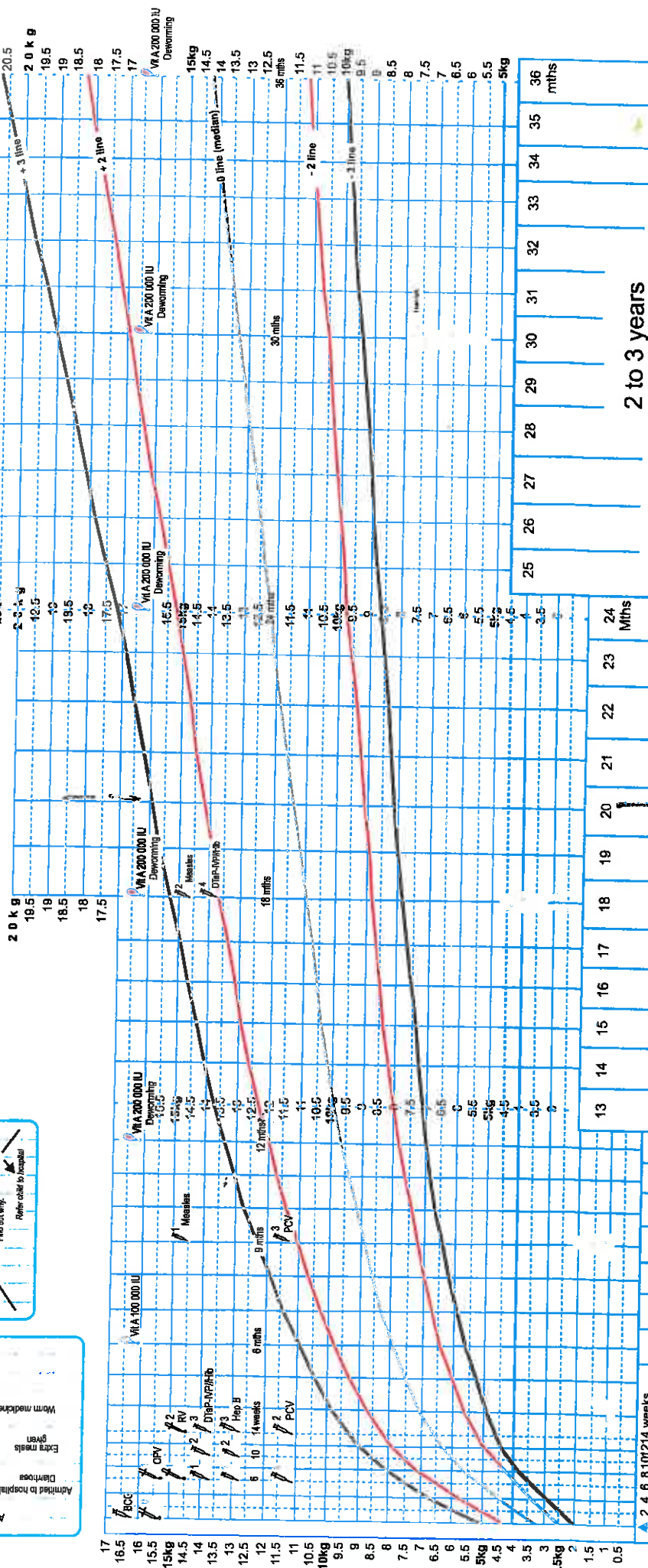
ARI

Admitted to hospital

Diarrhoea

Extra meals

Worm medicine



Interpretation of lines:

This Weight-for-Age Chart shows body-weight relative to age in comparison to the Median (0-line).

A boy whose weight-for-age is below the -2 line, is underweight.

A boy whose weight-for-age is below the -3 line, is severely underweight. Clinical signs of Marasmus or Kwashiorkor may be observed.

If his line crosses a z-score line and the shift is away from the median, this may indicate a problem or risk of a problem.

If his line stays close to the median, occasionally crossing above or below it, this

**Refer child if scheduled examinations have not been done.
To be completed by Dentist, Dental Therapist or Oral Hygienist.**

1st visit on appearance of first tooth

At age 12 months, when attending immunizations

In the 2nd year, with other health checks

In the 3rd year, with other health checks

In the 4th year, with other health checks

In the 5th year, with other health checks

Use a clean cloth to clean your baby's gums
Use a small soft toothbrush to clean the baby's teeth

[illegible]

Counsel and treat

Date _____

[illegible]

[illegible]

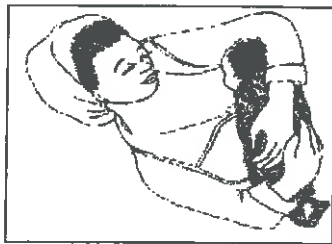
[illegible]

HEALTH PROMOTION MESSAGES

Up to 6 months

Feeding:

- Breastfeed exclusively (give infant only breast milk and no other liquids or solids, not even water, with exception of drops or syrup consisting of vitamins, mineral supplements or medication);
- Breastfeed as often as the child wants, day and night;
- Feed at least 8 to 12 times in 24 hours;
- When away from the child leave expressed breast milk to feed with a cup;
- Avoid using bottles or artificial teats (dummies) as this may interfere with suckling, be difficult to clean and may carry germs that can make your baby sick.



Why is exclusive breastfeeding important?

- Other foods or fluids may damage a young baby's gut and make it easy for infections (including HIV) to get into the baby's body;
- Decreases the risk of diarrhoea;
- It decreases risk of respiratory infections;
- It decreases risk of allergies;

If you have chosen to formula feed your baby, discuss safe preparation and use of formula with the health care worker

Play:

Provide ways for your child to see, hear, feel, and move.
Have colorful things to see and reach

Communicate:

Look into your child's eyes and smile at him or her
Talk to your child and get a conversation going with sounds or gestures.



HEALTH PROMOTION MESSAGES

6-12 months

Feeding:

For all children start complementary foods at 6 months

- Continue breastfeeding;
- Always breastfeed first before giving complementary foods;
- Start giving 2-3 teaspoons of mashed dried beans and/or locally available animal foods daily to supplement the iron in the breastmilk. Examples include egg (yolk), minced meat, fish, chicken/chicken livers, mopani worms. Give soft porridge, vegetables and then fruit;
- Gradually increase the amount and frequency of feeds.
- Children between 6-8 months should have two meals a day. By 12 months this should have increased to 5 small meals per day, whilst frequent breastfeeding continues;
- Offer your baby safe, clean water regularly;
- If the baby is not breastfed, give formula or at least 2 cups of full cream cow's milk (cow's milk can be given from 9 months of age)



Play: Give your child clean household things to handle, bang and drop.



Communicate:

Respond to your child's sounds and interests. Tell your child the names of things and people.

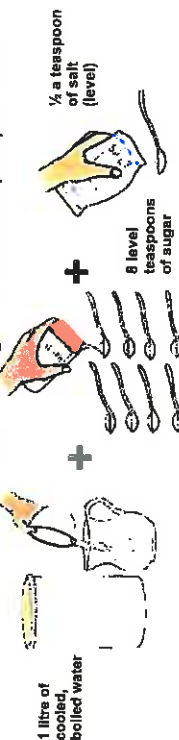
Encourage feeding during illness

Suggest an extra meal a day for a week after getting better

Feeding recommendation for DIARRHOEA

- Follow feeding recommendations for the child's age, but give small frequent meals (at least 6 times a day);
- Give a sugar-salt solution (SSS) in addition to feeds. Give SSS after each loose stool, using frequent small sips from a cup (half cup for children under 2 years and 1 cup for children 2-5 years). If the child vomits, wait for 10 minutes then continue, but more slowly

How to prepare a sugar-salt solution (SSS) at home



Fill in this section if infant is HIV exposed									
6 week visit									
What feeds has the infant received? <input type="checkbox"/> Exclusive breast <input type="checkbox"/> Exclusive formula <input type="checkbox"/> Mixed feeding									
HIV PCR test done? Date:		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Affix NHLS tracking barcoded sticker here					
Cotrimoxazole started?		<input type="checkbox"/> Yes	<input type="checkbox"/> No						
Infant feeding discussed?		<input type="checkbox"/> Yes	<input type="checkbox"/> No						
Has the child received Nevirapine?				If yes: <input type="checkbox"/> Stop now <input type="checkbox"/> Continue					
Stop Nevirapine if the mother is on life-long ART or the child has stopped breastfeeding. If not, continue until breastfeeding stops									
10 week visit, or earlier if ill									
PCR result		<input type="checkbox"/> Positive <input type="checkbox"/> Negative							
Post test counseling done?		<input type="checkbox"/> Yes <input type="checkbox"/> No							
Referred for ART?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Stop Nevirapine if PCR is positive					
Cotrimoxazole given?		<input type="checkbox"/> Yes	<input type="checkbox"/> No						
Has child received Nevirapine?		<input type="checkbox"/> Yes <input type="checkbox"/> No		If yes: <input type="checkbox"/> Stop now <input type="checkbox"/> Continue					
Encourage a mother whose baby is HIV positive to continue breastfeeding									
Retest HIV negative children 6 weeks after cessation of breastfeeding, or if clinical suspicion.									
An HIV exposed child should be retested with a rapid HIV Antibody test at 18 months									
Repeat PCR test Date:		<input type="checkbox"/> Positive <input type="checkbox"/> Negative	HIV antibody test Date:		<input type="checkbox"/> Positive <input type="checkbox"/> Negative				
Post test counseling done?		<input type="checkbox"/> Yes <input type="checkbox"/> No							
Referred for ART		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Stop Nevirapine if PCR is positive					
Cotrimoxazole given?		<input type="checkbox"/> Yes	<input type="checkbox"/> No						
Has child received Nevirapine?		<input type="checkbox"/> Yes <input type="checkbox"/> No		If yes: <input type="checkbox"/> Stop now <input type="checkbox"/> Continue					
Tick if there is additional information on HIV status in clinical notes <input type="checkbox"/>									

VITAMIN A SUPPLEMENTATION					
	At age	Date given dd/mm/yy	Signature	At age	Date given dd/mm/yy
200 000 IU Mother at delivery (not later than 6-8 weeks)					
	6 mths	/ /			
	12 mths	/ /		42 mths	/ /
	18 mths	/ /		48 mths	/ /
	24 mths	/ /		54 mths	/ /
200 000 IU every 6 months	30 mths	/ /		60 mths	/ /
	36 mths	/ /			
	ADDITIONAL DOSES:				
For conditions such as measles, severe malnutrition, xerophthalmia and persistent diarrhoea. Omit if dose has been given in last month.					
Measles and xerophthalmia: Give one dose daily for two consecutive days. Record the reason and dose given below.					
Date	Dose given	Reason	Signature	Date	Dose given
DEWORMING TREATMENT (Mebendazole or Albendazole)					
Dose	At age	Date given dd/mm/yy	Signature	At age	Date given dd/mm/yy
	12 mths	/ /		18 mths	/ /
	24 mths	/ /		48 mths	/ /
	30 mths	/ /		54 mths	/ /
	36 mths	/ /		60 mths	/ /
	42 mths	/ /			

NEONATAL INFORMATION			
Birth weight:	Birth length:	Head circumference at birth:	
Gestational age (weeks)	Rh factor	Mother's RPR	
Antenatal (Maternal history):		Intrapartum (including mode of delivery)	
APGAR	1 min	5 min	
Neonatal problems: (identify high risk problems):			
Neonatal Feeding: <input type="checkbox"/> Exclusive breast <input type="checkbox"/> Exclusive formula			
Special care plan / input required (e.g. Kangaroo Mother Care)			
Specify:			
Post-discharge plan (if baby was admitted in a neonatal ward/premature):			

PMTCT/HIV INFORMATION

Child's first name and surname:

Child's ID Number:

Signature of consent:

Date:

Fill in this section on discharge from Midwife Obstetric Unit (MOU) or obstetric ward or at first subsequent visit if not yet done

Mother's latest HIV test result

Positive

Negative

To be done

When did mother have the test?

☐ Before pregnancy

☐ During pregnancy

☐ At delivery

Is the mother on life-long ART?

Yes

No

If yes, duration of life-long ART at time of delivery

☐ < 4 weeks

☐ > 4 weeks

☐ Before pregnancy

Document ARVs the mother received:

Did the mother receive infant feeding counseling?

Yes

No

Decision about infant feeding

☐ Exclusive breast

☐ Exclusive formula

Document Nevirapine given:

All HIV exposed infants should receive Nevirapine for a minimum of 6 weeks

Has the mother disclosed to anyone in the household?

Yes

No

Has the mother's partner been tested?

Yes

No

Remember to offer testing for all the mother's other children if not yet done

Offer a mother with unknown HIV status a rapid HIV test.

If mother's HIV rapid test is positive, perform an HIV DNA PCR test on infant if $\geq 6/52$

DETAILS OF CHILD AND FAMILY (To be completed at birth)

Child's first name and surname:									
Child's ID number:		<div> <div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div> </div>							
Mother's ID number:		<div> <div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div> </div>							
Date of birth:		dd	mm	yyyy	Name of facility where child was born:				
Child's residential address:									
Mother's name:		Mother's birth date:							
Father's name:		Who does the child live with?							
How many children has the mother had (including this child?)									
Number born (including stillbirths)		Reason (s) for death (s):							
Number alive now		Date information given: dd / mm yyyy							
Child in need of special care (mark with X) (Complete at delivery or at first contact with health services)									
Is the baby a twin, triplet, etc?		Yes	No	Does the mother need additional support to care for the child? (Specify)		Yes	No		
Any disability present (including birth defects?) (Specify)		Yes	No	Other: (Specify)					
Stamp of facility and name and signature of official who issued booklet									

Stamp of facility and name and signature of official who issued booklet

ROAD TO HEALTH

IMMUNISATIONS

IMMUNISATIONS						
Name and surname:		ID number:				
Age group	Batch no.	Vaccine	Site	Date given dd/mm/yy	Signature	
Birth		BCG	Right arm			
		OPV0	Oral			
		OPV1	Oral			
		RV1	Oral			
6 weeks		DTaP-IPV-Hib1	Left thigh			
		Hep B1	Right thigh			
		PCV 1	Right thigh			
		DTaP-IPV-Hib2	Left thigh			
10 weeks		Hep B2	Right thigh			
		DTaP-IPV-Hib3	Left thigh			
		Hep B3	Right thigh			
		PCV2	Right thigh			
14 weeks		RV2	Oral			
		Measles1	Left thigh			
		PCV3	Right thigh			
		DTaP-IPV-Hib4	Left arm			
9 months		Measles2	Right arm			
		Td	Left arm			
		Td	Left arm			
18 months						
6 years						
12 years						

HEAD CIRCUMFERENCE AT 14 WEEKS AND AT 12 MONTHS

14 Weeks: _____ (Range: 38 - 43 cm) **12 Months:** _____ (Range: 43.5 - 48.5)

REFER if head circumference is outside range

ROAD TO HEALTH

WELL CHILD VISITS - RECORDING SHEET FOR CHILDREN

Record the following information for each visit on the spaces that are not shaded. Refer to the page numbers given in this booklet and complete the relevant section.										
Remember to check the following details on the relevant page										
Date of next visit										
Age	Date	Growth (IMCI) (page 14)	PMCT/HIV status (IMCI) (page 7&8)	TB status (IMCI)	Feeding (EBF/FFF/mixed for first 6 months)	Immunisations (page 6)	Vitamin A (page 9)	Deworming (page 9)	Development (page 13)	Oral Health (page 20)
3-6 days										
6 wks										
10 wks										
14 wks										
4 mths										
5 mths										
6 mths										
7 mths										
8 mths										
9 mths										
10 mths										

ROAD TO HEALTH

ROAD TO HEALTH											
Age	Date	Growth (IMCI) (page 14)	PMCT/HIV status (IMCI) (page 7&8)	TB status (IMCI)	Feeding (EBF/FFF/mixed for first 6 months)	Immunisations (page 6)	Vitamin A (page 9)	Deworming (page 9)	Development (page 13)	Oral Health (page 20)	Date of next visit
11 mths											
12 mths											
14 mths											
16 mths											
18 mths											
20 mths											
22 mths											
24 mths											
30 mths											
36 mths											
42 mths											
48 mths											
54 mths											
60 mths											
72 mths											
12 yrs											

ROAD TO HEALTH BOYS

Date of Birth:[illegible]

FREE OF CHARGE

Transcription of *actA*

Abstract

Health, Stability,

10

health

Department:

health

REPUBLIC OF SOUTH AFRICA

CPA PMB W/ 1215028

241

Diarthoea with blood

Appendix 11: Letter from the language expert

W 447Umlazi Township

P.O. Umlazi

4066

15 October 2014

19 Berkshire Dales, 51 Berkshire Drive

New Germany

3610

Dear Sir/Madam

**A VERIFICATION LETTER FOR INFORMATION LETTER
TRANSLATION.**

I Lungile Ladyfair Dlamini hereby confirm that I have done all translations from English to isiZulu. Namely, the information letter for adult patients to have their charts checked and for mothers to have their children's immunisation charts checked for research.

Thank you


Ms L.L. Dlamini

Further Diploma in Education (FED (UNITRA), Seniors Teachers Diploma (STD (UNITRA) and Bachelor of Education Honours (B.ED UKZN Westville).

Appendix 12: Structured observation tool

Date: 06.11.2013

Facility Code: NBI

Municipal/KZN - N

(1)

N O	ACTIVITY / EVENT	PERFORMED			PERFORMED		
		No 0	YES 1	N/A	No 0	YES 1	N/A
1.	Users called out from general queue.		✓			✓	
2.	Is there someone in attendance all the time at this point?		✓			✓	
3.	Is there relief personnel at tea break?			✓			✓
4.	Is station left unattended for more than 5 minutes?	✓			✓		
5.	Users are fast tracked?		✓			✓	
6.	Users told they will be in the Fast Queue Service Point		✓			✓	
7.	Vital observations conducted before consultation;	✓				✓	
						✓	
						✓	
						✓	
8.	User does not come back from consulting room for observation	✓			✓		
9.	Personnel communicate to users about FQSP	✓			✓		
10.	Specific queue available for these users		✓			✓	
11.	There is a dedicated PHC personnel for this service Point		✓			✓	
12.	Users are spoken to politely if they ask questions		✓			✓	
13.	Other						

Appendix 13: Record review tool for adults

Facility: **MC2** Date: **20.12.13** Municipality/KZN: **M** Key: Yes: 1 No: 0 N/A

U S E R	Age	Gender	Diagnosis	WT	BP	BS	LDL	LDL	PEER	How user feels	Lifestyle Modifi- cation	Presence of Complications	Presence of Side effects	Correct Prescription	Referral	Book next visit
1	39yrs	M	TB	1	114	2/4	2/4	2/4	2/4	1	0	1	1	1	2/4	1
2	36yrs	F	Asthma	0	NA	2/4	2/4	0	0	0	0	0	0	1	2/4	1
3	49yrs	F	HPT/AIDS	0	1	2/4	0	0	2/4	1	0	1	1	1	2/4	1
4	68yrs	F	HPT/DM	0	1	1	0	2/4	2/4	0	0	0	0	1	2/4	1
5	47yrs	M	AIDS	1	2/4	2/4	2/4	2/4	2/4	1	0	1	1	1	2/4	1
6																
7																
8																
9																
10																

Appendix 14: Record review tool for children

Facility: **MA3**

Date: **18.12.13**

Municipality/KZN **M**

Key: Yes: 1 No: 0 N/A

C H I L D	Age	Gender	Wt	Wt Plot ted	IMCI classification			Feeds	Immunisation Given		Side Effects To expect	Manag ement of side effect	Prophylaxis		Mile stones	Oral Health	Next visit
					growth	PMCT/ HIV status	TB status		Date	Batch No			Vit A	De worm			
1	9/12	M	9.4kg	1	0	1	0	1	1	1	0	0	1	N/A	1	N/A	1
2	14/12	F	13kg	1	0	1	0	1	1	1	0	0	1	1	0	0	1
3	5/12	M	8.6kg	1	1	1	1	1	1	1	0	0	N/A	N/A	0	N/A	1
4	18/12	M	10.1kg	1	1	1	0	0	1	1	0	0	1	1	1	0	1
5	8/12	M	10.7kg	1	0	1	1	1	1	1	0	0	1	N/A	0	N/A	1
6																	
7																	
8																	
9																	
10																	

Appendix 15: Completed anonymised interview

Participant 3: Age 43yrs Category: Clinic Manager Gender: F Experience: 20yrs
Facility: NB1

1. What is the purpose of the Fast Queue Service Point? To identify and treat patients that need immediate attention, and those that are coming regularly to the clinic like chronic patients, Family Planning, and Immunizations. **Purpose** But we allow staff to use their discretion because they are faced with health care users when we are not there. They also need to plan what is going to work best on the day depending on the available staff.

2. Briefly describe this service point. Patients are first seen by the clerk who takes their details and gives them their cards, together with all other patients. They then go for checking of vital signs, weight, blood sugar /blood pressure whichever applies and urine tests. **Process** It is divided according to what the patient came to do e.g. FP, TB, ARVs, HPT, DM and Immunization. Sometimes if the clerk is not at work the ENA takes over this duty and it becomes a challenge who is going to carry out observations of vital signs, that is why sometimes they are not done. **missing checking vital obs.**

3. What does a consultation for these patients entail? Professional nurses must check if vital signs are within normal limits, **if BP is not too high or blood sugar not too high and manage accordingly or refer to Doctor or hospital** They issue them their chronic medication unless the user has complaints. **Involvement of PNs**

I saw patients with high BPs who were issued with medication as usual: For some patients it is normal for them to have elevated blood pressure they were referred from hospital like that, the PNs accept that as their normal BP. **Lack of referral**

4. What is your core function in this service point? My core function is to allocate staff and make sure that all areas of the clinic are well staffed as required by the service. I have to make sure that the fast queue is fast, so I allocate an ENA to check vital signs and a professional nurse to consult. I also make sure that medication is available all the time for these patients. **With the increase in the programmes and more responsibilities on professional nurses like initiating ART sometimes you have skeleton staff in different programmes.** **What happens in the Fast Queue service when you have skeleton staff?** It becomes very hard because there is no pool of staff for relief purposes; I juggle around those that are available. **Then what happens to the Fast Queue service?** On some days it is not fast because there is only one professional nurse for instance.

5. What support do you get in this service point? I get support from the staff, because sometimes they organise themselves if the clinic is too busy. They know who can work better in TB, or ART clinic.

What kind of support do you give them? I think by allowing them to be creative about how they man the clinic I am supporting them because they are at the cold face of the clinic they know what works better and what does not. They are professional nurses they know what they are doing.

How do you ensure quality care for these patients?: The problem is that supervision is not possible. Even the clinic supervisor comes in to collect reports and statistics. Lack of supervision. As a clinic manager one is doing office work every day for the whole day. Most of the time I have to take work home and do some during weekends. There is so much to write for us clinic managers. When people from national come to check on National Core Standards, they want to see what you have written for the clinic and you are judged on that. Even my supervisor wants reports, statistics, and performance appraisal for staff. Too much writing. When I complain she tells me that is what is required from her to produce, otherwise she would not be doing her work properly. As a manager I hardly get time to even do chart reviews. To top it all there are so many new programmes where nurses have to work alone with very sick patients. It is sometimes too much for them.

What does your manager say about supervision? She knows I hardly have time for it because she also cannot manage to do supervisory visits in her clinics. Lack of clinic supervision from manager and supervisor.

What then do you think of the quality of care in your facility? It is not at a standard that I would like it to be, but I must say that the staff is trying their best. I am satisfied except for days when staff is absent from work. **Where would you like it to be?** I would like to have everything that is supposed to be done on Fast Queue users and all the health talk that is required to be done. **What are you doing to get it to where you want it to be?** Without staff my hands are tied. If staff equals the number of programmes in the clinic life would be so much easier. **What does your supervisor say about this?** The very same thing that I have just told you, that she cannot get staff. **Who is responsible for staffing?** I forward my staffing requirements to the supervisor who also forwards it and I know that HR is involved, but most times we do not get a response we just wait to hear from them I do not know how they determine to give us staff.

As a manager what is your plan about this: I think I am going to resign I cannot continue like this. I am going to go to a place with better staffing or even overseas. Reason for staff exodus.