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Title: Exploration of the underlying causes of high waiting times at a community health centre in Cape Town, South Africa

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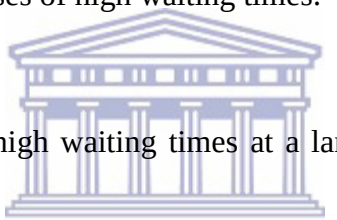
ABSTRACT

Introduction

At public sector health facilities in Cape Town, South Africa, patients experience very high waiting times, with a medium waiting time of 3 hours which prevailed at the study facility being common. So the question arose as to why waiting times are so very high and what could be done to reduce them? While for the facility under investigation the immediate causes of the high waiting times were known, the underlying causes were quite opaque. A concern expressed therefore, was that if the underlying causes were not uncovered then efforts to reduce waiting times might not be successful, as they would just address the immediate causes. The legitimacy of the concern derives from the view that if underlying causes are not addressed, then they will continue to exert an influence on the immediate causes, and therefore perpetuate the environment which creates fertile ground for immediate causes to arise and persist, with resultant persistence of high waiting times. Hence, my interest to undertake research to explore the underlying causes of high waiting times.

Aim

To explore the underlying causes of high waiting times at a large community health centre in Cape Town.



Methodology

The research followed a qualitative explorative study design because the nature of the research was an open-ended investigation. There were 2 study populations, namely patients who regularly utilise the service and permanent frontline staff. The sampling type used was purposive and the sample size included 11 patients who were interviewed and 15 staff who were engaged via 4 focus groups of varying size. The in-depth interviews of patients were conducted using broad open-ended questions with follow-on probing, while the staff views were captured within focus groups using opening/guiding questions. By following a thematic analysis approach the link between various immediate causes and the underlying issues thought to give rise to them, were explored. Participation in the study was voluntary following informed consent and full confidentiality was assured for the interviews with small group confidentiality imbued within the focus groups. Rigour in the study was maintained via a clear documented methodology, transparent reflexivity, respondent validation and triangulation.

Results

The study found a number of potential underlying causes for each immediate cause of high waiting times at the facility. The immediate causes were batching, mismatch, inefficiency, illogical queuing and logistical problems. The underlying causes as to why batching occurs early in the morning included, patients belief that they would be attended to quickly if they arrived early; the fear of not being attended to on the day; non-adherence to the appointment system; the patients' concern about repercussions if they are late for an appointment; the cultural principle of not wanting to be late; work related logistical reasons; the staff's preference for purposefully causing batching in order to make work processes more efficient; transport challenges faced by patients and their expectation of a reward for being early. The underlying reasons given by patients and staff as to why a mismatch occurs included, very early arrival of patients; early morning staff meetings; staff taking lunch (and tea) breaks simultaneously and some service point staff not being present throughout the day. The underlying causes for inefficiency included the belief that staff has 'authority issues' and a poor work ethic, and a power differential between staff and patients. The key underlying causes of queuing expressed, were the belief that favouritism influences queuing, mispronunciation of names, high levels of noise, signage problems and the unfamiliarity of the queuing procedures. Underlying causes of logistical problems uncovered were the unavailability of consulting rooms, missing folders and missing laboratory results.

Conclusion and Recommendations

In summary, the underlying causes for high waiting times gleaned from a patient perspective included very early arrivals, the fear of being turned away, work and transport issues, appointment system challenges, cultural beliefs, a reward expectation for being early, uncertainty about the queuing procedures, mispronunciation of patient names, high levels of noise, misplacement of their folders, missing laboratory results and signage problems. The underlying causes for high waiting times from staff members' vantage point, included their deliberate batching of patients for efficiency, lunch and tea breaks not staggered, morning staff meetings, service points intermittently unattended and displays of power over patients. The key recommendations to contemplate would be to discontinue the practise of turning patients away, decreasing appointment bookings for known busy times, extending the opening hours and holding meetings at less busy times.

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God Bless!

DECLARATION

I, Russel Norton Piquer, hereby declare that the work on which this dissertation is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

I empower the university to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever.

Signature: *R. Piquer*

Date: 7 December 2017

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LIST OF ABBREVIATIONS

DAAD – Federal Ministry of Education and Research

DOH – Department of Health

HAST – HIV, AIDS, Sexually transmitted diseases and Tuberculosis

HIV – Human Immunodeficiency Virus

HNU - Hochschule Neu-Ulm

KEMU - Kenya Methodist University

MHIM - Master in Health Information Management

OPD – Outpatient Department

PHC – Primary Health Care

UWC - University of the Western Cape

WTS – Waiting Time Survey

CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION

The phenomenon of high waiting times at public health facilities remains an intractable problem in the Western Cape. Vallabhjee (2011), cited in a broad policy document outlining the vision for healthcare in the Western Cape by 2020, notes that high waiting times remain a major challenge at many health facilities in the Western Cape Province, South Africa. According to an article released by the Western Cape Government on waiting times, high waiting times and long queues, together with unacceptably rude staff form the bulk of patient grievances and culminate in poor patient experiences at public health facilities (Western Cape Government, 2013). Also, bottlenecks at some service points at certain health facilities indicate poor management and needs urgent attention. Stories of high waiting times at different facilities within South Africa are widespread, as illustrated by various media reports. In 2013, an Eastern Cape province daily newspaper, 'The Dispatch Online' reported that pharmacists complained about unbearable working conditions caused by staff and medication shortages, that in turn resulted in long queues for patients waiting for their medication translating into high waiting times, with some patients reporting that they arrived before the pharmacy opened, waited a long time and yet did not obtain the medication they required (IOL News, 2013).

Further up the north east coast of South Africa, in the province of KwaZulu-Natal, patients lamented about their long and fruitless wait for medicine at a public health facility (IOL News, 2009). Patients at the specific hospital complained that they waited a long time to get their much-needed medication, with some despite having started queuing for it as early as 4am, not receiving their prescribed medication. This was further exacerbated when doctors continued writing scripts for patients to get medication and the backlog continued to get worse. Many of the problems were blamed on the recent worker strikes that occurred earlier in the year and since then some claim that they have been experiencing serious problems when it comes to dispensing medication.

The latest 'client satisfaction survey' 2016/2017, which is a routine survey carried out annually at public health facilities, revealed that 87 per cent of patients were happy with their treatment from doctors, while 88 per cent were pleased with nurse's attitudes, but 76 per cent felt that they waited too long to get their folders and medication (Western Cape Department of Health, 2017). In Cape Town, a 'waiting times survey' showed that long queues and poor staff attitudes were the greatest irritants to patients at state health facilities (Western Cape Department of Health, 2011a). While a complaints analysis from the 'client satisfaction survey' showed that two-thirds of patients dreaded long queues and almost 30 per cent were unhappy with staff attitudes towards them (Western Cape Department of

Health, 2011b).

Needless to say, the negative consequences of these high waiting times, are patients who are disillusioned, angry, frustrated and these patients then equate high waiting times with poor quality of care, irrespective of whether they received good health care at the time of their visit or not. These deleterious patient experiences will be the same wherever one attends a public health facility with high waiting times, thus portraying a poor image of the public health services in general.

A study by Arries (2008) confirms, outpatients draw their own conclusions about the quality of service provided based on their experiences of actual services received, and by the time they had to wait to receive it. As patients appraise the quality of service they receive from public health facilities, it is therefore important to measure waiting times of the consumers of health care, because it is indirectly measured by the aforesaid surveys. Dhar, Michel & Kanna (2011) in their research put forward that surveys indicate that excessive waiting time is often the major reason for patients' dissatisfaction in outpatient services. While there were "no quick solutions" to the problems, literature shows there were several initiatives that had been launched which are aimed at improving staff attitudes and patient flow. Studies show, that improving waiting times can affect the health care system positively and can enable health departments to gain insights into the performance of health service provisions for both the users and providers (Dhar, Michel & Kanna, 2011; Reagon & Igumbor, 2010). It is also noted by Dhar et al., (2010), that Waiting Time Surveys (WTS) fundamentally measure the accessibility to services at a facility, as the time spent waiting translates into a barrier to accessibility.

Reagon & Igumbor (2010), further suggest that one way of strengthening health systems within any health facility context, could be through training of health care providers in the conduct of routine Waiting Time Survey (WTS). They further state, that the effective functioning of health systems is reliant on good quality information being available for decision-making and hence information generated by a WTS detailing the lengths of waits and the causes of long waits at service points are indispensable information for those wishing to effectively reduce waiting times. Reagon and Igumbor (2010) mention that there are 8 possible immediate causes of high waiting times which are batching/ inappropriate arrival patterns, a mismatch, lack of efficiency, queuing problems, a logistical problem, flow problems, high workload and high service times. Batching is considered an inappropriate arrival pattern because patients are arriving at the same time in big batches. Batching usually occurs at the reception of the facility when health workers collect many folders at a time to process. Mismatch happens when patients arrive to be attended to, but staff are not at that particular service point because they are conducting other activities such as possibly some community outreach activities, meetings, administration, lunch, tea breaks, or for other diverse reasons. This could also occur before the opening

time of a particular service point when patients arrive before the staff does. Inefficiency transpires when patients are not sufficiently attended to although staff members are present at the particular service point, but they are busy with other duties such as administrative work, or preparation work. This could mean that the staff are not prioritising attending to the patients. Queuing problems come about when patients are attended to by staff in an illogical order, i.e. the patients are not attended to in the order that they arrive at the service point. Meaning those patients who arrive first are not seen first, but have to wait while the others are seen before them. Illogical queuing does not typically affect the overall average waiting time even though it has a large effect on individual patient waiting times. It may however affect the average/median waiting time if large numbers of patients are permitted to "jump queues". This however should be distinguished from "logical queue jumping" or "fast-tracking" where certain patients, e.g. patients in need of emergency care or a specific type of service is placed ahead in the queue. Logistical problems take place when the patients are waiting to be attended to and staff are available to see patients, but owing to a lack of equipment, rooms or other logistical essentials, the staff are incapable or powerless to attend to the patients. Flow problems typically occur when staff are available to see patients and patients are at the facility, but they are being delayed at some other service point. A high workload would occur if staff are overworked, then patients have to wait longer as staff have too many patients to attend to. And lastly, an inappropriately high service time for a particular service point, results in higher waiting times for the other patients waiting in the queue behind those patients receiving care at that service point.

High waiting times is not a unique South African problem, but indeed a worldwide phenomenon and there are many different reasons why it arises and persists, with a unique combination of these varied reasons prevailing in any one context. (Bamgboye & Jarallah, 1993; Shaikh, 2005; Ahmad & Dun, 2010; Cao & Pillay, 2011; Dinesh, 2013)

1.2 SETTING

The facility at which this study was conducted is located in a large suburb with some formal but mainly informal dwellings, situated in Cape Town, South Africa. It also supplies services to people from other smaller close by suburbs with mainly formal housing and many different types of industries. Because of the work opportunities being created by rapidly expanding industries in the area over time many shacks (informal dwellings) mushroomed in an adjacent informal settlement, which grew larger over time and with the provision of basic services developed into a suburb in which formal houses were constructed alongside the informal dwellings. The suburb has no police station, with the nearest

being about 5km away. The area initially had a rudimentary clinic which was housed in a small building with several containers on the premises, offering primary health care (PHC) services. The clinic staff rendered services under adverse conditions and staff and the community wished for a larger better equipped facility within which a high standard of care could be provided.

To be able to follow the evolution of the clinic it is vital to understand the events that led to the building of this infra-structure, hence it is appropriate to trace the beginnings. In 2003, the facility started to function as a small satellite clinic within temporary structures. All services were rendered in this structure but due to lack of space, bad light, inadequate ventilation and the sheer volume of patients, it became impossible to render all the services in this structure. In 2004, a non-governmental organization was approached to render HIV services on this site and these services commenced in August of that year. These services were conducted in a temporary container that was previously used as a voting station during the South African 2004 general elections, which was handed over to the health department for utilization at the facility, to assist with the ease of flow of the patients. All the same, by 2006 it was realized that the two structures were not sufficient to cope with the daily activities and the additional staff used to render the services. In September 2007, with the volume of patients swelling, it was projected back then that if the average increase per month continues to grow at the same rate, that by end of March 2009 the facility will have over 1000 patients in care (Western Cape Department of Health, 2011c). There was no space at this site to add any more staff or more infrastructures to accommodate the increased staff needed. As a result of the area growing in size the clinic became too small to service all the users from the drainage area and the surrounding areas. In December 2009 the Cape Argus newspaper had an article that alluded to a health official that called for construction of a fully-fledged community health centre to be fast tracked before the area's poverty-stricken community embarks on protest action. With the community frustrated at the slow rate of progress to offer adequate health services, tensions grew within the community which inevitably led to protest action and several incidents of violence were reported (Cape Argus, 2009).

In 2011, the Strategic Development Information and GIS Department of the City of Cape Town (SDI & GIS, CCT) using the 2001 census dataset from Statistics South Africa, did a census of suburbs and the population for this particular area, and at that time it comprised of 31 133 people living in 11 496 households, while it also had three schools (two primary and one secondary) (City of Cape Town, 2011). In 2012, the health department opened a transitory facility in the suburb, to deliver better PHC services to the growing population of the area. There were several services offered that included reproductive healthcare, HIV, sexually transmitted diseases and tuberculosis care, and all these services

were offered free. The construction of the new community health centre (CHC) was commissioned in December 2014 and replaced the transitory facility, which serviced a population which had grown to approximately 120 000. But, based on projections in the pre-planning stage, it was estimated that on a normal day, 750 patients could visit the facility and 180 would be patients just collecting chronic medication (Western Cape Department of Health, 2011c). All the same, the new facility offers a considerably greater mix of services in a new and much bigger facility and as a result can attend to a much broader base of clients than the foregoing smaller and temporary facility. The new PHC facility's greater mix of services offered, includes PHC services such as HAST, child health, women's health, chronic health care, pharmacy and rehabilitation services to the drainage area. The facility employed 80 staff at the time of the survey with the bulk of the workforce being nurses. The surrounding communities are primarily low socio-economic income groups, while there is also a small section of the community that is middle income earners. Several informal housing units are situated in the backyards of formal houses and they usually have no basic services such as piped water or flushing toilets, even though some have an unreliable electricity supply. While the largest section of the community in the drainage area of the facility is from the immediate township, it also services the communities from three informal settlements located within a radius of 10 kilometres, as well as three other developed suburbs within the same radius (Western Cape Department of Health, 2011c).

High waiting times were known to be experienced by the patients at the new facility before a survey, called a waiting time survey (WTS), was conducted in 2015, but more importantly, it was not known exactly how long they were waiting and therefore it was warranted to determine the exact waiting times. Predictably, the WTS conducted in August 2015 (Piquer, Caesar & Reagon, 2015); found that patients do experience high waiting times. With the median waiting time for a complete visit to the facility (which is the sum of the waiting time for all services received such as reception services, clinician services, pharmacy services, etc.) being 124 minutes, while the median service time was 17 minutes. Based on a previous feedback workshop, the median times were greater than what the patients and staff regarded as acceptable because their acceptable times were 60 minutes and 76 minutes respectively. It was also noticeable that the 17 minutes of service time was inconsistent in proportion to the waiting time of 126 minutes. The WTS report not only documented the total waiting time at every service point, but it also discovered the different immediate causes of high waiting times at each service point. The results thus indicated that high waiting times were experienced at most service points and the duration of waiting times at the facility and the immediate causes of high waiting times were identified.

A total of 612 patients had their waiting times recorded and assessed on an average day within an average week. Their waiting time was assessed in the following manner: Their arrival and departure times were recorded by fieldworkers and at every point at which these patients received a service, the times were recorded by the staff who attended to them. Staff completed a staff time-sheet which tracked the time they spent at the service points they worked at from the time they arrived at the facility till the time they departed. Patients were also asked questions on departure about their experience at the facility and staff completed a short questionnaire about logistics and equipment, and their opinion was asked about suitable waiting times for patients. The sum of the service time and waiting time at all the service points attended by a patient then calculates to the total waiting time and total service time respectively for that patient.

Of the previously stated 8 probable immediate causes of high waiting times, 5 were revealed to exist at several service points in the study facility. These immediate causes of long waiting times at these service points at the facility, were, according to the classification system proposed by Reagon and Igumbor (2010): patients arriving at the same time in big batches (batching); patients arriving at a time when the service point they were visiting was not open (mismatch); staff choosing to perform other activities rather than attending to patients even though patients are waiting (lack of allocative efficiency); patients waiting for very long periods because they are not seen in the order in which they queued with many patients who arrived after them being seen before them (illogical queuing); and staff being available to attend to patients but unable to do so as the required equipment, or folder, or room is not available to do so (logistics problem). These high waiting times would remain unless changes in the way services are provided occur.

The key question is what information, insight and evidence is needed to address the general problem of high waiting time at the setting, or how can the research aid the resolution of high waiting time. There were many changes done by other public health facilities, to alleviate some of the immediate causes of high waiting times, however, many of the high waiting time concerns still persists. Harper and Gamlin (2003) found in their study that steps undertaken to reduce waiting times by improving the appointment system at ‘ear, nose and throat out-patient clinics in the United Kingdom, resulted in most patients arriving before their appointment time. These participants experienced long waiting times because they arrived up to an hour early for their scheduled appointment and this led to more than half of the patients experiencing longer waiting times, due to arriving too early for their appointment. They concluded that although they had addressed an immediate cause of patients arriving early, by giving specific time appointments to those who previously arrived early, they had not addressed why patients

arrived early and hence their intervention had been unsuccessful. It was anecdotally thought, but not properly investigated, that the probable notion held by patients could be their optimism of being helped sooner, even though these patients' chances of being helped earlier were very small, and hence they arrived earlier. Therefore, one can assume that this behaviour pattern will continue to persist whereby patients arrive very early, causing a batch early in the morning, and continually experiencing longer waiting times, unless their actual reason for arriving early is addressed. Hence addressing immediate causes only, might not resolve the problem causing the high waiting times, but instead one needs to dig deeper and uncover and then appropriately address the underlying causes of the particular immediate cause. Similarly, Reagon and Igumbor (2010) in a large study in Cape Town found that in all 120 clinics and health centres surveyed, that high waiting times were consistently linked to a lack of appointment times being given to repeat visit patients (patients were given an appointment date on which to return, but were not given an appointment time for that date), who then by default arrived early at the facility competing with walk-in patients who typically also arrived early, which resulted in a flood of patients arriving at facilities in large batches in the early hours of the morning. They then suggested a generic recommendation of providing appointments, but cautioned that it might be an insufficient degree of intervention, as the reasons why patients were not given specific appointment times were unclear and also whether patients desired and would adhere to specific appointments times, was unclear.

To address the concern of high waiting times at the facility therefore, as strongly hinted at above, one needs to investigate what the underlying causes of the immediate causes are, because to reduce high waiting times it is likely that one would need to address both the immediate causes and the underlying causes. Knowing the range of underlying causes would probably enable one to produce strategies to resolve these underlying causes, such that they are comprehensively addressed and then there might be a better likelihood of reducing the high waiting times.

Anecdotal based suggestions articulated by some staff on potential underlying reasons as to why patients arrive early, could be because of problems with transport logistics. However, at the study facility, transport challenges did not appear to be a problem, as the public transport system seemed good within the facility drainage area, with affordable low cost public transport being readily available. The facility is quite accessible because of its proximity on a main thoroughfare which links the communities to the facility. There are 3 major transport services the patients have access to, namely a number of privately-owned minibus taxis, a standard bus service and a municipal bus service, with the facility being a routine stopping point for minibus taxis and busses. The facility is also within easy

walking distance of the facility and it is relatively safe for the patients to walk. Hence, although transport logistics is posited as an underlying cause of arriving early, the likelihood of it actually being the case is unclear and warrants deeper investigation. Other potential causes of arriving early which could be explored include that patients with appointments might have the belief that they could be turned away, especially if they have witnessed this practise of turning patients away, and if some of these patients appeared to have appointments, then this might induce them to arrive early, despite having a set appointment time, as they might fear that this could happen to them as well, and because they probably also noted that those who arrive early are not turned away. But this as with the case regarding transport logistics is all speculative, and although based on anecdotal experience and insight, the actual underlying cause/s of arriving early needs to be elucidated.

Other possible underlying causes operative within public health facilities in Cape Town and hence possibly prevailing in the study facility, based on my own experience and that of several staff, are briefly illustrated below. A possible underlying cause of early morning mismatch is that patients arrive very early because they want to be seen first, thinking that this will decrease their waiting time, however they unfortunately then end up waiting very long due to the mismatch effect on waiting time. In informally engaging patients and via the formal complaints system, patients have articulated the belief that staff in general have a poor work ethic and have advanced the perception that certain staff are unnecessarily slow in attending to them. If this were prevalent behaviour by staff, then it would probably increase waiting time via impacting on the allocative inefficiency and high service times immediate causes.

Lastly, missing patient folders could cause high waiting times for patients as they would cause the immediate problems of logistics (because of the added time needed to look for the folder or the time taken to create another folder) and illogical queuing (as these patients are bypassed by clinicians who then attend to patients who arrived after them but do have folders). If the folder is not found and a new folder is necessarily issued, this causes further avoidable consequences, in that vital information such as laboratory results and previous care notes are not available for the clinicians, thereby inhibiting their ability to provide high quality care to the patient.

Given the above it would be desirable that thought should be given to the need to turnaround the deleterious effect of high waiting times, to allow for greater patient satisfaction and better perceived and real quality of service delivery in the study facility. A key step on the path to realising this would be the elucidation of the contextual circumstances, patient behaviours, staff behaviours and the service

provision systems, which intertwine with the already identified immediate causes of high waiting times and are possibly acting as underlying causes of those immediate causes.

1.3 PROBLEM.

The PHC facility had high waiting times which many patients did not accept and the patients accordingly linked this to poor quality of care. Although the median duration of waiting and the immediate causes of the long waits were known based on the findings of the 2015 WTS report, this information was not sufficient to effectively deal with the issue (Piquer, Caesar, & Reagon, 2015). A waiting times survey provides valuable information which may possibly be used to offset the immediate causes of high waiting times and in this manner reduce the waiting times. However, there is a worrying likelihood that these solutions might be brief, because if one does not address what gave rise to those immediate causes in the first place, then shortly after the immediate cause corrective actions have been effected (and are hopefully successful), there is a strong possibility that there might be a steady move back to the situations which gave rise to the immediate causes in the first place. The underlying causes were not known and therefore recommended solutions would have to be based on immediate causes, which might not be sustainable. To ensure that sustainable solutions to decrease high wait times are likely to be implemented, it was therefore considered valuable to explore the underlying causes of high waiting times, as only then could one be sure that undertakings to reduce waiting times, would be successful and sustainable.

1.4 PURPOSE

The purpose of the study was to explore the underlying causes of high waiting times as it was thought to be a likely prerequisite for reducing waiting times. Moreover, it was my intention, that this could also improve staff morale and improve working conditions, with less stress of an overcrowded facility. Equally, patient dissatisfaction and antagonism due to high waiting time could be reduced and users would then be more patient to wait for a service, as they will possibly experience better overall patient satisfaction.The findings of this study could also be used to guide the facility to render healthcare services that are more patient-centred and increase efficiency in a context of scarce resources. Hence, direct presentation feedback will be given to the staff and management of the facility and a report will be made available to them and to the health department.

CHAPTER 2 LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, I review literature which deals with the effectiveness of change actions to reduce waiting times and also change actions taken to improve health services in general. The experiences of patients being subjected to the high waiting times is also be reviewed. Reducing patient waiting times has been the focus of a large number of research studies because waiting and treatment times are usually regarded as indicators of service quality. Hence, I look at the effectiveness of the implemented changes to improve health services and the effect it has on overall patient satisfaction. Therefore, as stated above, I examine what other research has been done on reducing high waiting times and the implementation of recommendations or changes to reduce high waiting times.

Dinesh et al. (2013) uses Six Sigma methods to accomplish the objectives of their research to reducing high waiting times. It shows how the results improve the quality of services carried out in the department of Cardiology of a large University Teaching Hospital in India with an average annual Cardiac OP of 40000. Firstly, Six Sigma is a business management strategy originally developed by Motorola, USA in 1986 and was associated with statistical modelling of manufacturing processes. A six sigma process is one in which 99.99966% of the products manufactured are statistically expected to be free of defects.

The term "six sigma processes" comes from the view that if one has six standard deviations between the process mean and the nearest specification limit; practically no items will fail to meet specifications. Their research was conducted on the basis of the six sigma methodology and they intended to reduce waiting times in the outpatient cardiology office. Substantial reduction in waiting time was attained in the outpatient services department by using the six sigma method. Besides the overall reduction in waiting time for consultation, a major reduction in waiting time for receiving the lab results was also attained. As an off shoot of the study, 9 new registration counters were started, registration forms were modified and ushers/queue marshals were appointed to guide patients. Extra staff was appointed to handle communications and were taught basic telephone etiquette. An alert system was put in place for patients waiting for more than one hour to monitor and control any inconsistencies. (Dinesh et al., 2013)

Their study show, using the six sigma methods, the continuous improvement approaches as well as the lean techniques, reduces high waiting times, and as batching is a common problem found in waiting

time surveys, the use of continuous flow to avoid batching by way of improving health care access, could be considered. The study shows that doing work as it occurs during the course of a health facility visit (e.g., doing capturing at the end of each visit) reduces the bottlenecks created by holding it for later in the day (batching). For example, some facilities save all data capturing, filing, etc., for the end of the day or session, and this is referred to as batching. With continuous flow, all work is accomplished as it presents itself and completed in one continuous action. Appointment times may need to be lengthened, or pauses placed in the schedule, to accommodate continuous flow in appointment scheduling. Therefore, continuous flow does not mean that time is added to the day, but that it is reallocated throughout the day. Doing tasks in parallel could also improve waiting times. Inflexible sequencing of tasks in a daily process means that a delay in any task stops the entire process. Parallel processing means that the overall process can continue even if one task or part of a task is delayed. Finally, the study says that to do parallel processing well requires some mechanism for team members to know that the essential elements of the work have been accomplished, and for this a check list would serve this need.

Another is by way of improving the flow of work and thus eliminating waste, ensures that the health facility runs as efficiently and effectively as possible. Some estimates show that up to 40 per cent of clinical admin work is redundant or otherwise wasted effort. Examples include staff taking messages and looking for a chart for a repeat phone call requesting a prescription refill, or preparing for a clinic visit and the patient doesn't show up for the appointment. This change idea addresses concepts aimed at improving work flow and recognizing and eliminating waste. Finding and removing bottlenecks is another method that can be adopted. A bottleneck is anything that restricts the throughput of patients into and through the clinic/health facility system. Bottlenecks occur when the demand for a specific resource (e.g., rooms, service providers, tests) or part of the system is greater than the available supply. If changes are made to improve parts of a system without addressing the bottleneck, the changes may not result in reduction of waiting times or delays in the system. It is often difficult to identify a bottleneck by evaluating the demand and the supply for each resource because these elements can be masked by constraints in other parts of the system. To identify the bottleneck, one needs to observe where the work is piling up, or where the queues are forming. By looking for certain signals within the system, such as places where material or information is in short supply, or where patients or staff is waiting, will help to identify bottlenecks. Many usually expect that the physician, clinician or pharmacist may be the constraint, but there may be other factors.

Lastly, health staff could create a reminder system for scheduled health care. As part of a certain

protocol to care for all patients (e.g., chronic care patients as well as all patients needing screening and preventive services), a reminder system can be used to trigger a specific care team/patient interaction. Automatic triggers that could be generated from the current electronic system could be very effective and the same concept can be used with manual systems. The triggering system will prompt staff to schedule some type of interaction (e.g., phone call, visit appointment, email communication, etc.) with the patient at a prescribed time. These are some the methods that can be considered and adopted to achieve the desired result of reducing the high waiting times in a facility.

There are of course many other directions to take in the pursuit of the objective. One of these is the psychology of waiting lines and the waiting experiences are researched by David Maister. Maister (2005) discusses the psychology of waiting lines and examines how waits are experienced. He quotes a well-known courier service that once stated; "Waiting is frustrating, demoralizing, agonizing, aggravating, annoying, time consuming and incredibly expensive." He emphasizes that the reality of this assertion cannot be repudiated because few clients of services in current society have not felt, at one time or another, each of the emotions identified by this statement. Moreover, each of us who could recall such experiences can attest to the fact that the waiting-line experience or more specifically experiencing high waiting times in any service facility, significantly affects our overall perceptions of the quality of service provided. As an example he says that waiting in ignorance creates a feeling of powerlessness, which frequently results in noticeable irritation and many a times rudeness on the part of patients as they harass health staff in an attempt to reclaim their status as tax paying clients. In turn, this behaviour makes it difficult for the health staff to maintain their equanimity.

Nevertheless, Maister also determines that once we are being served, our transaction with the service organization may be efficient, courteous and complete: but the bitter taste of how long it took to get attention pollutes the overall judgments that we make about the quality of the service. In addition to discussing the psychology of waiting lines and examining how waits are experienced, he attempts to offer in depth managerial advice to service organizations. In summary, Maister declares that, if you expect a certain level of service, and perceive the service reviewed to be higher, you are a satisfied client. He further says, if however you experience the same level of service as before and hence have the same perception of it, but expected higher, you are disappointed, and consequently, a dissatisfied client. The point he is trying to make is that both the perception and the expectation are psychological phenomena and are not the reality. Maister concludes that establishing the importance of the interplay between perceptions and expectations are vital in this regard.

Barlow (2004), on the other hand says that numerous solutions are well-tried, researched and policies tested. However patients are still waiting in long queues and these queues are only getting longer and not shorter. This means no lessons were learnt and nothing has changed. Barlow however counters the last statement as not true. For the reason, patients are aware of their constitutional rights and justly express themselves when they feel that their rights are ignored and put the blame solely on the staff for their inconvenience.

This said, outpatients are described as consumers of health care services by some researchers. Arries (2008) states that patients draw their own conclusions about the quality of service delivery based on their experiences of services received. Another study by Anderson et al. (2006) looks at the effect of waiting time in a different light. Their research examined the relationship between patient waiting time and willingness to return for care and patient satisfaction ratings with attending primary health care clinicians. In other words, their study concentrated on the relationship of both patient waiting times and service times on overall patient satisfaction. As expected they found that the duration of time spent with the attending clinician is a strong determinant of overall patient satisfaction. On the other hand, the combination of high waiting times and short visit times produced the lowest level of patient satisfaction observed in the study, and suggests that both measures are important.

A study by Peltzer (2009) suggests that patients' views are being given more and more importance in policy-making. Understanding populations' perceptions of quality of care is critical to developing measures to increase the utilisation of primary health care services in South Africa. His study, done in South Africa at both public and private sectors aimed to evaluate the degree of health care service responsiveness (both out-patient and in-patient) and comparing experiences of individuals who used public and private services in South Africa. Peltzer concluded that health care access, communication, autonomy, and discriminatory experiences (in private services) were identified as priority areas for actions to improve responsiveness and patient satisfaction in South Africa. What is important though is that implications for policymaking include that the result from the survey can be used to prioritize efforts when resources are limited. The data seem to provide a clear message to prioritize reforms that improve prompt attention, but not at the expense of patient dignity and communication, which may damage the acceptability of health services to users, and result in barriers to access. Therefore, they concluded that the time spent with the attending clinicians is a stronger predictor of patient satisfaction than is the time spent in the waiting room. Their results showed that shortening patient waiting times at the expense of service time attending to the patient to improve patient satisfaction would be counter-productive.

Then again, is there a level above which additional length in service time, affect satisfaction? In most cases, the patients feel that additional time spent is not productive or is unnecessarily long. Meaning, if the service time is extended to a point where the clinician has done what he\she wanted but the patient feel that it could've been done in a shorter time then they're not appreciative of the time spent on them. This usually occurs when they came for repetitive things like collecting medication or family planning such as contraceptives and the like. Therefore, it is dependent on what service the patient is coming for and having a balance to avoid it becoming counter-productive. For example, at the reception the patient would like to be attended to very quickly as it is getting them quicker to the actual service point that they need to be. At that particular service point, they would not mind being seen longer as it might then be considered quality time was spent on them. Therefore, as a patient I would want more service time however if it impacts on my overall waiting time, I might not be so happy. Therefore, as the service provider it is vital to find that balance.

Fetter and Thompson's (1966), research showed that if patient care is to be made acceptable to the patient and still remain efficient, some balance had to be achieved between the patients' waiting time and the doctors' idle time. The authors also emphasized that an examination of the literature on the subject and of three specific waiting-time studies had revealed that there are at least seven variables affecting this relationship. This includes appointment interval, service time, patients' arrival pattern, number of no-shows and number of walk-ins, physicians' arrival pattern and interruptions in patient services. Their research involved specific experiments that were conducted to determine the effect of patient loads, patients' early and late arrival times, physicians' promptness, and a combination of these variables on the operation of the health facility. Various types of clinics experience widely different variables if not all. The researchers hoped that their study will to some degree at least demonstrate the validity of the concept of setting realistic load factors for each type of service. Therefore, using past experiences, the clinic can anticipate a certain percent of no-show rates, walk-in rates and no appointments rates and therefore correct appointment intervals should be considered when determining the load factor. Also, staff still finds it difficult to change because in monetary value, more efficient clinic operations are not a payoff to them as clinicians and administrative staff is usually not paid for this improvement in efficiency.

Hart (1995) revealed that the term "waiting time" is hypothetically ambiguous, as it can be applied to two distinct types of events. On the one hand, patients refer to "waiting time as the time before their first routine appointment". This would be a period of time measured in weeks or months. Alternatively, they also refer to "waiting time in clinics" (usually measured in minutes) as the time they wait from

arrival until they are definitively attended to. But, he says that when questioned, many patients testify to the quality of treatment which they have received and their understanding of any flaws in the service that they may have experienced. All the same, the one consistent feature of dissatisfaction which was expressed by the patients is the length of waiting time in the clinic. In the study by Hart, it was also interesting to notice the tolerance voiced by the majority of patients for waits of up to half-an-hour, after which time their tolerance justifiably declines. It is also interesting to note that in the UK, the "30-minute threshold" was incorporated into The Patients' Charter as a National Charter standard, which says: "You will be given a specific appointment time and be seen within 30 minutes of that time." Whereas in South Africa, we are resistant to appointments as the South African Charter states: "The South African national department of health aims for improvement in health services and while one of its primary aims namely, addressing access to health care, is directly related to waiting times, in addition it specifically insists that waiting times be reduced, although it does not indicate what the benchmark acceptable level of either access or waiting time should be pegged at"

The above study also showed that most patients would like a degree of likelihood regarding the time they will probably spend in a clinic, so that other commitments related to work, child-care arrangements and so on, can be coordinated. Hart suggests that further research could well concentrate more specifically on ascertaining the views of patients concerning current waiting times. He concludes that if the vast majority of them were to suggest that they were more concerned about getting quality of treatment and were not concerned about reductions in their waiting time, then this may well give policy makers pause for thought.

Dr. Margaret Chan, Director–General (former), of the World Health Organisation says this about health systems: "For the first time, public health has commitment, resources and powerful interventions. What is missing is this. The power of these interventions is not matched by the power of health systems to deliver them to those in greatest need, on an adequate scale, in time. This lack of capacity arises in part, from the fact that research on health systems has been so badly neglected and underfunded." The literature review focuses on the African context as well as further afield on the international front

To begin with, De Jager et al. (2009), asserts that the evaluation of public health care is important for clients, health care providers and society. This is to have an understanding of the determinants of health care satisfaction that will eventually lead to improvement of health care quality. The purpose of their research was to examine responsiveness as a determinant of service quality in a government

controlled hospital in South Africa. The objectives of their study were twofold. Firstly, to determine if equality exists between in-patients and out-patients for the service responsiveness provided to patients in a government-controlled hospital in South Africa (perceived performance). Secondly, to determine whether the expectations of in-patients and out-patients were satisfactory in terms of how hospital staff responded to patients needs in terms of the responsiveness variables.

As a result, the research major findings were that all patients demand excellent responsive levels but none of these are met, resulting in dissatisfaction. Largely, patients were to a certain degree satisfied with the waiting time for the dispensing of medication as well as waiting time for treatment. The findings of this study would then suggest that it could be used to guide health facilities in general to render health care programmes that are more patient-centered and to increase their efficiency in a context of scarce resources. The results also show the service responsiveness under investigation included suggestions like prompt service during registration and admission, reasonable waiting time for treatment, reasonable waiting time for the dispensing of medication, responsiveness to complaints, prompt services by medical staff and communication of health facility procedure (what to do and where). Based on their findings, the authors recommended that public health facilities should firstly ensure that a survey of patients' perceptions of the performance of a facility is conducted on an ongoing and formalized basis, and secondly, that management training sessions are held on proper explaining of hospital procedure (what to do and where to go) and speediness of services by their medical staff. Also, facility managers should be aware of the various gaps in performance and as such, proper explanations of hospital procedure should occur. These include how to communicate these findings to the respective individuals or groups that are responsible for satisfying customer needs, in particular at public hospitals. In conclusion, de Jager et al. (2009) findings clearly identifies that it is imperative the hospital management take the necessary measures to improve the perceived performance of the hospital. A different approach should be considered and implemented to satisfy the needs of in-patients and out-patients.

More recently, health care service problems reported in a 2014 national survey of South Africa shows that other issues play a key role in the health disparities in South Africa. Hasumi (2014) discusses and identifies common types of health service problems reported by South African adults during their most recent visit to a health care provider. Results of the survey show that in total 43.8% of participants reported experiencing at least one problem during their last visit and 19.1% reported multiple problems. The most common problems experienced at both the private and public health care providers were high waiting time and drugs not being available. However, staff were rude and uncaring and turned

patients away only at the public health care providers. Of the 73.6% of participants using public providers, 54.9% reported at least one problem; of the 26.4% of participants using private providers, only 18.0% reported a problem, usually high cost. Similar differences in reported problems at public and private providers were reported for all racial/ethnic groups and income groups. Black Africans reported more problems than other population groups due in large part to being significantly more likely to use public providers. In conclusion, the survey shows that addressing commonly reported problem areas in particular, high waiting times, unavailable medications and staff who are perceived as being unfriendly might help prevent delayed care seeking, increase the acceptability of health care services and reduce remaining health disparities in South Africa.

The literature review thus shows that the high waiting times are not country specific, but a worldwide problem. To illustrate this, I will show the different contexts where the problems of high waiting times are experienced.

2.2 The African context

Ogunfowokan and Mora (2012) states that high patient-clinic encounter time is typical of many hospital general outpatient departments in Nigeria. Their research objectives were to determine the time spent by patients at the service points in the general outpatient departments of the national hospital Abuja, to establish the perception of patients regarding the patient–clinic encounter time, and to describe the level of satisfaction of patients with the services received. The results revealed that if the appropriate measures of long patient–clinic encounter time was accounted and addressed, then patient–clinic encounter time and meeting patients' pre-visit expectations could significantly improve patient satisfaction at health facilities in the general outpatient department's of Nigeria.

Although emergency medicine department triage is a relatively modern phenomenon, introduced in the 1950s in the United States, the introduction of triage was implemented to help alleviate the waiting times of patients, experiences of high waiting time remained (Farrohknia et al., 2011). Farrohknia et al., defines the aim of triage scales, as to optimize the waiting time of patients according to the severity of their medical condition, in order to treat as fast as necessary the most intense symptoms, and to reduce the negative impact on the prognosis of a prolonged delay before treatment. Triage is a complex decision-making process, and several triage guidelines have been designed as decision support systems, to guide the triage nurse to a correct decision (Gilboy, Travers, & Wuerz, 1999).

In a study done in South Africa on the effectiveness of the triage system used a retrospective and

prospective, cross-sectional study that was conducted in the emergency department of a provincial hospital, in order to evaluate the introduction of nurse triage on patient waiting times (Bruijns et al, 2007). It showed that the most noticeable concern prior to implementation of the Cape Triage Score, were patient‘s complaints about their high waiting time and this waiting time was defined as the time that elapsed between the first contact in the emergency department to the time attended to by the doctor on duty in the emergency department. In addition, the respondents complained that the receptionist and administrative staff prioritized patients incorrectly, patient dissatisfaction and aggression was also noted due to high waiting time. Further studies done in South Africa will be discussed under the South African context section

2.3 The International context

On the international front, high waiting times is a problem as well as shown in a study in China (Cao et al, 2011). One of the major concerns prevailing in Chinese hospitals is registering to see a doctor, especially in tertiary hospitals. Trying to address this issue, a web-based appointment system was developed for the Xijing tertiary hospital in China. The aim of the study was to investigate the efficacy of the web-based appointment system in the registration service for outpatients. Firstly, participants were randomly selected for a telephone interview and secondly patients using the normal queuing method were randomly selected to complete a questionnaire. The response rate of telephonic interviews was 73.8% and of the sample patients used in the study by means of usual queuing method, the response rate was 92.6%. Furthermore, the researchers felt that certain determinants had to be taken into account such as patient gender, urban residence, ignorance of online registration, not trusting the internet and not being computer literate. In addition to the above reasons given for not using the web-based appointment system, the different hospital departments, the day of the week and time of the day, plays a major part in patients unwillingness to use the web-based appointment system. Compared to the usual queuing method, the web-based appointment system could significantly increase patient’s satisfaction with registration and reduce total waiting time effectively. However, further improvements are needed for the broad use of the system.

Further east, Bamgboye and Jarallah (1993) examine the meaning of waiting time and attention is paid to the activities of the patients and companions during the waiting time. The setting was the King Khalid University Hospital outpatient department, Riyadh, Saudi Arabia.The potential for health education programmes during the waiting time and the form such a health education programme should take, is explored by them. The results showed an average waiting time of 148 min with a

standard deviation of 11 min. Patients currently engage in reading, sleeping or talking during high waiting times. However, they showed a preference for health education programmes for specific diseases such as heart disease, diabetes mellitus and bowel diseases during the waiting time. Leaflets were favoured to be the most preferred mode for disseminating such information. A sizeable proportion of patients also wanted religious programmes included. The study concludes that education programmes for preferred specific health topics would be of potential benefit to patients' overall health and would efficiently utilize otherwise poor quality waiting time.

According to Ahmad and Dun (2010), patient satisfaction in Saudi Arabia also represents a key marker for the quality of health care delivery and states that this internationally accepted factor needs to be studied repeatedly for smooth functioning of the health care system. Their study shows that 75% of respondents conclude that a reduction in waiting time was more important to them than a short consultation time. Furthermore, their study purports that patient satisfaction is a useful measure to provide a direct indicator of quality in healthcare, hence needs to be measured frequently so that a standard health care plan could be developed.

Further studies in Pakistan have shown that reliability of the service means that the patient is seen according to his or her expectations and received the required treatment. A responsive service would be where all patients regardless of their origin, status and background receive prompt attention by the hospital staff with courtesy and cooperation. Then waiting time is appropriate and not bothersome (Shaikh, 2005). Reducing waiting time in outpatient services of a large university teaching hospital in India by using a six sigma approach had a significant impact on a patients' overall waiting time. In addition to the overall reduction in waiting time for cardiac medical consultation, a significant reduction in waiting time for getting the lab results was also achieved. (Dinesh et al, 2013)

In Malaysia, Pillay et al. (2011) did a national study aimed to determine the average waiting time in Malaysian public hospitals and to gauge the level of patient satisfaction with the waiting time. It also aimed to identify factors perceived by health care providers which contribute to the waiting time problem. The findings indicated that on average, patients waited for more than two hours from registration to getting the prescription slip, while the contact time with medical personnel was only on average 15 minutes. Employee surveys on factors contributing to the lengthy waiting time indicated employee attitude and work process, heavy workload, management and supervision problems, and inadequate facilities, to be among the contributory factors to the waiting time problem.

2.4 The South African context

Most South Africans use the public sector for health services (Peltzer, 2009). The Board of Health Funders of South African states that 84% of South Africans are living without any medical aid cover (BusinessLIVE, 2011). According to Statistics South Africa, the 2014 mid-year estimates of 54 million population, only 3.5 million have medical aid and as a result health security for their 4.6 million dependents.

It was also often reported in the media about the state of Cape Town's health facilities (Cape Argus, July 12 2011). It was reported that a 2011 audit revealed that the City of Cape Town's clinics are in a shocking state and urgent interventions were needed. Overcrowding, a lack of equipment and crumbling infrastructure were some of the problems identified. Some facilities was so overburdened with patients that its staff sometimes turned people away and some people queue from 4am to ensure they get into the facility which opens at 8am. Several people in the queue often waited in mist, rain and the cold. Others said they were used to spending the whole day at the clinic and leaving empty-handed or without having seen the doctor or nurse. Some said they did not expect to leave the clinic before 2pm that day. As far back as 1996 (Rispel et al., 1996), there was an indication that primary health care services in South Africa were experiencing overcrowding, long queues of people, high waiting times and a lack of resources. "Patients run out of patience with health department", protest over poor health services which included high waiting times were regular (Western Cape News, August 2010). Steyn et al (2006), cited in a South African medical journal (May, 2006) which shows that high waiting time at health facilities were the most common reason for dissatisfaction and frustration. They furthermore say that sometimes certain patients are not in a condition to wait too long for a definitive service. There were also isolated unconfirmed cases that have been reported, where some patients have died in the queue while waiting to receive a service. That they say is clearly unacceptable. However, Saidi, 2005 says that the waiting time should be seen in the context of the workload in certain hospitals (Saidi, 2005). Saidi further states that besides the waiting times, the waiting rooms can play a vital role in making the waiting bearable. They conclude that waiting rooms should be comfortable and offer some positive distractions in terms of entertainment, as most users appreciate the television sets installed in many main waiting rooms, of some hospitals.

In resource poor settings with poverty, a high burden of disease and critically low medical staff numbers, interventions are needed to improve the high waiting times experienced at South African public health facilities (Bruijns et al., 2007). A study by Mohammed and Bachmann (1998) showed that after introducing appointments, patients with acute and chronic illnesses and having appointments

had significantly shorter waits than similar patients without appointments (difference in median waits: 39 and 63 minutes respectively). Appointments had no benefits for patients not seeing doctors or collecting repeat medication. Thus the study has shown that a simple appointment system is feasible in an overcrowded facility but not all patients benefit. Therefore, incomplete implementation may limit its effectiveness.

Reagon and Igumbor (2010) say that the effective implementation of interventions to reduce waiting time is essential for South Africa. In their research they also indicate that an effective Health System is dependent on worthwhile information being available for decision-making. Reagon and Igumbor also show that not using such a source of information, could curtail health departments to gain valuable insights into the performance of health care delivery, for both the users and the health care providers. For instance, WTS will directly react and rectify the collective complaint of users of such health care services. There is however a small amount of valuable information on approaches to routinely implement vigorous and workable facility-based WTS, specifically in resource-constrained locations. Their paper describes the conceptual and methodological basis for implementing WTS in health care facilities, using an approach that puts the process of the survey within the setup of the usual service undertakings of health care providers, and as a result makes the routine assessment of waiting times conceivable at low cost and with great value.

CHAPTER 3 AIM AND OBJECTIVES

3.1 AIM

To explore the underlying causes of high waiting times at a community health centre in Cape Town.

3.2 OBJECTIVES

- To explore patients views on the underlying causes of high waiting times at the facility
- To explore staff views on the underlying causes of high waiting times at the facility

CHAPTER 4 METHODOLOGY

4.1 STUDY DESIGN

The research followed a qualitative explorative study design to investigate the underlying causes of high waiting times at a community health centre in Cape Town. I utilized a qualitative explorative design, because it is ideally suited for open-ended enquiries such as the one I undertook, in which I attempted to explore the perceptions, opinions and feelings of patients and staff regarding the underlying causes of high waiting times.

4.2 STUDY POPULATION

The study had two study populations, namely the regular patients using the services and the permanent health care staff who provide the services at the facility. For staff to be included in the study, they had to be permanent frontline staff who directly attended to patients and had worked at the facility for more than 6 months, as staff who had not worked at the facility for six months were assumed to have inadequate knowledge of service processes at the facility and probably lacked sufficient local patient interaction experience. The patients included in the study were adult regular users of the services who by virtue of their previous use of the facility were reasonably assumed to know the system well.

The specific inclusion criteria for the patients were: age greater than 18 years, attended the facility for 6 months or longer, had visited the facility for more than 3 times, and were not emergency or trauma cases, as emergency/trauma services would typically have a different waiting time experience to clinic outpatients.

4.3 SAMPLING

Purposive sampling was used to identify patients for in-depth interviews and staff for engaging in focus group discussions.

For the interviews, patients who met the sampling criteria of being adults and regular users of the services were purposively chosen to cover a variety of age and gender groups. Initial identification of potential recruits was done by a clerk who had access to patients' folders and hence could determine if they were regular users of the services at the facility or not. The clerk then asked identified patients if they would be willing to be interviewed about waiting times at the facility, and those who agreed were then directed to me. Thus the clerk acted as an intermediary for me the researcher, and if patients were willing and volunteered to participate, they would come to me, whereupon I explained the study, and obtained formal consent from those who wished to proceed to the interview. Interviews were

conducted in a quiet room. The interview process continued until saturation was deemed to have been reached.

For the focus groups, I specifically chose staff working at service points with high waiting times. From all staff working at these service points, different types of frontline staff cadres such as clerks, nurses and doctors, were selected. For one of the focus groups, different levels of management staff were selected, as it was surmised that they could have somewhat different perspectives on waiting times to that of the frontline staff. The process of identifying the staff was done by me with the help of a staff member knowledgeable about which staff worked at which service points, whereby we identified different cadres of staff and then amongst each cadre selected specific individuals, who were then invited to participate in the focus groups. The times of the focus groups were set such that it was likely that those cadres of staff selected were less busy, and would be able to participate in the focus groups. The selected staff were then invited to participate, but when some staff could not participate because of other demands on their time, or because they were reticent to participate, other colleagues within the same service area and from the same cadre group, were then approached to participate. Four focus groups were conducted with 3 of them being composed of frontline staff and one with all the participants being managers. One frontline focus group consisted of clerks who worked at the reception service point (a high waiting time service point), while the other two were a mix of nurses and doctors from clinical service points with high waiting times. Before the focus group commenced informed consent was obtained and staff were requested and agreed to maintain the confidentiality circle inherent in a focus group. Focus groups were conducted in the boardroom, which is a quite environment at a distance from the hurly burly and potentially disruptive influence of the service points.

4.4 DATA COLLECTION

Data collection for the patients took the form of in-depth interviews and were conducted using broad open-ended questions with follow-on probing, while the staff views were captured within focus groups using opening/guiding questions. Both the interviews and focus groups were done with the aid of a digital recording device and I took brief notes during the interviews and focus groups. The notes were used to give summary feedback to the participants on my interpretation of their views and they were asked to confirm the veracity of the summary, with clarifying modifications being made as required. The interviews and focus groups were both conducted in English, which was for several of the patients and staff their second language, as that is the only language that I as the interviewer and focus group facilitator am fluent in. Even though, for some staff it was not their mother langue, it was the language

that they were trained in and thus was not considered to be an issue even if it was their second language. But for several of the patients English was not their mother tongue, and it was unclear how expressive they could be using it, but all those interviewed agreed to be interviewed in English and indicated they were comfortable conversing in it.

A workshop with the staff at which feedback from all the focus groups would be provided allowing for clarity and further comment, was planned, but did not transpire due to unavailability of staff due to time constraints.

4.5 DATA ANALYSIS

The recorded data was transcribed verbatim and then I followed a thematic analysis approach which enabled me to establish the link between various immediate causes and the underlying issues that gave rise to them via more detailed exploration. The themes were conceptualized by reading through the transcripts, at least three times, to get a sense of the 'whole'. I then assigned key themes in margins of the transcripts and grouped quotes together under the same themes. This process was repeated for other transcripts until I noted the patterns emerging under each theme across all transcripts.

4.6 RIGOUR

Rigour in the study was maintained via a clear documented methodology and via triangulation. By having both interviews and focus groups, I ensured triangulation which enabled me to validate data through cross verification from two sources. This allowed me to cancel out weaknesses or inherent biases of respondents' opinions and the problems that come from single method and single-theory studies. Respondent validation was done at the end of the interview, as I summarized the information given and then questioned the respondent as to its accuracy.

I planned a workshop with staff but it did not materialize because of time constraints and logistics of getting them together for a workshop in one group, as staff had many demands made on them for other meetings and a workshop would have been an undue imposition. A workshop with patients was not planned because for the patients the logistics of contacting them and getting them together at one point in time was way too difficult.

To conclude, I am a Health Information Officer who works in public health sector facilities and I have witnessed and experienced high waiting times at many public facilities and I am also keen to reduce waiting times and hence I have vested interest in it. Therefore, having by virtue of reading about it and

witnessed it, I would have already formed my own opinions because of my interactions with staff and patients about potential causes of high waiting times. However, I tried to neutralize my opinions as much as I could, to essentially get from the participants their own views and experiences. Therefore, interviews were done honestly without unduly influencing the respondents and I ensured a respectful attitude and body language while conducting the interviews and focus groups.

4.7 ETHICS

Permission for entry into the health facility was obtained from the Provincial offices of the Department of Health in the Western Cape. In addition, access and the necessary permission to conduct the research was sought and obtained from the relevant Sub district Programme Manager and the Facility Manager. Participants were informed of the aim of the research and were assured that no adverse effects would result if they declined to participate, and they could withdraw at any point without providing any reason for doing so. Formal ethical approval was obtained from the UWC Research and Ethics Committee.

Participation in the study was voluntary following informed consent and full confidentiality was assured for the interviews with small group confidentiality imbued within the focus groups. The names of the participants were not recorded and they were each assigned codes which was used in the verbatim transcripts. No financial compensation took place, however, stationery in the form of a writing pad and pen were provided to participants after the interviews and focus groups, as a gesture of appreciation for participating. A possible benefit to participation was the opportunity of sharing their experiences of waiting times, in order to contribute to efforts to lessen waiting times. No issues were known to have potential harm to the participants as the questions posed did not require responses that were expected to be emotionally disquieting for the participants.

The principles of research ethics were adhered to, as there were no risk to participants, with beneficence, respect and autonomy guaranteed. Lastly, the knowledge obtained from the study is now available to the managers of the facility so as to allow for decisions which could contribute to the improvement of the services by reducing waiting times.

CHAPTER 5 RESULTS

5.1 INTRODUCTION

Sixteen patients were approached to participate in the in-depth interviews and 11 consented to this. Four focus groups were held with staff with each focus group ranging in size from 2 to 5 people. Twenty staff were approached to participate in the focus group with 15 agreeing to participate. The basic demographic information on the patients and staff who participated is shown in Table 1 and Table 2 respectively.

As previously noted in the introduction that the common immediate causes of high waiting times at the facility are batching, mismatch, inefficiency, illogical queuing and to a lesser extent logistical problems. The results presented below from 4.2 to 4.8 illustrate what patients and staff regard as the underlying causes of the above immediate causes of high waiting times.

Table 1: Demographic table of interview respondents

No.	Patient code	Nationality	Years accessing services at facility	Employed/ Unemployed	Gender	Age	Time of arrival	Mode of transport	Appointment
1	**P1**	Foreign National	2 years +	Unemployed	Female	33	6:48 AM	Bus	Yes
2	**P2**	South African	12 - 18 months	Unemployed	Female	32	7:45 AM	Car	Yes
3	**P3**	South African	12 - 18 months	Employed	Male	49	4:40 AM	Car	No
4	**P4**	South African	2 years +	Employed	Male	55	9:15 AM	Taxi	Yes
5	**P5**	South African	12 - 18 months	Employed	Male	73	10:00 AM	Bus	Yes
6	**P6**	South African	2 years +	Unemployed	Female	38	13:30 PM	Bus	No
7	**P7**	South African	2 years +	Employed	Female	37	7:30 AM	Car	Yes
8	**P8**	Foreign National	12 - 18 months	Employed	Female	31	10:15 AM	Taxi	Yes
9	**P9**	South African	2 years +	Unemployed	Female	37	10:20 AM	Walked	Yes
10	**P10**	South African	12 - 18 months	Unemployed	Male	38	7:45 AM	Car	Yes
11	**P11**	Foreign National	12 - 18 months	Employed	Male	53	10:00 AM	Car	No

Table 2: Demographic table of focus group members

FG No.	Focus Group Respondent code	Gender	Work history at Western Cape Government	Work history at facility	Qualification level	Age	Service Point
1	**S1**	Male	1 year or less	1 year or less	Grade 12	41	Reception
	S2	Male	1 year or less	1 year or less	Grade 12	28	Reception
	S3	Female	1 year or less	1 year or less	Grade 12	44	Reception
	S4	Female	1 year or less	1 year or less	Grade 12	43	Reception
	S5	Female	2 years or more	2 years or more	Grade 12	36	Reception
2	**S6**	Female	2 years or more	2 years or more	Degree/Post Graduate	54	Chronic
	S7	Female	1 year or less	1 year or less	Degree	39	Chronic
3	**S8**	Male	2 years or more	1 year or less	Degree	27	Paediatrics
	S9	Female	2 years or more	1 year or less	Degree	45	Paediatrics
	S10	Female	2 years or more	1 year or less	Degree/Post Graduate	30	Paediatrics
4	**S11**	Male	2 years or more	2 years or more	Degree/Post Graduate	38	Management
	S12	Female	2 years or more	2 years or more	Degree	42	Management
	S13	Female	2 years or more	2 years or more	Degree/Post Graduate	49	Management
	S14	Female	2 years or more	2 years or more	Degree/Post Graduate	57	Management
	S15	Female	2 years or more	2 years or more	Degree	42	Management

5.2 UNDERLYING CAUSES OF BATCHING EARLY IN THE MORNING

Batching occurs if many patients arrive at the same time, resulting in most of these patients having to wait a long time to be seen, as the staff member would be busy seeing the patients who were first in the batch and the rest would be waiting. Sequentially, the last patients in the batch would predictably be waiting for a very long time. As noted in the Introduction batching was a major immediate cause of high waiting times and large batches were occurring early in the morning (between 7.00am and 9.00am), causing very high waiting times for those in the batches and those who arrived soon after the batches.

There were several underlying causes articulated by the participants during the focus groups and in-depth interviews, which linked to the immediate cause of batching and especially illuminated why batching occurs early in the morning. These included the belief that they would be attended to quickly if they arrive early; the fear of not being attended to on the day; non-adherence to the appointment system; the patients' concern about the repercussions they would experience if they are late for an appointment; the principle of not wanting to be late because it goes against their culture; work related reasons for arriving early; the belief of waiting less at various time intervals during the day; the staff's preference for purposefully causing batching for convenience and better patient flow; and the transport challenges faced by a large proportion of patients. Lastly, the results also show that patients have an expectation of a reward system which they feel needs to be implemented for being early.

5.2. A The belief of being attended to quickly if they arrive early

Patients, who arrive very early in the morning, wait much longer than those who arrive later in the morning and afternoon. This is precisely due to batching occurring in the morning. However, some patients believe that they are seen and helped quicker if they arrive early and hence believe they have a shorter waiting time if they arrive early. Therefore, they believe it is best to come early as indicated by P6: "Yes just to come early, I am here early because the early I arrive the earlier I go out."[1] Despite the participants' views, this paradoxically is not the case, as indicated in the results of the 2015 waiting times' survey. Patients, who arrived as early as 6am or 7am, waited much longer (150 minutes) than the patients who arrived later in the afternoon (30 minutes). Staff also confirm that a spectrum of patients believe that if you arrive early, you will wait a shorter time, even though that is not the case. Staff member S4 while commenting on the "early in early out" belief system, noted that, "We can tell them about the time but still they believe they must come at 5 or 6 o'clock because they want to be here first and leave early, but that is not so, but they got that belief you understand."

[1] Quotes are relayed verbatim without correction of grammatical errors

5.2. B The fear of not being attended to on that day

There is a fear of not being attended to on the day of arrival if one arrives at the facility from the late morning onwards. This fear of not being seen on the day one visits the facility is real, as was intoned by both staff and patients. This typically occurs when the facility is particularly full in the morning and staff anticipate that they will not be able to attend to all the patients. The staff then introduces a system whereby patients are triaged before entering the waiting area of the facility, and those patients considered non-urgent are told to come back the following day.

The majority of patients understand this situation. However, there is a segment of the patients who are not happy about being asked to come back the following day. Patient P6 in a surly manner stated, "I am not happy about this system they have. If the number is full already, too many patients, we must come back again." Similarly, patient P9 elaborated that, "Aagh man I don't like to come back because its more money and time you see and I don't like it because I don't live here and I must take a bus to get here, you see." By inference, patient P9 implies that she would not be happy to be told to come back again to the facility, just because the facility has reached the daily maximum quota of patients for the day, as she would then be obliged to spend more money to get to the facility and feels it's frustrating and a waste of her time.

Staff in turn, although having empathy for the patients, expound the necessity of the practice. The reality of patients being turned away is evident in the response of staff member S12 who says, "Patients unfortunately have been turned away previously, sometime before and maybe that is what they are thinking and that it will be done the same again to them." This further implies that staff are aware that patients are aware of the consequences of coming late because previously several of them were turned away and told to come back another day. While further commenting on this practice, staff member S13 categorically expresses, "That fear of not being seen is true, as we have a maximum number and we can only reach a certain number because we reach our maximum number by 9am already and because they are coming with no bookings and they are coming for minor complaints, we ask them to come back." Therefore, patients' fear of not being in the daily quota and as a result not being attended to, is founded on past experiences of having been turned away and drives their motive for arriving early, which in turn results in big batches in the morning.

A further consequence of the daily maximum quota system being applied is that patients incur financial losses. Several patients expressed strong opinions on the "out of pocket expenses" that ensue from missing a workday due to the maximum daily quota being applied, as they need to come back to the facility on another day and hence sustain a financial loss. This is well expressed by patient P1 who says, "The problem with that is you need a script and it's not easy for me to get a script and if I go to private doctor, they too need to do their own checking and I have to pay another money and also

getting back here more money. So it's more financial issues."

Specific staff also expressed empathy for the patients that incurred financial costs as staff member S6 supportively says, "We are asking patients to spend twice the amount of money on travelling back to the hospital. That is punishment because we are punishing them financially to come again."

5.2. C Non-adherence to the appointment system by patients and staff.

Interestingly, the results revealed that staff and patients alike are undermining the appointment system and are finding the telephonic appointment system challenging. Patients who have visited the facility previously, could be given a follow-up appointment on the day of their last visit to the facility, or they could be given an appointment if they telephone the facility to arrange an appointment for the next available date. On the one hand staff feel that patients do not adhere to the appointment system, while ironically and in contrast patients feel that staff do not adhere to the appointment system.

Most patients are mindful of the practise by staff that they will be attended to at whatever time they arrive. Whether they arrive slightly early or whether they arrive much earlier than their appointment time, they are seen at whatever time they arrive at the facility. For this reason the patients feel that staff don't adhere to the appointment system and this is clearly shown by the response of patient P3 who says, "They will see me anytime that I arrive there, even if I have an appointment." This is further expounded on by a riled patient (P7) who despite arriving on time for her appointment details the response she obtained from the staff on her arrival; "Yes, this staff will be angry with me because they say we can't come this time as we are supposed to be here at 7:30am. She says that the appointment time given for 10:30am is just put there. We must still come at 7:30am so staff wants us to come early!" Patient P7 further adds, "It looks like there is no system here because whether you are early or late and even whether you are here at the time that was given, it's like taking chances. Because you are hoping that if I come early, who knows, I might be served. So you see there is no system in place."

Moreover, patient P2 elucidates further her experiences on the non-adherence of staff to the appointment system when she comments, "They told me 8 o'clock is the time that I should be here but it does not necessarily mean that I am going to be seen at 8 o'clock. You see, that's my experience, some days I'm told be here at 8 o'clock and then I am seen at 4:30pm!"

However, several staff counter these views of the patients, as they believe it is the patients who are not adhering to the appointment system. This is strongly expressed by staff member S2 who says, "Some patients do understand the appointment system but most of them don't understand it. They still come here at 5 o'clock in the morning even though they have an appointment!" The non-adherence to the appointment system, on the part of the patients is further described by staff member S3 who says, "It's a problem because how do you explain it because now you are trying to educate the person about how

we are working on an appointment system here, but it is still not working!"

Other opinions expressed by several staff were that they believe that certain patients default on the appointment given and come in on an alternative date, just to be at the facility very early. As staff member S11 states, "A client will rather default on an appointment then come in the walk-in system because they simply believe they will be seen quicker and leave the facility quicker." In addition to the above staff member S5 says, "I know when we started with the appointment system, it was said if the patient misses their appointment date they have to make a new appointment, but they never do come, as they just want to come in very early."

All that being said, the results reveal that a certain segment of patients believe otherwise to what the majority believe. Some patients are happy with the current appointment system, as P11 assuredly confirms in her comment, "I believe that the appointment system works very well and I am certain that if all patients adhere to the appointment times given, it will work."

By the same token, a section of staff recognizes that there are loopholes in the system. As staff member S11 affirms, "So there is an appointment system in place but it is not always working that well. So we realise there are some shortcomings in our appointment system and essentially we got to get our appointment system right or on par so that everyone can be seen on that day."

5.2. D Repercussions of being late for an appointment

The results reveal that patients have a fear of not wanting to be late for an appointment and thus arrive very early to avoid being late as indicated by P4 who states, "Because I don't want to be late for my appointment, I arrive early". This shows that the patients know there will be consequences if they are late for their appointments. Consequently, this reluctance translates into a preference for coming early for their appointment in their eagerness to avoid a late appointment arrival. This too is confirmed by P2 who says, "Well I have been late for appointments before and yes then I end up leaving very late."

This challenge of being on time is clarified by staff member S13 who clearly states, "So they will wait long because there are always patients before them that kept their time that need to be seen and they will wait till we see all the other patients first." Thus, patients know they will wait longer if they are late for their appointment and even stand the risk of being pushed to the back of the queue if they arrive late, and this may drive them to arrive very early.

5.2. E Cultural beliefs around not being late for appointments.

Patients are not only anxious about being late due to the repercussion of consequently waiting a long time, but it is also considered culturally inappropriate to be late for appointments. Certain responses for several of them make reference to the belief that it is culturally disrespectful to be late for an

appointment and therefore not wanting to be late drives the patients to be early, because then they cannot be late. This is aptly conveyed by the response of patient P5 who said, "I think trying to get there first, this is obviously to be helped first. Maybe its habit, maybe its culture but I think more culture." The culture beliefs around not being late for appointments, is similarly evident in the response of patient P10 who added, "You see it's my belief, and many other people's belief, that you get here early and not be late."

Staff members seemed to confirm the views of the patients with staff member S4 reporting that: "So we are coming from, most of our people are poor and people are not educated or so and then we can tell them about the time but still they believe they must come at 6 or 5 o'clock because they want to be here first and they got that belief, you understand."

It seems that many patients have a preference for arriving early because they have the belief that they will get quicker service and some patients believe they will be turned away if they are not early. This is intertwined with the belief that it's culturally disrespectful to be late, causing many patients to arrive very early for their appointments, and as a consequence induce batching early in the morning.

5.2. F Work related reasons for arriving early.

The practice of coming to the facility first and then going back to work is very common. This is contrary to taking a shorter day at work and then coming to the facility in the afternoon when it is quieter and thus being seen quicker and leaving early. Respectively, staff and patients express their own views on the work related reasons why patients arrive early.

Patient P3 says; "Jaa just to come early, I am here early because the earlier I arrive the earlier I go out and I can go back to work." This perceived opinion of the patients is also evident in the response of patient P10 who says; "The situation here is, if you arrive at your time then you spend 2 more hours before being attended to and that is why I arrive early so that they can do preparation first, then I can make it to my work still." Another patient, P6 reflects on social and family duties that prompts people to arrive early, "People don't just come early to get out of here early, people need to take their kids to school and still maybe go back to work or like me must go and clean my house and do other things. For me I haven't got a choice, I must come in the morning or much later in the day when the kids are home." Hence, patients hope that by arriving early they will be seen quickly and exit the facility early, allowing them to go back to work, or alternatively they can do more things during the rest of the day at home.

Several staff are also convinced that patients come very early so that they can go back to work after being attended to. This is reflected in the response of staff member S15 who says, "They get seen early

with an appointment and then they can go home or back to work still". However, some staff members are not convinced of the necessity of coming early due to work attendance requirements with staff member S12 stating, "You must remember we are in the industrial area and therefore they can go back to work still."

Staff therefore is divided on the issue of early attendance for work compliance, implying that patients are as likely to fulfil work obligations if they come early in the morning or late in the afternoon or at lunch times. Patients are of the opinion that if you come to the facility very early then your whole day is not ruined and you can go back to work.

5.2. G Patients are aware that the waiting time is less at various time intervals during the day

Some patients are aware of the less busy times and the very busy time periods at the facility and impute that the waiting time is less at various time intervals during the day. At mid-morning when the facility is very full, patients reasonably assume they will wait for a long time, while in the late afternoon when it is emptier they assume that they will wait for a shorter time. This is acknowledged by several patients who say that when they do come later in the afternoon to the facility it is quite empty. Although some patients prefer the early morning and hope they are lucky enough to get attended to early and leave early.

As explained by P10 who says, "I like the very early morning because it gives me time to clean my house and take my child to crèche, but I also like the afternoon because it's just so quick if I come here at 1 o'clock, I am in and out." So the patient implies, correctly, that the waiting time is less at various time intervals during the day, with afternoons generally having a short wait because the facility is emptier, yet still patient P10 finds it difficult to choose when to arrive at the facility. This seems to be because she also, erroneously, believes that arriving very early results in a short wait.

There are however several patients that are willing to come later in the day because they have experienced that the waiting time is less in the afternoon, as explained by patient P8 who says, "So yes I am willing to come at a less busy time like the afternoon, because I am in and out." Patients P2 and P6 espouse the same sentiments with P2 stating, "Yes I am willing to come at another less busy time like quieter times in the day, like the afternoon. So long as I get seen to and I am not going to be here long." Patient P6similarly reported, "To come at a less busy time it's much easier because you just get in and just get out and you don't even sit for 15 minutes, then you out." This again implies that the patients are aware that the waiting time is less at various time intervals during the day.

However, results show that there is reluctance to accept and a sense of scepticism on the part of some staff on the issue of less waiting time during less busy periods such as in the afternoon. This reluctance and scepticism is expressed by staff member S3, who cynically says "When is less busy times, we are

busy the whole day!" and S5 states, "I don't know where the less busy time is, what times are you referring to?" The waiting time survey showed the views of patients to be the correct ones, as the median waiting time in the afternoon at 30 minutes, is much less than that of the morning at 150 minutes.

5.2. H Staff's preference for purposefully causing a batch for convenience

It is probable that some clinicians purposefully let batching occur as it facilitates continuous patient flow. This is clearly indicated by staff member S6 who self-consciously says, "I don't want to bring anybody in trouble but they want a bit of a build-up of files because they don't want to see one at a time. So in the morning everyone triages to get a little bit of a bulk of files so that they can see 5 patients at a time." So based on the response of staff member S6, it shows that several staff find it convenient to allow batching because it makes their time use more efficient. As referred to in section 1 C, this is substantiated by a riled patient (P7) who despite arriving on time for her appointment details the response she obtained from the staff on her arrival; "Yes, this staff will be angry with me because they say we can't come this time as we are supposed to be here at 7:30am. She says that the appointment time given for 10:30am is just put there. We must still come at 7:30am so staff wants us to come early!"

However, unfortunately the staff's efficiency gain is at the cost of the patients' time, because batching causes very high waiting times for patients. The staff does this because there's no lag-time or downtime on their part and this implies they can use their time very efficiently, although it causes congestion in the facility and longer waiting times for the patients. This congestion also gives the misleading appearance of a high workload, which might be an advantageous impression to create for staff.

5.2. I Transport Challenges

The unpredictability and unreliability of the different modes of transport later in the day is also a contributory factor, why some patients arrive very early at the facility. This is evident in the response of patient P10 who added, "Transport can be a problem yes because sometimes later in the day it is difficult getting transport but most of the time it is because you must get here early to get out early".

5.2. J Patient's expectation of a reward system for being early for an appointment.

Patients have a strong belief that it is only fair that when they arrive early at the facility, they should get a reward and likewise coming early should not be seen as a bad thing, but be seen as being better than on time. This is affirmed by P4 who says, "Yes they will help me if earlier but the thing is my

folder was lost, so when I do see the doctor or the nurse on time and therefore we must earn a reward." Thus it is implied, by patients, that it is reasonable to expect a reward for arriving early. By a similar notion, many patients also perceive it as a bad thing if they come late and expect to be admonished and penalised in some way or other for it.

So, if they came early, they expect to be helped quicker and leave the facility earlier and this will be considered as being rewarded. So in essence if the folder of P4 was not lost, the patient believes she would have been seen quicker which she considers as a just reward for arriving early. Patients not only expect a reward but also believe it is a fair system that when they arrive very early, then they should leave early and hence use the rest of their day productively.

5.3 UNDERLYING CAUSES OF MISMATCH (especially very early in the morning)

A mismatch arises when patients arrive to be seen but staff are not yet at that service point. This typically happens very early in the morning when patients arrive before the staff do and before the opening time of the service points (arrive before 7.00am). Yet it could occur when staff are away from their service point due to staff attending meetings, staff being on lunch and tea breaks, staff performing outreach activities within the communities or staff carrying out other administrative tasks and so forth.

What is notable is the underlying reasons given by patients and staff as to why a mismatch occurs, is largely similar to the underlying reasons for batching. Yet, there were several underlying causes expressed by the participants during the focus groups and in-depth interviews, which clearly define the distinctive underlying causes of a mismatch. What is also important to note is that a mismatch can occur anytime during the course of the day.

These underlying causes included early arrival of patients; staff meetings that are prioritised higher than waiting time of patients and staff taking lunch (and tea) breaks simultaneously.

5.3 A Early arrival of patients causes a mismatch

As previously stated, some patients believe they are seen and helped quicker if they arrive early and hence believe they have a shorter waiting time if they arrive early. This is not the case and unavoidably results in batching, but it also results in a mismatch if patients arrive so early that they get there before the staff do.

However, what it does create is a mismatch when the patients are there to be seen but the service points are not yet open. As one patient (P4) who clearly prefers to come very early says, "Okay they say they open at half past 7 but I would prefer that they open earlier, yes at 7 o'clock, because half past 7 is too late."

This is irritably countered by staff member S6 who says, “They are first in line and that is their problem because we only start at 7:30am, so the mismatch in the morning they are doing it for themselves and besides the hospital is still closed.”

Contrarily, some clinicians believe that amongst the patients who arrive very early, some could in fact be really sick. This is corroborated by quote staff member S8: “Generally I found that if they do come in early they are quite sick and to a certain extent I am fine with that, because you want to see such patients first thing in the morning, right?”

One other staff member S13 stated that, “It depends on the category of patient. Whereas, the sick babies are more kids without appointments and the majority of them arrive in the morning. So they are going to wait longer depending on how sick they are.” The implication is that they might wait long due to the mismatch of coming early, but that they would be prioritised as soon as the service point opens.

5.3 B Staff meetings prioritised ahead of waiting patients

The results show that staff meetings are a cause of a mismatch occurring during the day and a number of patients regard it as an inconvenience. When commenting on the staff meetings, patient P10 reflects that, “I feel it’s aah, I don’t know if one can improve on that but maybe if they have meetings, if its quiet time, then its fine but to leave lots of patients and say “this is my time” that’s not right. You rather reschedule your meeting than to leave your patients sitting there because you meant to go to that meeting. If that meeting is so special then I’ll understand but some meetings, you can try not to go or somebody can go in for you but to leave patients is an inconvenience.”

On previous occasions, other patients experienced mismatches on days that scheduled meetings had taken place and were left sitting at the service point and waiting for the staff to attend to them. Because of the scheduled meeting, patients on that day experienced high waiting time. Several patients commented further and said that on the basis of knowing when staff at the facility has meetings, they do not attend on that particular days. Patient P9 clarifies the above statement when she says, “Like I know on Wednesdays they have meetings, I don’t come then. You see, they must schedule meetings properly.”

Another patient (P8) alluded that although she is aware that meetings are important they should be better arranged, when she said, “Some of the patients, they don’t understand that staff needs to discuss certain things because meetings are important, but yes maybe at better times.” Understandably, this implies that patients in general consider this as unprofessional and discourteous because they feel that staff are prioritising meetings ahead of attending to them.

Interestingly, a response given by a staff member endorses that meetings do create a mismatch and has a direct impact on the patients’ waiting times. Staff member S7 states, “So what happens is those

nurses are called away from their work station for a meeting, so people have to wait as result of that. So if the doctor needs to consult and there is no nurse there to help and do a procedure or whatever is required and then that patient has to wait! That to me is something that needs to be addressed because the meetings are held and with nobody who is there to actually cover."

This clearly shows that meetings during busy times causes high waiting times for the patients via inducing a mismatch.

5.3 C Staff taking lunch and tea breaks simultaneously

A perception of poor work and a *"I don't care"* attitude of staff is created when staff are taking lunch and tea breaks simultaneously and thus leaving service points unattended, while patients are waiting to be seen. This is elucidated by patients P7 and P8 when they commented (P7), "The nurse or doctor tells you that he or she is going on lunch now and I must just wait until they return. I feel sad about it because obviously I have taken my time to come and I expect that you are at work and it's your duty to serve, but it also depends on what reason they are telling me to wait." (P8): "They cannot just leave us; there should always be someone who can see us."

The view held by patients that staff have a poor work ethic is further interpolated when an annoyed patient (P10) says, "It's annoying and it doesn't feel well because if you there and you've got your time to master, so they must also master their time you understand. If they not there then it will not come in well with me, you understand?" This imputes that staff are disrespectful towards patients, because they deliberately ignore them and make them wait, which results in high waiting times for the patients.

Patient P9 angrily ends by saying, "No man! They all go on lunch, all of them at the same time. There was only one nurse to see to us, even reception was on lunch. That is not right, never!" It is then fair to imply, that the patients' anger is very high, and exacerbated by staff ignoring them, at staff having lunch or tea breaks simultaneously.

Staff concedes that no patient should be left waiting for a staff member to return from lunch or tea breaks, however, they do know it happens from time to time. As staff members S10 and S9 explains, (S10) "In my department when we are going to lunch we not going all of us, other people are staying there." And (S9) says, "Yes it does happen now and then but in my department when we are going to lunch we not going all of us, other people are staying there. There should not be a mismatch because there is enough staff in my department and when two go on lunch then the other two must still be working." Other staff also agrees that a mismatch should not occur because staff are having lunch or tea breaks as staff member S15 remarks, "Windows are being manned by more than one person, so if one goes on tea or lunch there is always someone there."

5.3 D Club room staff that are not present throughout the day

The club room is a service point where patients with a chronic illness are seen in order to perform preparatory tasks such as weighing and urine testing, before they proceed to a definitive clinical service point. As these services can be provided quite rapidly there are periods where there are no patients at the club room and hence staff tend to leave the area. Not only the patients but also other staff are concerned when staff are not present in the club room throughout the day, and agree that the disappearances of staff are the cause of a mismatch for patients at this particular service point. Comment from S6 corroborates this when she says, "The patient had an appointment for 11:15am and he only came through to my consulting room at 4pm as the last patient, because there was nobody in the club room.

5.4 UNDERLYING CAUSES OF INEFFICIENCY

Inefficiency normally happens when patients are not effectively attended to, even though staff members are present at that particular service point, as they are busy with something else, such as administrative work or some form of preparation work. Thus, this means that the staff are prioritising attending to other activities, ahead of attending to the patients, resulting in the patients having to wait to be served.

The most notable underlying causes expressed by the respondents during both the focus groups and in-depth interviews, included the belief that some staff believe that medical aid patients shouldn't attend public health centres. Patients on the other hand, believe that staff have 'authority issues' in that they feel superior to the patients.

Patients also believe that staff have a poor work ethic and that favouritism occurs often. Patients express anger with inefficiency, especially when staff are engaging with social activities instead of attending to them. There is also a very discernible power differential between the staff and patients.

5.4. A Patients believe that staff have 'authority issues'

A number of patients believe that certain staff have authority issues, because they believe they are doing patients a favour and that therefore by nature patients should reciprocally be grateful and accept whatever service they are given. This is specifically illustrated by patient P9's response of, "I don't know really, it's like they think you are the patient and I am the nurse so you must wait for me because it is for you this help."

A number of patients believe that certain staff demonstrate a lack of accountability and efficiency, as aptly explained by patients P7 and P10. P7 relates that "Some people they just do it because they take advantage, of the situation and because they are in charge and it's a public place because you can't

really voice up and you just have to wait." Patient P7 is specifically responding to a question by the researcher as to how she felt when staff are engaging with social activities instead of attending to her. Patient P10 says, "Staff are busy laughing and chatting to each other and they are not taking into account what the others are going through." This shows that patients are dissatisfied with this experience of care they are receiving from these staff.

5.4. B Patients believe staff have a poor work ethic

Several patients are angry and question particular staff members' work ethic and efficiency, especially when staff are engaging with social activities instead of attending to patients. As P2 irately states, "I don't think they should be on their phones and chatting and having big fat conversations, instead of seeing patients." Another patient, P9 caustically commented, "She is counting my tablets but she is on the phone on WhatsApp and I am just like sitting there and looking at her like this".

This indicates that the patients are frustrated and angry and hence express their frustration at their experience of staff not prioritising attending to them. Patients believe that some staff display a demonstrable lack of courteousness, respect and empathy, which they believe they deserve, when being attended to by the staff, and that this is expressed by several staff members prioritising other activities, including social activities, ahead of attending to them, the patients who are waiting to be served. Patient P6 comments further on this aspect when she says, "We very angry about that, people stress about it because the children are crying, they hungry and staff are busy laughing and chatting to each other. They are not taking into account what the others are going through. You must remember they are very poor people, so the clinic name goes down when people talk about this clinic because of one or two staff being inefficient especially at the children side. They are having it bad and the kids are getting naughty and so on. I was in and out of my service and it took long but some people were sitting at their same place for hours and that is bad, very bad and it makes me angry." This again, as stated above, suggests that staff are disrespecting the patients by not making them their main priority and this result in allocative inefficiency of their working time.

5.4. C Power differential between the staff and patients

Patients perceive that some staff have a 'don't care' attitude, which arises because they are attending to public sector patients who have minimal 'voice' and hence there is a power differential between the staff and patients, as illustrated by the response of P7, "It gives a very bad reflection of the whole institution and it's not fair as some people they just do it because they take advantage of the situation because they are in charge and it's a public place because you can't really voice up, you just have to wait." Further comments from patient P6 were, "Certain staff were rude and insensitive and that our

documentation was missing or incorrect or folders were missing, but they were still rude."

Patients seem to believe that the power differential allows staff to disrespect them and deprioritise attending to them, whereas in private, these same patients feel they won't get the same experience and would be respected and their needs would be prioritised ahead of the social desires of staff.

5.4. D Staff belief that medical aid patients shouldn't attend public health centres

To some patients' annoyance, there are several staff that consider that those patients who have medical aid should not attend public health facilities, as they have by virtue of acquiring 'medical aid', explicitly chosen to attend private sector health facilities. As patient P9 says, "They say why we then come here if we have medical aid, but the doctor [private sector doctor] said we must come to the clinic." The staff concerned therefore are questioning the legitimacy of their presence at the facility and implying that these patients should not be attending public health facilities, if they can afford to attend private health centres, much to the displeasure of these patients who feel that they have every right to attend any public facility they wish to attend.

The reason given by the patient concerned as to why they are attending a public facility was that their medical aid funds were depleted and they have no other alternative but to attend a public facility. As explained by patient P9 who relates, "Also, my sister's funds in her medical aid are finished and so she would prefer to come here as it is the closest. But after that, my sister just left this place and said she can't handle this rude people here!"

The behaviour of certain staff towards medically insured patients seems to suggest disdain and disrespect and possibly staff are not prioritising attending to these patients as some form of punitive action. Patients on the other hand, believe that staff cannot prevent them from attending the health facility, as public sector services are supposed to be accessible by everyone, even though most people with 'medical aid' (medical insurance) most of the time elect to receive services in the private sector.

5.5 UNDERLYING CAUSES OF QUEUING

Queuing problems typically occur when patients are attended to by staff in an illogical order, i.e. the patients are not attended to in the order that they arrive at the service point. This basically means that those who arrive first are not seen first, but are made to wait while others are seen before them.

The most prominent underlying causes of queuing expressed by the respondents during both the focus groups and in-depth interviews included favouritism, mispronunciation of names and uncertainty about the queue procedures.

5.5. A Patients believe that favouritism directly influences their position in the queue

Patients have noted the irregular queuing procedures and blame it on certain individuals who are unduly favoured in the queuing order, as patient P9 unapologetically states, “Most of the people here are doing favours for other people and it’s not right.” similarly patient P6 also expressed dissatisfaction with the irregular queuing procedures and blamed it on certain individuals who are unduly favoured in the queuing order, opining that, “There’s favouritism here because they treat better the people they know. When their friends come, they give them folders before us and they finish sooner than those of us who were here from early in the morning.”

Because of the presumed favouritism potentially due to nepotistic relationships between clinicians, administrators and some patients, other patients are not being attended to in the correct order, resulting in them having to wait longer in the queue.

5.5. B Patients believe that the mispronunciation of names also directly influences their position in the queue

If a patient’s name is called but they don’t recognise it as their name because it is badly mispronounced, then they will not respond and hence will be passed over while other patients, who do respond to their name being called, are attended to. As patient P3 states; “This morning I was feeling bad because I’m waiting an hour and a half and she says she called my name. I didn’t hear my name and I am not happy, then I asked them if they shouted my name and then she says I must wait when my name is called. I don’t know, maybe they didn’t pronounce my name properly.” Staff on the other hand counter this argument as S15 states, “I think our loud speakers are load enough although we might not be calling out the names correctly, the pronunciation won’t be that wrong for them not to understand.” S15 also believes that the recommendation of a numbering system won’t work, when she says, “It was done before and it created more confusion for both the patients and the staff.” S2 says agrees when he says, “We had to cut the condom boxes and write numbers on it but there were many mistakes made and there were double numbers.” Language barriers could thus have resulted in queuing problems occurring especially if the names of those who did not respond to an initial call are not repeatedly called again at intervals and/or they repeatedly don’t recognise the pronunciation of their name.

5.5. C High levels of noise in the facility

The results show that a certain amount of patients are unable to hear when their names are called because of the high level of noise in the waiting area and as with mispronunciation of their name this results in them not responding to their name being called, with a resultant long wait in the queue.

This is substantiated by the response of patient P11 who says “It’s very noisy, so maybe the marshals

can come and tell the people to be quiet, to sit down and keep the children from running around. People talk very loud so some elderly people with hearing loss cannot hear their name being called."

As a solution to the high level of noise experienced one patient suggested that a flashing screen showing the patient number, be used to alert patients that it is their turn with P5 stating, "A flashing screen perhaps so that instead of always shouting to people, I think people must grow up and watch the screen and look for your number is okay so that is also less noise."

5.5. D Patients are unclear of the queuing procedures

Some of the underlying causes about the queuing procedures included the response from patient P2 who says, "There are some patients that do not know where to go as I often see patients stopping doctors and nurses from what they are doing to ask where to go and so forth." Staff S6 agrees as noted in the response, "I agree there are always patients in the corridors not knowing where certain rooms are and asking the staff where to go." However, according to staff member S8 who has a slightly different opinion, "Most of the patients seem to know their way around the facility actually but there are still many that don't." Patients therefore might be spending unnecessary time waiting in the wrong queues.

5.6 UNDERLYING CAUSES OF LOGISTICAL PROBLEMS

A logistical problem typically occurs when patients are waiting to be seen and staff are available to see patients, but due to a lack of equipment, rooms or other logistical needs, such as unavailability of a folder, staff are unable to attend to the patients. It was found that such cases do happen from time to time and their causes included unavailability of consulting rooms for visiting clinicians, missing folders and missing laboratory results.

5.6. A Unavailability of consulting rooms for visiting clinicians

Unavailability of consulting rooms for visiting clinicians was distinctly pronounced by a staff member who felt that when visiting specialists arrive to attend to patients at the facility they are not provided with the rooms in which to do so. Staff S6 commented, "Space is a problem as we don't have the enough rooms because some clinicians must wait for up to 30 minutes for space to be provided." This in turn also creates a perception of a generally inefficient and ineffective management system being in place and causes stress to visiting clinicians.

5.6. B Missing folders and missing laboratory results

Missing patient folders as well as missing laboratory results within the folders inevitably causes high waiting time for the affected patients, as clinicians need to phone the laboratory services for these

results themselves or endure the frustrating process of attending to a patient without the benefit of their past service record. Faced with these extra claims on their time the clinicians tend to delay attending to these patients until their folders are located or their results are obtained by the support staff, hence increasing the waiting time of these patients. Clinicians and patients shared the same sentiments concerning missing folders and missing laboratory results within the folders. When this happens, it results in staff continuously waiting for missing folders from reception, and/or prompts them to go to reception and help them retrieve the folder. This inevitably takes the staff member away from the service point for a considerable amount of time, all of which is experienced as waiting time by the patients, even though the staff member is actually attempting to assist them in the background. This is pointed out by S13 who glumly says, "Sometimes folders are missing and they are wandering around looking for it and literally looking in consulting rooms and at the emergency centre and also results not in folders as well." Patient P9 clarifies the above description when she says, "You know what happened with me? I was sitting from 07:30 to 12:30pm and I was sitting there with children. So we getting hungry you know, and I was getting angry, and there was not a lot of people there and my folder was gone missing, and they had to go and find it."

Similarly, a number of staff members feel very concerned by missing folders or missing results in the folders as described by the comments of staff member S8: "To be honest I don't think they have been doing it because I know for a fact that the moms are waiting outside my door and when I ask them where the folders are, then they say they are still waiting for it. So they are definitely not sorting it out beforehand. That's for sure." This is corroborated by staff members S6 and S7 who says, (S6): "Okay sometimes there is a delay because they take time to chase up results and because you need to have the results before you can consult. So there may be a delay for the patient because the results are being looked for whereas those results should have been looked for the day before." Also, (S7): "Yes there were a lot of problems because people were waiting for folders and we were actually helping to generate folders because the folders were not ready."

The above comments demonstrate that there isn't an efficient filing system in place and therefore patient records are not filed correctly. Thus it takes a disproportionate amount of time to retrieve the folder when the patient arrives at the clinic and therefore causes an avoidable logistic problem resulting in increased waiting time.

5.7 UNNECESSARY SERVICE POINT: An immediate cause of waiting time not measured by the formal quantitative survey

The "helpdesk" service point functions both as a typical helpdesk in that it directs patients to the service points which they are required to attend, but it also functions as a point where patients can

make appointments and have their appointment logged onto the electronic system. “Helpdesk” is usually staffed by one person who has to deal with the issuing of appointments for the entire facility, at the times that the reception clerks are not dealing with appointments. Patient’s anger, frustration and the sense of helplessness of high waiting time and perceived inefficiency at the “helpdesk” service point were expressed by P2 who says: “Yes and sometimes that takes up to an hour, maybe even longer there at that helpdesk. I can’t for the life of me think why it takes so long. I felt helpless because I could not understand why a person must wait so long for an appointment.” In addition, P2 felt that helpdesk is a waste of time, saying; “That I mean is time wasted because you are basically sitting and waiting for an hour waiting for an appointment.”

Patients thus feel that the helpdesk is an unnecessary service point and feel that some other system of allocating appointment dates and times should be utilised. This is expounded on by P7, “It’s too long because if everything could just be scheduled for instance, why does one still have to go the helpdesk for the appointment? Why can’t it just be automated or given by the doctor, instead of you having to queue at the helpdesk. After queuing for all the procedures you still have to queue for the next appointment. It’s such a waste of time even though I understand that is what is in place at the moment and you can’t leave without going to the helpdesk.”

5.8 CONDITIONS AND EXPERIENCES ENDURED BY THE PATIENTS AND STAFF WHILE WAITING FOR A SERVICE.

Linked to the high waiting time as resultant offshoots of waiting, there are several deleterious conditions and experiences endured by the patients and staff alike.

These include staff become defensive about high waiting times; the waiting area becomes congested and dirty; staff as well as the patients undermines the appointment system; staff and patients alike are unfamiliar with the flow process; and patient safety is compromised in the early hours before the facility is open.

5.8. A Staff becomes defensive about high waiting times

Some patients felt that staff attitudes become defensive and rude when patients start questioning the high waiting time they experienced. As P10 says, “When you ask to them too many questions, they become rude. You understand, like when asking where my folder is and why is it taking so long, then they scream at you”. This indicates that the staff are becoming disrespectful and rude towards the patients who enquire about the high waiting time, as they repeatedly have to account for something which they don’t feel personally responsible for.

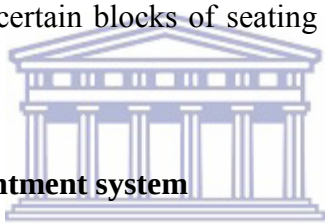
Results show that patients are very aware that the staff are under stress but they also feel that this

should not give the staff the right to be disrespectful towards them. Besides, the results appear to reveal that certain staff look for reasons to blame the patients for the long waiting time and a common excuse offered is that the waiting time is due to an increased workload which is partially attributed to patients who do have private medical aid, but who when their funds run out, attend the public facilities.

5.8. B Dirty waiting area

The waiting area is left dirty at most times due to the high congestion caused by many patients waiting. Although the dirty waiting area is probably an inevitable consequence of large volumes of patients being present at the same time, some patients feel strongly that the waiting area is dirty at most times because it is the patients themselves that mess up the place. P5 avers, "They give their kids lollipops and sweets and they put it their mouth for 5 minutes and they bang it straight in the floor its part of healthcare isn't it, to teach hygiene."

Some patients feel that the facility can do more to avoid a dirty waiting room with patient P5 stating that, "Certain times I would say and certain blocks of seating should have a big notice saying don't make a mess."



5.8. C Unfamiliarity with the appointment system

The results indicate that staff and patients alike undermine the appointment system, including the telephonic appointment system. This is clearly seen by the response of staff member S3 who says, "They expect and they have this mentality that they've been here since 6 o'clock and don't care about these peoples appointment system because they've been standing here and how can you help that person [with an appointment] that just walked through the door now, before me". Also, patients blame the staff who do not adhere to their own appointment system and this is substantiated by staff S3 who says, "I know when we started with the appointment system it was said if the patient misses their appointment dates they have to make a new appointment, but with more time we become more lenient". A similar view is echoed by patient P9 who says, "So with time they became more lenient even if the patient hasn't been there for 2 weeks, the appointment was 2 weeks ago but they push it through."

Staff also feel that the patients need more education as S1 clearly says, "First we need to educate the patients so they must be told to arrive an hour before the appointment time." and S1 says, "We also need to give more education on how to make the telephonic appointments, because to reschedule the appointments and so that we can drop the number of defaulters."

5.8. D Staff and patients lack familiarity with the flow process

Staff often do not adequately inform the patients about patient flow processes and staff themselves frequently do not adequately understand the patient flow process. This is distinctly explained by staff S6, “And the problem that I find for most of the time is that everybody blames the patients, but what I find is a lot of us, like for me there is so much change and so much things happening that a lot of staff does not understand the system themselves. They don’t understand how it works and then I often find myself wondering how we expect the patients to understand it, if we don’t understand it ourselves!”

5.8. E Patient safety is compromised when the facility doors are closed and the weather has an impact on arrivals

Patients feel anxious about the weather and their safety while standing outside the facility early in the morning, before the facility opens. Patient P3 explains: “Yes, at 7 o’clock because while standing outside can be very dangerous and the security only sit in their shed and do not walk around so there is some danger here.” Another patient P4 concurs; “The clinic it opens at 8 o’clock you see and it’s not right, it’s too risky because it is dark and you walk that time, all alone. Its dark you know.”

Another patient feels that the weather also plays a role as to when you attend the facility. Patient P1 clarifies by saying, “I was shivering in the queue and it is something else, we used to stand outside and it’s cold.

CHAPTER 6 DISCUSSION

6.1 INTRODUCTION

The objective of the study was to explore the underlying causes of high waiting times at a community health centre. This discussion accordingly addresses the key findings on underlying causes of and recommendations for reducing waiting times, in relation to the immediate causes of high waiting times at the facility. These immediate causes include batching, mismatch, inefficiency, illogical queuing, and to lesser extent logistical problems. Last but not least, the findings include commentary on a perceived unnecessary service point, an immediate cause of waiting time not measured by the formal quantitative survey, and conditions and experiences endured by patients and staff while waiting for a service.

6.2 BATCHING

Arrival of a large group of patients at the facility at the same time is known to cause prolonged waiting times among patients and stress among staff (Reagon and Gouws, 2005). Patients who arrived early waited the longest as unfortunately many patients arrived early and hence formed a batch, which is a powerful cause of high waiting times. Although patients waited long because of their early arrival resulting in batching, the majority still preferred to visit the facilities early and will in all likelihood do so again at their next visit. The main reasons given for the probable persistence in this attendance time behaviour were that they wanted to return home early and wanted to maximize the available time in their day. Likewise, Reagon et al, 2005, also discovered in a waiting time survey conducted at clinics and health centres in Cape Town, that congestion and high waiting times, especially in the early mornings, results from batching.

Reagon & Igumbor (2010), further suggest that patients are aware of varying waiting times at different times of the day. However, in public health facilities it is a long standing and daily reinforced tradition that patients arrive at the health facility early in the morning. Ultimately all patients have one wish and that is to receive high quality medical attention timely and return home early, and yet even though they are aware of the shorter waiting times later in the day, they still arrive early in the morning. This indicates that this preference of some patients to arrive early is activated despite the high waiting time, suggesting that the reasons for arriving early lies elsewhere than with waiting times. As anticipated it transpired that the patients were indeed more apprehensive about other things. The anxieties of the patients included the reality of the patients' fear of being turned away and furthermore, they were sometimes told to come in early by some staff, in spite of and irrespective that they had received specific appointment times for later in the day, and it appears that they then considered the verbal

instructions to have overridden the written appointment time, and hence arrived early.

Other studies (Elloker et al., 2013 and Scott et al. 2015); also show that patients believe that they will be given preference for arriving early. In addition to the above statements, there is also the strong belief held by the patients that the staff are attending to patients at any time, irrespective of what time they arrive at the facility. Be it that the patients arrive slightly early or whether they arrive much earlier than their appointment time. Responses indicate that they are seen at whatever time they arrive at the facility. It is therefore for this reason that patients feel, the staff are not adhering to the appointment system.

Patients also come to the facility early because of work related reasons. Patients either with day jobs or patients who are scholars, have a need to receive care before their day begins and not miss work or school? Or that they had other businesses to attend to in the afternoon? Transport challenges later in the day were also cited by the patients as the reason for their early arrival. As previously stated, they have various reasons for arriving early in the morning, but patients come early because they have to catch the busses or taxis that carry people to work and these transport modes are the only transport available to them. Others get lifts from someone they know who goes to work. However, what should be noted is that the travel time to the clinic is relatively short and public transport is good within the facility drainage area. Nonetheless, most of them due to their low socio-economic status relied on public transport which is intermittent late in the afternoon. What should also be noted is that evidence indicates that accessibility to health facilities, as reported by Saidi (2007,) is that some users do not have money for public transport even if the facility is on the main public transport route. All things considered, the assumption is most patients want to finish early so that they could get transport back home, particularly those who relied on public transport and lifts. Similarly, the patients who use their own transport also have the same wish to finish early and return home.

As previously mentioned another possibility is many patients believe they will be turned away if they are not early at the facility and become anxious about not being attended to if they arrived later (Reagon & Igumbor, 2010). Results indicate that it is a fact that patients might not be seen on the day of their visit which often happens when the facility is too full. The staff then triages patients at that time and all the non-urgent patients are told to come on another date. The majority of the patients understand the necessity of this practise, however several patients disapprove. Many felt that they had to spend money to get to the facility and then it becomes a total waste, which many of the patients cannot afford. Staff on the other hand has empathy for the patients but believe that turning away non-urgent patients when the facility is too full is justified.

As noted in the results and above, staff and patients equally are also undermining the appointment system and find the telephonic appointment system a challenge. It is known among several of the patients that if you visited the facility previously, you could be given a follow-up appointment on the day of your last visit to the facility, or you could be given an appointment if you telephone the facility to arrange an appointment for the next available date. However, staff feel that patients do not adhere to the appointment system, while in contradiction patients feel that staff do not adhere to the appointment system. A study by Hermoni et al. (1990) shows that the scheduled appointment system in primary care clinics in Israel although popular, the failed appointments are creating problems for both the staff and clients. This was also evident in the study by Mohammed and Bachmann (1998) that found failed appointments created a problem for both the staff and patients alike.

Furthermore, several patients are aware of the practise by some staff that they will be attended to at whatever time they arrive, because whether they arrive marginally early or whether they arrive much earlier than their appointment time, they are seen at whatever time they arrive at the facility. Hence, the patients feel that staff don't adhere to the appointment system. Staff ironically says it's the patients who are not adhering to the appointment system, because they feel that certain patients default on the appointment given and come in on an alternative date, just to be at the facility early. What is noted nonetheless is that there are a large proportion of patients that are happy with the current appointment system and a sizable amount of staff that recognizes that there are loopholes in the system.
Patients also know there will be certain repercussions if they are late for their appointments and prefer to come early for their appointment to avoid a late appointment arrival. This is because patients know they will wait longer if they are late for their appointment and risk being pushed to the back of the queue if they arrive late. Ultimately, this drives them to arrive early (Mohamed and Bachmann 1998).

Likewise, several patients are not only anxious about being late but feel it is culturally disrespectful to be late for an appointment and therefore not wanting to be late, ultimately drives them to be early because then they cannot be late. Leape et al. (2012) says that culture is influenced by society at large and on many occasions the result is that civility is regarded as weakness and as an invitation to exploitation. At the end of the day, patients have a preference for arriving early because they believe that they will get a quicker service and several believe they will be turned away if they are not early. As stated in the results, these two reasons are interwoven, which causes many patients to arrive early for their appointments and as a consequence induces batching early in the morning.

Furthermore, it could be speculated upon that patients expect a reward for arriving early which by a similar opinion, many patients also perceive it as a bad thing if they come late and expect repercussions. Hence patients expect to be helped quicker and leave the facility earlier and this they consider as being rewarded. Therefore, patients not only expect a reward, but also believe it is a fair system that when they arrive early, then they should leave early and hence use the rest of their day productively. (Daniels et al. (2017).

Lastly, to create a continuous patient flow, it is then possible to speculate that several staff are deliberately letting batching occur, because it is convenient for them and it makes their time use more efficient. Reagon & Igumbor (2010), identify poor patient flow and bottlenecks as a cause of high waiting times. However, this perceived efficiency gained on the part of the staff is at the cost of the patients' time, because batching causes very high waiting times for the patients. This also creates congestion which gives the misleading appearance of a high workload. This misrepresented image of high workload might be a deliberate impression the staff want to create, to allow them to claim that they experience high workloads as this absolves them of culpability in unnecessarily prolonging waiting times due to their actions.

There are various recommendations one could give thought to as to how to circumvent the effects of batching. Primarily, staff should avoid the practice of turning away patients and they should give appointments for quieter times and quieter days in the week. Therefore, as a recommendation, staff should consider discontinuing the practise of turning patients away. And to realise this, staff could decrease the amount of appointments for days and times of the day where it is known that there will be a large number of walk-ins normally arriving.

Jawahar (2007) also correctly points out that nowadays patients are looking for hassle free and quick services in the fast growing world. A significant reduction in the number of patients who arrived early can be averted by institutionalizing an appointment system (Bosch and Dietz, 2000). This was shown in the South African study (Mohamed and Bachmann, 1998) where patients with appointments were significantly more likely to arrive after 8 a.m. than other patients.

In addition, thought should be given to changing traditional operating hours as they do not always work for patients. Staffing levels could also be adjusted to accommodate patient loads, especially in the morning and therefore better staff utilization can be considered**.** Last but not least, further qualitative studies on the reasons why patients prefer to come early in the morning than during the

afternoon is suggested.

6.3 MISMATCH

Mismatch by implication is when patients are at the facility but the facility or the service points they need to attend are not open. So the question then is why do the patients get there before the service point or facility is open?

Empirical studies have shown that arrival before the opening hours indicate that early arrival is characteristic of public funded health facilities in South Africa. (Mohamed and Bachmann 1998; Lowe, 2000, Reagon *et al*, 2005). This phenomenon is prevalent in other parts of the continent and the rest of the developing world. (Khoury and Mawajdeh, 2004).

To begin with, the very early arrival of patients when the service points are not open is not exclusive to any particular facility, but is prevalent at many other facilities with a similar setting. For example, in other parts of South Africa and the continent, high waiting time at both private and public health care (PHC) facilities is common. For instance, in the Gondar District of North Ethiopia which has a similar setting to many PHC settings within South Africa, Tegabu (2008), in his dissertation explains that very early arrival of patients and mismatch of patient arrival and service commencement were the leading causes of high waiting times among public health facilities. There are many possibilities as to why this occurs and the results reveal that several patients arrived very early to make sure that they were first in the queue as they want to be seen first or earliest with an assumption that they would then wait a shorter time than if they were to arrive later during the day (Mohamed and Bachmann 1998). Regrettably, as revealed by the results, patients who arrived very early at the facility experienced high waiting times. There are numerous possibilities as to why the patients came to the facility very early and one could speculate that such patients could be employed and they did not want to miss work? Or that they had other businesses to attend to in the afternoon? Another possibility could be that they just wanted to free up their time for the rest of the day.

As a recommendation, management could consider handing out notices to the patients which will indicate the advantage of making an appointment. The advantage would be that the patients would be provided with a set time to see a clinician, which in turn will shorten their waiting time at the facility. Others arrive very early because they are very sick and want to be attended to first. In fact, staff want to see these very sick patients first and is happy to have this mismatch, if sick patients are not attended to early in the disease process they could worsen significantly, and therefore it is almost an appropriate

mismatch. So even though these patients are waiting, it might be good for them because they will be seen first rather than seen later in the day when they could have been sicker. So this may well be an appropriate mismatch from the staff perspective, but also possibly from the patient perspective, since they are willing to endure the wait because they want to be seen as soon as possible, in order to get their medical condition attended to earlier, irrespective of how long they have to wait. Therefore, the usual recommendation to arrive later in the day would probably not fit this group.

So, the question then is how management resolves this and what options are open to them. Firstly, at the time of the study, staff could not channel ill patients directly to the emergency section because it was open for extended hours, but did not open early. However, more recently this has changed and the facility has now introduced a 24-hours service to the public. Therefore, one way of solving this could be that the facility has the patients triaged by the emergency unit staff early in the morning and the actual emergency cases are attended in the emergency unit with other patients directed to the various outpatient service points. In addition, facility management could also consider having certain categories of staff come in earlier, to attend to the early arrivals.

However, as previously stated, recent studies (Reagon *et al*, 2005) reveal that there is the danger of creating a vicious cycle of solving one problem and creating another, because the patients will then know staff are there early, and they might then be perversely incentivized to come in even earlier. This early service opportunity for the patients could in all probability work in a different setting, such as a rural facility, which has a clearly defined group of patients coming in early all at the same time in the morning, with the same transport, but might backfire here in an urban setting. Moreover, if the early morning staff are paid overtime for their early morning start, then it could become a considerable cost to the facility, that might not be viable in their current or future financial circumstances. However, if the staff hours are just shifted to a different start time and end time, without cost being incurred, it could help solve the problem, provided that a vicious spiral of patients arriving earlier and earlier does not occur.

A further cause of a mismatch is when staff meetings are held early in the morning when large numbers of patients are waiting. The results made clear that both staff and patients recognised that meetings at busy times, when there are large numbers of patients in the facility waiting to be seen, result in a mismatch and it is obviously detrimental to the patients and increases their waiting times. Although this is known, the question is why meetings are held at those times? However, no reasons were volunteered by the staff. The results make known that there is a large overlap of staff shifts in the

morning and this could possibly be the reason why they have their meetings at that time, or it could be speculated that the staff felt that there is no other time during the day conducive to have a meeting, because there is less overlap of staff shifts at other times in the day. The reason is, some staff come in later in the day and leave earlier than other staff, because of the extended hours offered at the facility. As a result, some staff start work at 7:30am, others at 8:00am but other staff worked a late shift the previous day and for that reason are entitled to leave at 12:00pm. So the best time for management to have these meetings will be to schedule it later in the morning, when most staff are available and the majority of the batches of patients have been attended to, as one does not want to solve the mismatch issue by exacerbating the batching issue. One must however always take cognizance of the fact that some patients will incur a high waiting time irrespective of at what time during the day the meetings are held, but the meetings should be timed to have an impact on a lesser number of patients. This is according to the classification system proposed by Reagon and Igumbor (2010).

Another reason why the staff have meetings early in the morning could be that they hold the perception that there is no predictable time when there are a few patients waiting. However, the results clearly indicate otherwise, because in the afternoon there are much less patients waiting. Therefore, even though there is an impact on some patients, scheduling the meetings in the afternoon will be of a lesser impact than in the morning, because the impact in the morning is on a much larger number of patients and the intensity of the impact on waiting times is greater, because they are already going to wait long because of batching and now there is an added extra wait for mismatch. As previously shown in other settings, batching often occurs early in the morning and often has the greatest influence on waiting times and now the meeting induced mismatch compounds it (Mohamed and Bachmann 1998). The solution to the problem could then be to schedule meetings at quiet times, however meetings will always cause a mismatch irrespective what time in the day it is held, because staff are taken away from a service to go to a meeting and hence if there are patients waiting then a mismatch is created, but its effects would be less. So the solution would be to minimize the mismatch by scheduling the timing of the meeting when there are large numbers of staff present and few patients waiting, or a large proportion or all of the staff are present who are required for the meeting and a few patients waiting (Reagon & Igumbor, 2010).

When staff lunch and tea breaks are not staggered it causes a cessation or suspension of services and an enforced wait for all patients then becomes mandatory. Patients recognise and accept that staff need breaks. However, they don't think that all staff should go at the same time as it causes a complete

shutdown of services at any particular service point. Staff also recognises that this is not an ideal situation and yet they also note that it does happen. Although some staff are defensive about how frequently it happens and if it happens at the areas where they work or not? The question as to why it is happening was not probed far enough, however many speculations were discussed but with no clear answers. The possibilities could be that staff want to take lunch breaks together because it is an opportunity to socialise and talk about things. Or it is the preferred time of the day to have a break and many staff would be upset if management staggers their breaks when they don't particular want to. However, it is unclear why, because staff know that they are causing patients to wait, but yet they still engage in this activity. Therefore, one of the necessary solutions to resolve this problem could be to further probe the reasons as to why the staff are taking breaks simultaneously and then address those issues, thereby encouraging staff to stagger their lunch and tea breaks and ensure that there is no complete shutdown of services and therefore a mandatory wait until the break is over (Reagon & Igumbor, 2010).

At the club room service point staff are not present at the service point the whole day because staff goes to another service point when there are no patients to attend to. Therefore, rather than to be idle the staff go to the next service point, however, this unavoidably then cause a mismatch. The club room is a service point that is not regularly patronised by the patients because it is an intermittent service point. There are periods when staff and patients are there and the room is fully utilised but there will also be times when there is nobody and the room is vacant of staff and patients. The reason being is that these services can be provided quite rapidly at the club room and therefore there are periods where there are no patients at the club room and hence staff tends to leave the area. Not only the patients but also other staff are concerned when staff are not present in the club room throughout the day, and agree that the disappearances of staff are the cause of a mismatch for patients at this particular service point. There are many reasons as to why staff do not return to the service point and the most obvious one is that the staff are either waiting for a build-up of patients before they return or the staff cannot see if there are patients waiting to be seen at the club room. There is also no calling system in place to alert the staff that patients are waiting to be attended to (Daniels et al. (2017).

A possible recommendation that the facility could consider to alleviate the club room mismatch, could be to move that service point to an area where the staff can easily detect if patients did arrive while they busy somewhere else. So the staff must be in visual sight of the patients waiting and its close by with a call mechanism that is linked to where they are that indicates there are patients waiting.

However, the staff knowing there are patients and not going back could still be a problem. Therefore, thought should be given to finding a solution to ensure that the staff are doing other clinical activities at the particular service point or being close by. This would then make it more efficient for the staff to attend to the patients at club room and there will be minimal interruption and minimal travel, back and forth across the facility. Another alternative could also be changing the club room and reorganising the flow of the patients by moving it to another area, where it is more visible and then using the club room for other more appropriate services (Daniels et al. (2017).

Moreover, staff usually starts seeing patients at 9:00 a.m. though the official opening hour is 8:30 a.m., therefore starting services at 8:00 a.m. rather than 9:00 a.m. could be considered. Also avoiding administrative work and outreach activities in the morning session could also further cut the high waiting times and increase patients' satisfaction. Hence, shifting facility opening hour to 8:00 a.m., postponing paper and administration work to the afternoon session and less peak hours and educating patients on the fact that there is no quota limitation for consultation, is recommended to decrease the high waiting times (Daniels et al. (2017).

6.4 INEFFICIENCY

Inefficiency is also a cause of high waiting times experienced by the patients. Inefficiency is often compounded by undesirable staff attitudes and thus negatively impacts on the patients overall experience at the facility. Literature shows that patient satisfaction together with the interpersonal quality of the patient-provider relationship has been associated with significantly better patient adherence and outcomes (Beyene *et al*., 2009, Godin *et al*., 2005). Poor staff attitudes coupled with poor staff behaviour is not just a one-off isolated event, it happens in many settings. (MacKian, 2003). A study in Uganda reported that poor staff attitude at primary health care clinics are a barrier to the utilization of health services at most primary health facilities (Solome, Wamala, Galea, State, Peterson & Pariyo, 2009).

Results indicate that patients believe staff have authority issues because staff believe they are giving the service hence they are in charge. Staff believes that patients should accept any service given to them as this was a public facility, and that patients must be grateful for the free service. Patients oppositely believe that this shows that staff has no accountability and this heartfelt belief inevitably caused much dissatisfaction for them.

A study done by Hasker et al. (2010) showed that the reasons for defaulting treatment by patients in some PHC facilities has to do with the attitude of the health workers. Poor work ethic by the staff was a reason given as patients express their anger, especially when staff are engaging with social activities instead of attending to them. The patients also described how certain staff disrespect them by playing with their phones and when they challenged staff about it, the staff became arrogant and had no empathy for their situation.

The results also show that there is a very discernible power differential between staff and patients. This could be because the staff are attending to public sector patients who have minimal 'voice' and hence can easily be dismissed by staff who do not feel that the patients have any role to play in oversight of the functions and activities or the manner in which they carry them out. A study done in Bangladesh (Aldana et al. 2001) found that technical competence by the provider had a less important influence on client satisfaction than respect and politeness. Patients assert that some staff have a "don't care" attitude towards them which they feel demonstrates total disrespect towards them. This is particular evident in the response of patients that said certain staff were busy reading a newspaper while they were waiting to be seen. This type of "don't care" attitude of the staff is considered by the patients' as complete dereliction of duties from the staff. However, other patients also felt that the staff has this power differential which allows them to disrespect them and deprioritise attending to them because at times some staff are busy with social activities while attending to the patients. The patients believe this type of behaviour will not occur in the private healthcare system and believe they would be more respected and their needs would be prioritised ahead of the social desires of staff.

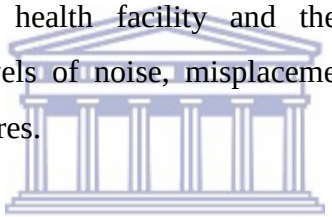
There is also some staff that considers that patients who have medical aid should not attend public health facilities because by virtue of acquiring 'medical aid', they unequivocally chose to attend private sector health facilities. This predictably results in staff not prioritising those patients and will in all likelihood cause them to have high waiting times. This action by the staff shows disdain and disrespect and often staff mete out some form of punitive action towards such patients. These patients believe they cannot be prevented from attending the health facility, as public sector services are supposed to be accessible by everyone. Patients believe that staff should show courteousness, respect and empathy, which they believe all patients deserve (Reagon and Igumbor 2010).

A number of health care studies with a focus on quality of care make reference to patients' views in terms of their satisfaction with a health service. The studies reflect on the patients' satisfaction as a key

measurement of the quality of care received (Donabedian, 2005; Hasker, 2010 and Solome et al 2009). Therefore as a recommendation, thought should be given to improve staff-patient relations for greater patient satisfaction and better quality of service delivery and thereby ensuring that prioritising the patients is the most important. Therefore, thought should also be given to probing the reasons why staff are not empathetic and respectful towards the patients and ways to mitigate these attitudes and behaviours. Encouraging staff to undergo in-service training in soft skills such as empathetic listening and essential communication skills, to expand the competencies of staff in forging good relationships with patients, might prove useful. Management could then strive to create and maintain an enabling, empathetic and respectful environment that can enhance staff-patient relations and that is supportive of patients' rights.

6.5 ILLOGICAL QUEUING

There are varying reasons for queuing problems to arise, but the leading underlying causes of queuing voiced by the patients using this health facility and the staff rendering the service were mispronunciation of names, high levels of noise, misplacement of folders, signage problems and uncertainty about the queuing procedures.



Essentially, queuing problems happen when the patients are not attended to in the order that they arrive at the service point, with those who arrive first not being seen first, but instead made to wait while others are seen before them. Similarly, a queue management study by Bachmann et al (1997) reveals, it can be assumed that generally most people do not like queues and therefore good queue management is essential in any service environment. Good queue management is about ensuring fairness and demonstrating to clients that they are waiting in a planned environment, whilst reassuring them that they will be attended to fairly and timeously. The possibilities as to why illogical queuing with a few patients being repetitively bypassed happens are varied, but some potential reasons attributed by the staff and patients are commented on below?

Patients contend that the mispronunciation of names creates queuing problems, as when someone does not recognise their name being called then they are bypassed in the queue, causing a high waiting time for them, especially if the names of those who did not respond to an initial call are not repeatedly called again at intervals, and/or they repeatedly don't recognise the pronunciation of their names. Therefore, one could speculate that mispronunciation of names results from language barriers due to staff and patients not necessarily speaking the same language. This phenomenon is particularly

prevalent at this facility as the mother tongue of the vast majority of the patients (isiXhosa) is not spoken by 60% of the staff. Staff in contrast contend that the mispronunciations are not that far out as suggested by the patients and therefore contest that this as a cause of high waiting time. It is however likely that staff do not know how bad their mispronunciations are and although they think it is quite minimal, in fact they could be quite drastically mispronouncing the names. So, when the names are mispronounced to the degree that they are completely changed, the patients will not be able to pick it up, but if the names called sound fairly similar to theirs, then the patients could then think that it is their name being called, and query if it is them being called. It seems that the latter situation prevails and it is resulting in a significant underlying cause of illogical queuing. As a possible solution, certain patients suggested a numbering system aligned to a flashing screen that shows the ticket number or even if the numbers are just called out there is little chance of mispronunciation. Many patients felt that a ticketing dispenser system with screens will also lessen the noise as there will be no screaming of names and they believe people are matured enough to look out for their number and additionally it will give the patients some sort of ownership of the queue as they are actively participating in it by anticipating their number, based on the prior numbers that were displayed. During the focus groups the staff however relate that this numbering system was implemented before, and it just created unnecessary confusion for both the patients and the staff. According to staff, they had to cut cardboard boxes and write numbers on it, which they found cumbersome and ultimately mistakes were made with several duplicate numbers giving rise to confusion. These numbers were handed out to all patients who had a folder. However, challenges emerged when the 'new' patient who did not have a folder would not get a number and then had to wait long anyway, because staff tended to help the other patients who had folders, and hence numbers, first (Reagon & Igumbor, 2010).

The results also show that a certain amount of patients are unable to hear when their names are called, because of the high level of noise in the waiting area. As with mispronunciation of their names, this results in them not responding to their names being called, with a resultant long wait in the queue. As a solution to the high level of noise being experienced by the patients, some patients suggested that the flashing screen described and discussed above, be implemented (Reagon & Igumbor, 2010).

Patients not following the correct queue procedures due to a lack of knowledge on which queue to join, poor signage, incorrect signage, illiteracy, or the misalignment of signage could be possible underlying reasons for queuing problems. For example, the service point for chronic conditions does not fully explain where patients who have had their initial basic assessments done should then proceed to for

their full clinical evaluation, which then results in them being at risk for joining the wrong queue. Similarly, patients are often not told where to go by reception, which is the first service point visited by most patients, or they simply did not understand the directions given by the reception staff and hence mill around looking for the next service point and potentially join the wrong queue. While on the other extreme other service points such as tuberculosis clinic, antenatal clinic, pediatrics and others have clear queuing processes and also have good signage. Conversely the signs could be too small for a large facility, or the placement of the signs could be in inappropriate places where patients are unlikely to look, or the signs could be in a language which the patients don't understand, or the patient could be illiterate, all of which could be possible reasons why a small proportion of patients end up in the wrong queues. Therefore, it is vital that signage in a large congested facility is displayed in all languages spoken by patients, is large enough, is correctly placed and ideally should have pictographs or colour coding as well as writing (Bachmann et al 1997).

Other possibilities for queuing problems could be that the patients' folders could have been misplaced and patients are hence not seen in order, if staff are attending to patients based on the order of the folders they have available to them, rather than the physical seating arrangement of patients sitting in the waiting room. Therefore, patients might be bypassed but both they and the staff are unaware that they are being bypassed until a considerable amount of time has lapsed and either they become suspicious or the staff become suspicious as to why they have been sitting in the waiting room for a long time. It is therefore recommended that thought should be given to implementing an efficient filing system and the respective administrative staff should be well trained on it to ensure a smooth operation. Considering that queuing only affects a few patients, queuing by definition would usually not dramatically affect the median/average waiting times of the vast majority of patients, but for the few patients that it does affect, the waiting time can be dramatically increased. Hence efforts to reduce illogical queuing via attending to the above problems elucidated could be effected by appointing queue marshals that could assist in directing patients to respective queues to reduce waiting time. Some patients are however not convinced that queue marshals and the numbering system will alleviate the queuing problems, because they pessimistically feel that this is a poor use of human resources as the number of people who fall foul of illogical queuing is small. They believe the problem is better addressed via structural and process changes, such as the numbering of patients, good signage and alerting screens discussed above, which make it very unlikely that illogical queuing will occur (Reagon & Igumbor, 2010).

In contrast to queuing, some patients were fast-tracked with them being shifted ahead of others in the queue and then all other patients wait a little bit longer in direct proportion to the service time of the fast tracked patients. Typically, this happens when there are emergencies or some special service is happening at a given time, hence patients need to be fast tracked to that service point for rapid care (emergencies) or to obtain the service before it closes (special service). This could be considered as appropriate fast-tracking of patients. It was however intimated that inappropriate fast-tracking might be occurring at the facility with patients being fast-tracked simply because staff singled them out inappropriately as special for whatever reason (friends of staff, family of staff, influential people). Whether this is occurring or whether it is just perceived to be occurring, it causes dissatisfaction among patients, because it results in slightly higher waiting times for them and it manifests as blatant unfairness (Reagon & Igumbor, 2010).

6.6 LOGISTICS

The literature notes that certain minimum requirements must be in place to ensure that an organization such as a community health care centre has the capacity to deliver services. Among these requirements are physical aspects such as space and resources, as well as less tangible aspects such as attitude and culture (Kaplan, 1996). The results reflect that at certain times the services were not organised to cater for visiting specialists, whose time at the facility is limited and precious. There was no dedicated space allocated to visiting specialists which they could use to attend to the patients that were booked to them and often a temporary space was not made available to them timeously enough and hence they had to wait for a space to be made available resulting in them being idle for a proportion of the session time. Given that they are a scarce resource it is important to fully utilise their valuable time by facilitating that they can spend all their time there attending to patients. However, the unavailability of space for visiting specialists seems to reflect a deeper problem of a lack of planning before the commissioning of the facility, or poor forecasting of the variety of daily and special event services that would be required. Results also show that the same staff felt awkward that the visiting specialists were made to wait for long periods until space was freed up to accommodate them. Likewise, as the visiting specialists also felt anxious and nervous while waiting for freed up space, therefore, the lack of space could reasonably be expected to result in a logistical problem. Then it could be fairly argued, that one must not only assume that the availability of services refers to issues relating to capacity and types of services available, but it is also about how services are organised with the knowledge of limited capacity in terms of available space. Hence, as literature shows, logistical problems typically occur when patients are waiting to be seen and staff are available to see patients but due to a lack of equipment, rooms or other logistical needs, staff are unable to attend to the patients. (Reagon, 2000)

Johnson and Capasso (2012:57) reported that to improve the flow in a PHC facility, one must understand how the process is perceived (voice of the customer) and how the process is presently working (voice of the process). Therefore, as a possible recommendation management could do pre-planning to determine and provide specialist service point space for the days that these specialist staff visit the facility. This could be done by doing an assessment of all the available physical resources in the facility that could be utilised, in order to uncover any hidden or under-utilised space. This space however should be accessible and meet universal access standards (DOH, 2007). By doing this, the facility is providing a service that caters for the needs of the community, in terms of specialist care.

Furthermore, results reflect that patients and clinicians alike shared similar opinions about missing folders and missing laboratory results within the folders. When a folder is misplaced, it often results in staff constantly waiting for missing folders from reception, which in the end unavoidably forces them to go to reception to help retrieve the folder. This demonstrates that there isn't an efficient filing system in place and therefore patients' records are not filed correctly. As a result, it takes a disproportionate amount of time to retrieve the folder when the patient arrives at the clinic and causes an avoidable logistic problem, causing increased waiting time for the patients. Similarly, when patients notice that their folders are lost in the system, it causes angst, especially if there is potentially compromising health information in the folders. Equally, continuity of care is at risk as the history of previous treatment is not at hand.

Similar results in a 2012 study found that the delay of blood tests results and diagnostic imaging were major factors contributing to the delay of care to patients (Mehmood, Khan and Khursheed, 2012). Also, the study by Burström, (2012) found that a delay in getting blood results posed an obstacle to efficient patient care. The World Health Organisation's six dimensions of quality (effectiveness, efficiency, accessibility, patient-centeredness, equality and safety) could be compromised when patients' experience long waiting time. The effect of missing laboratory results or the turnaround time of the results came out during patient interviews and the staff focus groups. The staff are particularly annoyed at having to personally telephone the national health laboratory services for the results, when the results of patients are delayed. What makes it worse is that the calls must be made from the reception area and thus the patient is left unattended for a period of time and it lengthens the patient's waiting time.

A likely suggestion could be to assign a staff member of the reception team as the champion to ensure that the laboratory results are placed in the folder and that folders are always ready for the clinicians.

This could lighten the workload on the clinicians and improve their productivity, as well as improve patient flow in the facility. Ultimately, management could investigate the possibility of incorporating an efficient computer software programme, where clinicians can retrieve different patient data through one integrated computer system, in their consulting rooms. Moreover, management could consider implementing an efficient filing system and the respective administrative staff should be well trained on it, to ensure a smooth operation. These initiatives could assist clinicians in rendering efficient and quality patient care and ultimately improve the high waiting time. Therefore, good planning with commitment and support by management, will bring about quality and consistency in service delivery

6.7 UNNECESSARY SERVICE POINT

Results show that some patients feel that the 'helpdesk' is an unnecessary service point and a waste of time and they feel that some other system of allocating appointment dates and times should be utilised. This was mainly due to patients being frustrated when after their clinical services were administered to them, they then needed to go and sit and wait at the helpdesk service point for their next appointment. They felt that the clinicians should give them their next appointment date, thus avoiding the unnecessary helpdesk service point.

Although the introduction of a help desk service point within the clinic setting is well intended to assist patient flow, as it anticipated alleviating congestion at the other service points, it caused frustration and anger for many patients. This then led to unintended inefficiencies and wasted time into the system. In addition to the above reasons elucidated by the patients, it also caused inefficiencies because helpdesk service point staff were not efficiently servicing the patients. Patients felt that they are not effectively attended to at this service point, even though helpdesk staff members are present. However, they felt that the helpdesk service point staff are taking a frustratingly long time to process an appointment for a patient. Thus, this means that the helpdesk staff are attending to the patients in a laboriously long time, resulting in all patients having to wait very long to be serviced, and in addition a large batch forms at the helpdesk as patients come to this service point from many different clinical service points, as helpdesk is effectively a bottleneck point.

Mazzocato et al., 2010 says optimizing performance requires measuring the demand, capacity, and flow into and out of each node within the clinic setting, and adjustments is required to improve the overall collection of steps, including such steps as consolidating or removing processes in order to streamline patient service flow. Other studies show that some of the causes of prolonged waiting times are inefficiencies in operation and coordination that result in flow disruption, the underuse of resources,

and an imbalance between the demand of patients to be seen and the supply of providers at any given time (Mazzocato et al., 2010; Young and McClean, 2008)

The question is, does the service point add value or is it a waste of time for the patients? In essence, getting an appointment is of value, but going to a specific service point to get the appointment is considered by the patients as a waste of time. Ideally, as a patient, one wants to get the appointment for one's next visit at the definitive service point where one was seen for this current visit, either by the doctor or nurse. During the interviews, many patients responded by saying they are frustrated, angry and many feel powerless because they know that the help desk service is a requirement for obtaining their next appointment date, but they feel that it is such a waste of their time.

Consistent with other studies Crutchfield and Kistler's, (2017) findings suggest that new ways to improve appointment systems have the potential to increase appointment attendance, which may result in improved health outcomes for patients and improved clinic efficiency. The majority of the patients interviewed, felt that an alternative for receiving the next appointment date could possibly be automated, or given by the clinician instead of having to queue at helpdesk and it is at that time when they feel powerless. At the same time, the difficulty that the patients do not appreciate or do not know, is that in order to provide an appointment date/time the clinician needs a networked computer in the consulting room to be able to log onto the electronic appointment system. Currently, it is only at reception and helpdesk where one can be logged onto the existing electronic appointment system to schedule appointments as only they have networked computers. The question then arises, how does management deal with the problem of unnecessarily waiting for extended periods to get an appointment at the helpdesk service point, given that the technical solution of more networked computers requires financial inputs which they in all likelihood don't have. Therefore, management could look into the possibilities of finding an alternative solution to allocating appointment times. Whereby, patients could physically or telephonically make appointments, as it is indicative that the helpdesk service point is overwhelmed.

There could also be a challenge in not being able to see the available appointment times on the already given appointment dates of the patients without double booking. This could either be a minor technical glitch or a major financial hurdle to the proposed and accepted, implementation of a computer in each consulting room. This is mainly due to clinicians not being able to see the available dates in the future and then also not being able to give a time for the appointment. So, a potential recommendation was

discussed in the focus groups and it was suggested to install a computer in each consulting room which has the requisite software to allow booking of appointments. Therefore, unless each clinician has access to computer equipment with the requisite software, it will remain a challenge.

Another consideration the facility management could look into, albeit a second choice, could be to introduce Google calendar with the existing health information system. However, technical issues should be managed and guarantees should be in place that the patient's total waiting time will not be compromised. Likewise, thought should be given to allow reception to do the appointments without compromising the patients waiting time. Also allowing telephoning in for an appointment could also be a consideration and therefore management should balance out all the alternatives to shorten the waiting time of the patient.

6.8 CONDITIONS AND EXPERIENCES

Finally, consequent on the long waits, there were other deleterious conditions and experiences incurred by the patients and staff alike. Results indicate that patients experienced dirty waiting areas, experienced decreased safety when they arrived before the facility opened and even the weather played a role by affecting the circumstances in which patients had to wait. Some patients endured defensiveness from staff about the high waiting time and incurred dismissive disrespectful interactions with staff.

To start with, patients indicated that the waiting areas were constantly dirty and the reluctance of the cleaning staff to clear the waiting area of dirt and other debris, shows disrespect towards them. However, staff on the other hand contend that the dirty waiting area is a consequence of the large volumes of patients being present at the same time and that it is not possible to be continually cleaning, only to have the space rapidly dirtied again. Yet, patients feel strongly that the waiting area is dirty at most times and that cleaning staff should strive to keep it tidy and clean via regular cleaning. Therefore, as a recommendation, some patients feel that over and above the education needed about the services offered, more education about general hygiene is just as important to reduce the likelihood of the place being dirtied soon after it was cleaned. The World Health Organisation (WHO) recommends that all healthcare facilities should have clear policies and data to drive safety improvements. This includes ensuring consistent and rigorous cleaning, sanitization of surfaces and most importantly, they should have good waste management services available. This is all needed to ensure sustainable and significant improvements in the safety of health care (WHO, 2017).

Additionally, patients' feel anxious about the weather when it is very cold and about their safety while standing outside the facility early in the morning before the facility opens. The safety aspect is unfortunately a consequence of arriving very early in the morning when the security staff has not started working. Also, during the colder months, patients who arrive very early have to endure the coldness and at times wet conditions while standing outside the facility, before the opening of the facility.

Moreover, the results appear to reveal that certain staff look for reasons to blame the patients for the high waiting time and a common excuse offered by the staff is that the waiting time is due to an increased workload, which is partially attributed to patients who do have private medical aid, but who when their funds run out, attend public facilities and further crowd an already crowded service.

The Office of Standards Compliance establishes a benchmark against which facilities can be assessed, gaps identified and strengths appraised. One of the priorities for quality improvement is patient rights, which includes acceptable staff attitudes (OHSC, 2013). The results show that patients perceive staff as being disrespectful and hence the staff-patient relationship was discussed within the different focus groups and interviews. Therefore, the research notes that this could be directly attributed to the patients' perception that some staff has an arrogant and rude attitude. Several patients believe this arises because the staff are attending to public sector patients, and hence patients must be grateful for the service provided. Results also indicated that the staff became disrespectful and rude towards the patients who enquired about the high waiting time. The staff on the other hand felt that they had to repeatedly account for something (high waiting times) which they believe they were not personally responsible for. However, patients are also very aware that the staff are under stress, but they (the patients) still feel that this should not give the staff the right to be disrespectful towards them.

Therefore, as shown in the study by Reagon and Igumbor (2010), thought should be given to the need to turnaround the deleterious effect of high waiting times on the staff-patient relationship. But cognizance must also be given to the way patients treat the staff, as some patients are reported as being extremely disrespectful towards the staff. A possible suggestion is to have staff trained in a more conciliatory disposition regarding the high waiting times and be more empathetic towards the patients. Ensuring that staff have been trained on the need to have affinity for all patients irrespective of how they appear, when foul language is used, the way they dress, or even if they are drunk and somewhat disorderly, might be helpful. Also, management should strive to ensure that staff do not work too long

hours and make certain that staff have all the equipment and tools to satisfy the patients' service needs. So, there are many factors already that affect the staff-patient relationship and these conditions and experiences are making it worse. Therefore, thought should be given to the need to change around staff-patient relations for greater patient satisfaction and better quality of service delivery in the facility. More importantly, cognisance should be taken of the study of Johnson and Capasso (2012:57) who reported that to improve the patient experience in a primary health care facility, one must understand how the process is perceived (voice of the customer) and how the process is presently working (voice of the process).

6.9 SUMMARY OF UNDERLYING CAUSES

Table 3 shows a summary of probable underlying causes which are listed next to the relevant immediate cause.

Table 3:

Immediate Cause	Underlying Cause
Batching Early in the Morning	The belief of being attended to quickly if they arrive early
	The fear of not being attended to on that day
	Non-adherence to the appointment system by patients and staff
	Repercussions of being late for an appointment
	Cultural beliefs around not being late for appointments
	Work related reasons for arriving early
	Patients are aware that the waiting time is less at various time intervals during the day
	Staff's preference for purposefully causing a batch for convenience
	Transport Challenges
	Patient's expectation of a reward system for being early for an appointment
Mismatch (especially very early in the morning)	Early arrival of patients causes a mismatch
	Staff meetings prioritised ahead of waiting patients
	Staff taking lunch and tea breaks simultaneously
	Club room staff that are not present throughout the day
Inefficiency	Patients believe that staff have 'authority issues'
	Patients believe staff have a poor work ethic
	Power differential between the staff and patients
	Staff belief that medical aid patients shouldn't attend public health centres
Queuing	Patients believe that favouritism directly influences their position in the queue
	Patients believe that the mispronunciation of names also directly influences their position in the queue
	High levels of noise in the facility
	Patients are unclear of the queuing procedures

Logistical Problems	Unavailability of consulting rooms for visiting clinicians
	Missing folders and missing laboratory results
Unnecessary Service Point	An immediate cause of waiting time not measured by the formal quantitative survey
Conditions and Experiences endured by the patients and staff while waiting for a service	Staff becomes defensive about high waiting times
	Dirty waiting area
	Unfamiliarity with the appointment system
	Staff and patients lack familiarity with the flow process
	Patient safety is compromised when the facility doors are closed and the weather has an impact on arrivals

CHAPTER 7

LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

7.1 LIMITATIONS

A key limitation was that I am a novice researcher and hence was inexperienced in conducting interviews and focus groups. The nett result of this inexperience was that I did not fully explore issues raised in the interviews and focus groups to the extent that I should have, which resulted in limited deep probing of the participants' responses to the questions posed.

Moreover, staff could possibly have been unforthcoming in their responses because of fear that they might not only damage their own reputation but also that of the facility as well. Equally, patients might have been reticent about what they want to complain about on the basis that this is a public facility (no cost for services, tests and medication provided), and they might have feared that how they answer, might negatively affect future service provision to them. Then again, patients might want to have an opportunity to complain, which they are often not given, and now that they were given an opportunity, the patients might have exaggerated their responses.

The recruitment of the participants for the focus groups and the in-depth interviews was a limitation, as a proportion of the patients and the staff refused to participate, and it could be that their views were quite different from those who did participate.

Although purposive sampling was used to improve representivity of the focus groups, it targeted staff working in the service points with high waiting time and hence the views of those staff working in service points with medium to low waiting times, are not portrayed.

Additionally, at the end of the interviews and the focus groups, I would have hoped to have a workshop to discuss major themes with staff, but due to time constraints and logistical issues, it was not done, and the possibility to have the patients also present at the workshop was unlikely. I had limited access to literature on the subject of underlying causes and feasibility of recommendations to reduce high waiting times, as this was fairly new research.

Finally, the interviews with the patients and the focus groups with the staff were in English, which for many was not their first language and only those who could speak, understand and interpret English, were interviewed.

7.2 CONCLUSION

In summary, several useful insights on the underlying causes of and the recommendations for reducing waiting times were uncovered for each of the known immediate causes of high waiting times. For batching it was patients' fear of being turned away, work attendance related logistics, challenges with the telephonic appointment system and transport logistics that pushed several patients to arrive quite early in the morning resulting in a large batch. The belief that it is culturally disrespectful to be late, the expectation of being rewarded for being early and the staff's deliberate attempt at letting batching occur for convenience, were also relayed as being an underlying cause of batching.

Underlying causes of mismatch by arriving at the facility before it opened included that some patients wanted to be seen first either for ease of planning of the rest of their day or because they felt very sick and want to be attended too early in the day before they deteriorated and due to work attendance related logistics. Mismatch at other time in the day were due to staff not staggering their lunch and tea breaks, holding staff meetings in the morning and related to a service point (club room) having no patients present at times in the day and hence the staff were induced to leave the service point unattended.

Patients related that inefficiency, with staff prioritising other tasks ahead of attending to patients, arose due to disrespect by staff for them, aided by a power differential which is skewed towards staff, which combined influenced them to deprioritise attending to patients who were waiting. Reasons why illogical queuing occurred with some patients being bypassed by several patients, who arrived after them, were either the mispronunciation of names, high levels of noise, misplacement of folders, signage problems or the uncertainty about the queuing procedures.

Logistical causes of high waiting time included a lack of pre-planning of space usage especially for unusual services such as visiting specialists, missing folders and missing laboratory results. Furthermore, patients and staff alike felt that the helpdesk service point is an unnecessary service point protested that the waiting area was dirty most times, and patients' endured decreased safety and inclement weather when they arrived before the facility opened.

In conclusion, the research demonstrates the value of the study beyond the current setting of a particular Community Health Centre because the findings are almost certainly transferrable to other facilities with similar settings. In addition, the findings contribute to local knowledge on how to improve the management of waiting times particularly for primary healthcare service delivery in Cape

Town, which is currently in the spotlight.

Finally, it could in all likelihood be transferrable regionally or internationally, to facilities with similar settings and contexts because the use of the research allows the findings to be generalizable in theory, and therefore might contribute to the improved management of waiting times at health facility level.

The following recommendations addressing these underlying causes were proffered by patients and staff.

7.3 RECOMMENDATIONS

1. Consider discontinuing the practise of turning patients away. This could be achieved by decreasing appointment bookings for days in the week and times of the day where it is known that there are a large number of walk-ins typically arriving.
2. Consideration could be given to changing operating hours to alleviate the mismatch of the early morning arrivals by opening at 7am.
3. Staff should be encouraged to stagger their lunch and tea breaks and ensure that there is no complete shutdown of services at any time at any service point.
4. Move ‘club room’ service point to another area where patients arriving are easily visible by staff that have temporarily left the service point.
5. Staff should hold meetings in the afternoon when it is less busy and there are fewer patients to attend to.
6. Improve staff-patient relations by implementing in-service training in soft skills such as empathetic listening and essential communication skills, to expand the competencies of staff in forging good relationships with patients.
7. Signage should be displayed in all languages spoken by patients, be large enough and be correctly placed.
8. If viable, incorporate an arrival numbering system coupled with an electronic information screen, which indicates the patient ticket number and hence their place in the queue.
9. Management could do pre-planning to determine and provide specialist service point space for the days that these specialist staff visit the facility.
10. Investigate the logistical challenges such as missing laboratory results and missing folders and attend to these.
11. Investigate an alternate system to allocate appointment times physically or telephonically, as the helpdesk service point is overwhelmed.
12. Cleaning staff should strive to keep the waiting area tidy via regular cleaning, and displaying

messages about general hygiene might help to reduce the likelihood of the area being dirtied, soon after it has been cleaned.

REFERENCES

Ahmad, I & Dun, S. (2009). *Patients' satisfaction with primary health care services in Qatar*. Middle East J Family Med, 7: (1) 4 - 9. [Online]. Available: https://academic.oup.com/intqhc/article/15/3/241/1856225[Downloaded 26/11/2015 19:20PM]

Aldana, Piechulek H, Al-Sabir a. (2001). *A client satisfaction and quality of health care in rural Bangladesh*. Bull World Health Organ. 2001; 79(6): 512-517.

Anderson, R. T., Camacho, F. T. & Balkrishnan, R. (2007). *Willing to wait?: The influence of patient wait time on satisfaction with primary care*. BMC Health Services Research: 1472-6963-7-31. [Online], Available: http://www.biomedcentral.com/1472-6963/7/31[Downloaded 22/03/2015 19:59 PM]

Arries, E.J. & Newman, O. (2008). *Outpatients' experiences of quality service delivery at a teaching hospital in Gauteng*. South Africa Health, 13 (1): 41-54.

Bachmann MO, Barron P. (1997). *Why wait so long for child care*? An analysis of waits, queues and work in a South African urban health centre. Trop Doct. (1) : 34-38

Bamgboye, E. A. & Jarallah, J. S. (1994). *Long waiting outpatients: target audience for health education,* 23 (1): 49-54.

Barlow, L.B. (2004). *No more Queues. A prescription to cure UK NHS outpatient clinic queuing blues?* The second world conference on POM and 15th Annual POM conference. 3 May 2004. Cancun, Mexico.

Beyene, K. A., Gedif, T., Gebre-Mariam, T. & Engidawork, E. (2009). *Highly Active Antiretroviral Therapy Adherence and its Determinants in Selected Hospitals from South and Central Ethiopia*. Pharmacoepidemiology and Drug Safety, 18:1007-1015.

Bosch, V., & Dietz, D. (2000). *Minimizing expected waiting in a medical appointment system*. IIE Transactions, 32, 841-848.

Brink, H. (2006). *Fundamental of research methodology for health care professionals*, 2nded. Cape Town, South Africa.

Bruijns, S. R., Wallis, L. A., & Burch, V. C. (2008). *Effect of introduction of nurse triage on waiting time in a South African emergency department* 2008. Emergency medical journal, 25 (1): 395-402

Burns, N. & Grove, S. K. (2003). *Understanding Nursing Research*, 3rd ed. W.B. Philadelphia, Saunders Company. 18-549.

Burström, B. (2012). Commentary: *Self-rated health and mortality in low income settings*. International journal of epidemiology, p.dys197.

Cao, W., Wan, Y., Haibo, T., Fujun, S., Danhong, L., Zhijun, T., Caihong, S., Qing, Y. & Yongyong X. (2011): *A web-based appointment system to reduce waiting for outpatients*: A retrospective study. BMC Health Services Research 2011. 11:318. [Downloaded 26/11/2017 04:30AM]

Cape Argus (2009). SA ahead of its ARV treatment targets. Available online at: http://www.capeargus.co.za. [Downloaded 28/11/2017 09:45AM].

Cape Argus (2011). Cape clinics in state of crisis. Available online at: http://www.capeargus.co.za. [Downloaded 28/11/2017 19:47AM].

Cayirli, T. & Veral, E. (2003). *Outpatient scheduling in health care*: A review article. Journal of production and operations management. 12(4): 519-547

City of Cape Town (2011). *2011 Census Cape Town Suburbs: Strategic development information and GIS development groupings*. Available at: http://cityweb.capetown.gov.za/en/cdirc/Pages/2011-census-suburb-profile-data-land.aspx [Downloaded: 01/11/2018]

Crutchfield, T. M. & Kistler, C. E. (2017). *Getting patients in the door: medical appointment reminder preferences. Patient preference and adherence*, 11, 141-150. doi:10.2147/PPA.S117396.

Daniels, J., Zweigenthal, V., & Reagon, G. (2017). Assessing the impact of a waiting time survey on reducing waiting times in urban primary care clinics in Cape Town, South Africa. Journal of public health in Africa, 8(1), 639. doi:10.4081/jphia.2017.639. Available at: https://www.ncbi.nlm.nih.gov /pmc/articles/PMC5708303/. [Downloaded: 01/11/2018]

De Jager, J. W., Du Plooy, A. T. & Femi Ayadi, M. (2009). *African Journal of Business Management* Vol. 4 (2): 133-139. [Online], Available: http://www.academicjournals.org/AJBM. [23/03/2015 19:43PM]

Dhar, S., Michel, R. & Kanna, B. (2011). *Improving visit cycle time using patient flow analysis in a high-volume inner-city hospital-based ambulatory clinic serving minority New Yorkers*. Journal of health care quality. 3 (2): 23-28

Dinesh, T.A. & Singh, S. (2013). *Reducing waiting time in outpatient services of large university teaching hospital* – A six sigma approach. Journal of management in health. 107 (1): 31-37

Donabedian A. (2005) *Evaluating the Quality of Medical Care*. Milbank Q. 83 (4): 691-729

Elloker, S., Olckers, P., Gilson, L., & Lehmann, U. (2013). Crises, routines and innovations: the complexities and possibilities of sub-district management. [Online], Available: http://www.hst.org.za/publications/south-african-health-review-201415 [Downloaded 28/11/2017 08:20PM].

Farrohknia, N., Castrén, M., Ehrenberg, A., Lind, L., Oredsson, S., Jonsson, H., Asplund, K. & Göransson, K. E. (2011). *Emergency Department Triage Scales and Their Components*: A Systematic Review of the Scientific Evidence. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine 2011 19:42.Gilboy, Travers, & Wuerz, 1999

Fetter, R. B. and J. D. Thompson. (1966). *Patients' Waiting Time and Doctors' Idle Time in the Outpatient Setting*. Op. Research 13 (5): 689-711.

Gilboy, N., Travers, D., & Wuerz, R. (1999). *Re-evaluating triage in the new millennium: A comprehensive look at the need for standardization and quality*. J Emerg Nurs, 25(6): 468-473.

Godin, G., Cote, J., Naccache, H., Lambert, D. & Trottier, S. (2005). *Prediction of Adherence to Antiretroviral Therapy: A One year Longitudinal Study*. *AIDS Care,* 17:493-504.

Harper, P. & Gamlin, H. (2003). *Reduced outpatient waiting times with improved appointment scheduling: a simulation modelling approach*. 25: 207. https://doi.org/10.1007/s00291-003-0122. [Online], Available: [Downloaded: 29/11/2017 03.48pm]

Hart, M.C. (1995). *Improving out-patient clinic waiting times: methodological and substantive issues*. International Journal of Health Care Quality Assurance, 8 (6): 14-22.

Hasker E, Khodjikhanov M, Sayfiddinova S, Rasulova G, Yuldashova U, Uzakova G, (2010). *Why do tuberculosis patients default in Tashkent City, Uzbekistan? A qualitative study*. Int J Tuberc Lung Dis. 2010; 14(9):1132–9. [Online], Available: http://www.biomedcentral.com/471-2334/8/97 [Downloaded: 28/11/2017 10.05am]

Hasker, E., Khodjikhanov, M., Usarova, S., Asamidinov, U., Yuldoshova, U., Van der Werf, M. J., Uzakova, G. & Veen, J. (2008). *Default from Tuberculosis Treatment in Tashkent, Usbekistan; Who are these Defaulters and Why do they Default?* [Online], Available: http://www.biomedcentral.com/471-2334/8/97 [Downloaded: 15/11/2017 10.00.am]

Hasumi, T. & Jacobsen, K. H. (2014). *International Journal for Quality in Health Care*, 26 (4): 482

IOL News. [Online], Available: http://www.iol.co.za/news/south-africa/eastern-cape/ecape-patients-wait-long-for-medicine-1.1452656#.VJ95BV4C2A [Downloaded: 21/03/2015 18:54PM]

IOL News. [Online], Available: http://www.iol.co.za/news/south-africa/kzn-patients-bemoan-long-wait-for-medicine-1.449664#.VJ95kV4C2A [Downloaded: 21/03/2015 18:59 PM]

Jawahar, SK (2007). *A Study on Out Patient Satisfaction at a Super Specialty Hospital in India*. Internet Journal of Medical Update 2007; 2:13-7.

Johnson M, Sensei L, Capasso V. (2012). *Improving patient flow through a better discharge process*. J Healthc Manag. 2012;57(2):89–93. [PubMed] [Downloaded: 26/11/2017 05:10AM]

Hermoni, D., Mankuta, D., & Reis, S. (1990.). Failure to Keep Appointments at a Community Health Centre: Analysis of causes. *Scandinavian Journal of Primary Health Care, 8*(2), 107–111. Available: https://doi.org/10.3109/02813439008994940 [Downloaded 01/11/2018 10:39PM]

Isbell, F. M. (1963). *A statistical analysis of the waiting and service times in the Air Force clinics*. Available: https://www.researchgate.net/publication/271726117 [Downloaded: 26/11/2017 15:50 PM]

Kaplan, R.S. & Norton, D.P. (1996). *The Balanced Scorecard: translating strategy into ac-tion*. Boston: Harvard Business School Press.

Khoury, S.A. & Mawajdeh, S. (2004). *Performance of health providers in primary health care services in Jordan*. Eastern Mediterranean Health Journal, 10(3), 372-81.

Leape L, Shore M, Dienstag J, et al. (2012). *Perspective: A culture of respect:Part 2: Creating a culture of respect. Acad Med. 2012:87;845-852.* Available: https://www.femi.com.uy/archivos_A Culture of respect Part 2.pdf. [Downloaded 31/10/2018 09:18PM]

Mahomed, H. & Bachmann, M.O. (1998). *Block appointments in an overloaded South African health centre. Quantitative and Qualitative Evaluation*. International Journal of Health Care Quality Assurance, 11(4), 123 – 126.

MacKian, S. (2003). *A review of health seeking behavior: problems and prospects*. University of Manchester Health Systems Development Program.

Mazzocato, P., Savage, C., Brommels, M. and Hakan Aronsson, J. T. (2010). "*Lean thinking in healthcare: a realist review of the literature".* Quality and Safety in Health Care 19, pp. 376 - 382

Maister D. (2005). *The psychology of waiting lines*. David Maister Professional Business Professional Life. [Online]. 1985 [cited 2013 12 1.]Available from: http://davidmaister.com/articles/thepsychology-of-waiting-lines/. [Downloaded 26/11/2017 05:33AM]

Mehmood A, Zafar A & Khan N. (2008). *'Impact of HRIS-based hiring for the organizations/ universities in Pakistan'*, Kohat, Kohat University of Science & Technology Institute of Information Technology, Pakistan.

Office of Standards Compliance (2013). Available from: http://ohsc.org.za/. [Downloaded 01/11/2018 16:39PM]

Ogunfowokan O, Mora M. (2012). *Time, expectation and satisfaction: Patients' experience at National Hospital Abuja, Nigeria*. Afr J Prm Health Care Fam Med. 2012; 4(1), 398. [Online], Available: http://www.dx.doi.org/10.4102/phcfm.v4i1.398. [Downloaded 26/11/2017 05:38AM]

Peltzer, K, Matseke, G, Mzolo and Majaj, M. (2009). *Determinants of knowledge of HIV status in South Africa: results from a population-based HIV survey*. BMC Public Health [2009], [9]: [74].

Pillay DI, Ghazali RJ, Manaf NH, Abdullah AH, Bakar AA, Salikin F, Umapathy M, Ali R, Bidin N, Ismail WI (2011). *Hospital waiting time: the forgotten premise of healthcare service delivery*? Int J Health Care Qual Assur. 2011; 24(7):506-22.

Rispel L, Cabral J, Price M, Beattie A. (1996). *Confronting need and affordability*. Guidelines for PHC services in S.A: an essential primary health care package for South Africa, University of Witwatersrand Press.

Reagon, G. & Igumbor, E. (2010). *Strengthening health systems through training of health care providers in the conduct of routine waiting time and system efficiency surveys*. In Studies in Health Technology and Informatics. (590-594).

Reagon, G. & Gouws, M. (2005). *Conducting a District Waiting and Service time Survey. A how to Manual*. Unpublished Guideline, Cape Town: University of Western Cape.

Reagon, G., Zogoe, A., Koopman, F., Adams, G., Titus, N. (2005). *Assessment of the Waiting and Service time survey in Cape Town*. Unpublished report. Cape Town: University of Western Cape.

Saidi, M. (2007). *Developing a User- Perception Assessment Tool for Health Facilities in South Africa*, Architectural Science Intern report. (8-11)

Saidi, M. (2007). *Application of the Health Belief Model for Osteoporosis Prevention among middle school girls students, Garmsar, Iran*. Education for Health, 20(1). [Online], Available: http//www. Education for health.net/ [Downloaded: 21/11/2017].

Scott, V., Dinginto, N., & Xapile, Z. (2015). Operational health service management: understanding the role of information in decision-making. [Online], Available: http://www.hst.org.za/publications/south-african-health-review-201415 [Downloaded 28/11/2017 08:24PM].

Shaikh BT. (2005). *Quality of health care: an absolute necessity for patient satisfaction*. J Pak Med Assoc. 2005 Nov; 55(11): 515-6. [Online], Available: https://www.ncbi.nlm.nih.gov/pubmed/16304878 [Downloaded 26/11/2017 06:04AM]

Solome, B.,Wamala, S., Galea,S., State, A., Peterson, S. & Pariyo, G. (2009). *Community perceptions and factors influencing utilization of health services in Uganda*. International Journal of Equity in Health, 25(8): 1186-1475. Available: https://www.ncbi.nlm.nih.gov/pubmed/ [Downloaded 26/11/2017]

Steyn, K. (2007). *Heart and Stroke Foundation of South Africa*. Media Data Document. Cape Town: Department of Medicine, University of Cape Town, and Chronic Diseases of Lifestyle Unit, July 2007.

Steyn, K., Levitt, N., Fourie, J, Rossouw, K, Martell, R. & Stander, I. (2006). *Treatments status and experiences of hypertension patients at a large health centre in Cape Town*. 1 (9):441-450. Available from: https://www.ncbi.nlm.nih.gov/pubmed/10600067 [Downloaded 26/11/2017 05:57AM]

Young, T.P. & McClean, S.I. (2008), *"A critical look at Lean Thinking in healthcare"*, Quality and Safety in Health Care, Vol.17, pp. 382-86.

Western Cape Department of Health. (2011a). *Annual Client Satisfaction 2011/2012*. [Online], Available: https://www.westerncape.gov.za/news/annual-client-satisfaction-survey. [Downloaded 28/11/2017 18:43PM]

Western Cape Department of Health. (2011b). *Waiting Times Survey*. [Online], Available: https://www.westerncape.gov.za/search/node/waitingtimes. [Downloaded 29/11/2017 03:39AM]

Western Cape Department of Health. (2011c). *Annual Performance Plan 2011/2012*. [Online], Available: https://www.westerncape.gov.za/sites/www.westerncape.gov.za/files/documents/2012/10/doh_annual_report_2011_2012.pdf [Downloaded 01/11/2018 10:39PM]

Western Cape Department of Health. (2013). *Department of health works on improving patient flow at hospitals*. 2013. [Online], Available: http:// www.westerncape.gov.za. [23/03/2015 19:40PM]

Western Cape Department of Health. (2017). *Annual Client Satisfaction 2016/2017*. [Online], Available: https://www.westerncape.gov.za/news/annual-client-satisfaction-survey. [Downloaded 29/11/2017 01:50AM]

World Health Organisation. (2017) *Patient safety: Making health care safer.* Geneva: World Health Organisation; 2017. Licence: CC BY-NC-SA3.0 IGO. Available: http://apps.who.int/iris/ bitstream/handle/10665/255507 /WHO-HIS-SDS-2017.11- [Downloaded 30/10/2018 02:15PM]

APPENDICES

Waiting Time Survey Report

Waiting Time Survey (WTS)

Report for a Primary Health Care Facility in Cape Town

Survey conducted on 26 August 2015

Survey Overview

A Waiting Time and Service Efficiency Survey primarily measures how long people wait for a service and the amount of service time they receive at health facilities. Importantly in addition to identifying high waiting times the survey identifies ***the reasons why these arose*** and suggests ways to reduce them. The survey also measures the workload of the staff, the efficiency of service provision and the percentage of time staff spent attending to patients.

Survey Methodology

The amount of time that patients spent waiting for a service, and the time taken to provide the service, was calculated for every patient that visited the hospital, on an average day in the week (usually a Wednesday).

As patients entered the clinic/CHC they were handed a timesheet on which their arrival time was recorded. The patients were then asked some survey questions, such as their age, whether they were employed and how they travelled to the health centre. Each of the health workers (such as receptionist, clinician, pharmacist, nurse, etc.) who saw the patient on that day, then filled in the time they started seeing the patient and the time they finished seeing the patient. When the patients left the clinic/CHC the departure time was recorded and they were asked questions about how long they are willing to wait at the clinic/CHC for the services which they had just received.

The health workers completed a personal timesheet. On their personal timesheet they recorded the time that they commenced duty at a service point and the time that they completed their duty at that service point. The health workers also filled in a short survey on the amount of time that they think it is

appropriate for patients to wait and on whether they had sufficient equipment and space to properly attend to the patients.

Using a combination of data from the patients' timesheets, the patients' survey, the health workers' timesheets and the health workers' survey, the results shown below were calculated.

Facility Description

Facility Type: CHC

Facility Location (Suburb): Milnerton

OPD Opening Time: 07:30

OPD Closing Time: 16:00

Emergency Unit: **Extended hours**

How to Interpret the Results of a Waiting Time and Service Time Survey

The main results of the survey are presented using two summary tables, one composite table and two graphs. A description of the tables and graphs are provided below.

The composite table is called the "**Detailed Service Point Table".**

The graphs are called the:

"Arrival Time Graph"

"Snapshot Graph"

The summary tables are called the: **"Summary Table of High Waiting Times, Quality of Care, Residual Staff Capacity and Causes of Waiting Times"** and **"Summary Interpretation and Suggested Actions for every Service Point".**

Interpretation guidelines for the range of values for waiting times, service times and % staff clinical time usage are then provided.

A list of the potential causes of a long waiting time, are then provided. Using the data from the table and the graphs in conjunction with the list of potential causes, the actual cause of a long waiting time can be established.

1. How to Interpret the Detailed Service Point Table

1. A. For every service point of the facility, this table shows the following:

- Total Number of staff who worked at the service point
- Equivalent staff who worked at the service point. This is calculated based on the amount of time staff spent at the service point with 8 hours equalling one equivalent staff member. So one equivalent staff member is a staff member who worked for 8 hours; half an equivalent staff member is a staff member who worked for 4 hours, etc.).
- Total Number of patients seen at the service point
- Workload: Calculated as patients seen per staff member per day
- Percentage time spent attending to Patients: This is the percentage of the total time that staff have to spend on patients, which is actually spent attending to patients. So if staff have 8 hours to spend on patients, but actually spend 6 hours seeing patients then they spent 75% of their time seeing patients. This allows one to assess to what extent staff time is efficiently used, as it is a sensitive measurement of both workload and staff time deployment.
- Service Point Specific (Partial) Waiting and Service times: This is the waiting time or service time for the patient at a particular service point e.g. reception, or doctor consultation.
- The Waiting Times: This is the amount of time that the patients wait. They are grouped as: 5% cut-off; median (50%) cut-off; 75% cut-off and 95% cut-off points.
- The Service Time: This is the amount of time that the staff spend on each patient. They are grouped as: 5% cut-off; median (50%) cut-off; 75% cut-off and 95% cut-off points.

1. B. The Meanings of the Waiting Time cut-off points are as follows:

- the median waiting time = 50% of the patients waited for that amount of time or less than that amount of time; this is similar to the average waiting time
- 5% waiting time = 5% of the patients waited for that amount of time or less than that amount of time

- 75% waiting time = 75% of the patients waited for that amount of time or less than that amount of time; or saying it slightly differently 25% of the patients waited for that amount of time or more than that amount of time

- 95% waiting time = 95% of the patients waited for that amount of time or less than that amount of time; or saying it slightly differently 5% of the patients waited for that amount of time or more than that amount of time

1. C. The same principles apply to the Service Time cut-off points

- the median service time = 50% of the patients received that amount of service time or less than that amount of service time; this is similar to the average service time

- 5% service time = 5% of the patients received that amount of service time or less than that amount of service time

- 75% service time = 75% of the patients received that amount of service time or less than that amount of service time; or saying it slightly differently 25% of the patients waited for that amount of time or more than that amount of time

- 95% service time = 95% of the patients received that amount of service time or less than that amount of service time; or saying it slightly differently 5% of the patients waited for that amount of time or more than that amount of time

2. Interpreting the Arrival Time Graph

This graph shows the number of patients who arrive within each hour. It also shows the waiting and services times for these patients. From the graph you can see if you arrive at the health centre at a particular time then how long will you wait to be seen and how much service time will you receive. From the graph you can see how long you will wait if you arrive at various times during the day. Therefore it is easy to see when the best time to visit the health centre is. That time would be the time of the day where one would wait the shortest time.

The things one could determine from this graph are:

1. The arrival time patterns of patients

2. The relationship between arrival time and the degree of waiting and service time

3. Whether there are Batches and the effect of the Batches

4. How to shift towards the most efficient arrival time patterns
5. When the best time to visit the facility would be if you were a patient
6. Queuing problems using the 'Box and Whiskers' on the waiting time bar

3. Interpreting the Snapshot Graph

This graph shows the number of patients waiting to be seen and those receiving a service at any point in time throughout the day. It also shows the number of staff available to see the patients at any point in time throughout the day.

What the graph shows is a detailed picture of what happened at the service point throughout the day. So, if you were at the clinic for the whole day and you were watching every patient and every staff member all the time, then this graph shows you what you would see. So this graph allows you to have many eyes and to see everything that was happening at the facility throughout the day.

The things one could determine from this graph are:

1. If there is a mismatch of patients and staff
2. If there are inefficiencies in service provision
3. How rapidly staff can clear the waiting crowd
4. Flow problems
5. Suspected Logistical problems
6. How crowded the facility is at different times of the day

4. Summary Interpretation and Suggested Actions Tables

These summary tables can be used in conjunction with the data tables and graphs as they provide succinct commentary on what the figures in the data tables and graphs are "saying". Then based on this succinct interpretation, logically consistent actions to decrease the waiting times are suggested

The first table provides an overall summary interpretation of the entire facility.

The second table provides a summary interpretation for each service point and suggests actions that could be instituted to decrease waiting times.

Guidelines for Waiting Times, Service Times and % Staff Clinical Time Usage

In interpreting the results of this survey, the following range of values are suggested for the **MEDIAN** times for a Hospital.

A. Median Waiting Times:

A.1. For Median Complete Waiting Times:

Workshop Suggested Values	Acceptable values suggested by staff at your facility	Acceptable values suggested by clients attending your facility
If value ranges from: then interpret as:		
< 15 minutes Excellent		
16 - 30 minutes Good		
31 – 60 minutes Acceptable		
>60 minutes Too high		

These are just guidelines and will vary based on which services were received.

The Staff acceptable value was calculated as the inter-quartile sum of the waiting time for 4 service points.

The Patient acceptable value was calculated as the inter-quartile range.

Service time was divided by two for Reception

Service time was divided by three for Pharmacy

A.2. For Median Waiting Times per Service Point:

Workshop Suggested Values	Acceptable values suggested by staff at your facility	Acceptable values suggested by clients attending your facility
If value ranges from: then interpret as:		
< 10 minutes Excellent		
11 - 15 minutes Good		
16 – 30 minutes Acceptable		
>30 minutes Too high		

These are just guidelines and the desirable times will vary based on the type of service point.

The Patient acceptable value was calculated as the inter-quartile sum of a quarter of the complete waiting time.

The Staff acceptable value was calculated as the inter-quartile range.

Waiting time was divided by two for Reception

Waiting time was divided by three for Pharmacy

B. Percentage Staff Time Spent Attending to Patients

If value ranges from:	then interpret as:
<50 %	Too low
51 - 59 %	Low
60 - 70 %	Acceptable
70 - 85 %	Excellent
>85 %	Too High

These are just guidelines and the desirable times will vary from service point to service point.

C. Median Service Times and Quality of Care:

Service Times are highly specific to the individual service points and the desirable times will in addition vary based on why patients visited these service points and what service/s they received at these service points. Acceptable and high quality of care cannot be directly determined however low quality of care can be determined using the survey. Low or (poor) Quality of Care is defined as, when the Median Service Time provided is insufficient to have provided an acceptable standard of care for the type of service being provided. This means that the time allocated to the patients was just too low for the services required to be provided to actually be properly provided. The converse however cannot be assumed as even if there is sufficient time allocated to the patient to provide good quality care, we are not sure what quality of services were actually provided in that time. Therefore we can only say that sufficient time was allocated that 'potentially good quality of care' could have been provided, however what quality of care was actually provided is unknown. A list of suggested cut-offs for acceptable service time for each service point is provided in the appendix.

Potential Reasons for a Long Waiting Time

The Potential Reasons for a long Waiting Time at any Service Point are:

1. **High Workload:** if staff are overworked, then patients have to wait longer as staff have too many patients to attend to. *You can see if staff are overworked on the **Detailed Service Point Table**. The Percentage Patient Time will be high.* **You can solve this problem by decreasing service times (if they are too long); or by providing more staff if service times are appropriate or low; or by shifting staff from facilities with a low workload.**

2. **Inappropriate Arrival Patterns and Batching:** if many patients arrive at the same time then most of these patients would have to wait a long time to be seen, as the staff member would be busy seeing the patients who were first in the batch and the rest would be waiting. So if 20 Patients arrive at the same time then the first patient would wait zero minutes if the health centre were empty and the second patient would wait for the time it took the staff to see the first patient (lets say 7 minutes), but the 20th patient would have to wait for the other nineteen to be seen, which would be 19 times 7 minutes or a wait of 103 minutes. A **Batch** is defined as a highly inappropriate arrival pattern and is calculated as **25% more patients arriving in a time-period than can be seen in that time-period.** *You can see if there is a batch on the **Arrival Time Graph.** There will be many patients arriving at the same time.* **You can solve this**

problem by encouraging patients to come at less busy times and by giving appointments for quieter times and quieter days in the week.

3. **A lack of efficiency:** patients are not effectively attended to while staff members are present at the service point but are busy with something else: such as administrative work, or preparation work. This means that the staff are not prioritising attending to the patients. *You can see if there is a lack of efficiency on the Snapshot Graph. There will be patients waiting but no or few patients seen even though staff members are present.* **You can solve this problem by making attending to patients the number one priority.**

4. **A mismatch**: a mismatch occurs when patients arrive to be seen but staff are not yet at that service point. This typically happens before the opening time of the service point when patients arrive before the staff. However it could occur at any time if staff are away from their service point due to outreach activities, meetings, administration, breaks, etc. *You can see if there is a mismatch on the Snapshot Graph as there will be a time period (of 30 minutes or more) when patients are available to be seen but no staff are present yet. There will be patients waiting but no staff to see them.* **You can solve this problem by encouraging patients to arrive later in the day and by staggering staff shifts. Meetings could be held at quiet times and breaks should be taken at quiet times whenever possible.**

5. **A logistical problem:** patients are waiting to be seen and staff are available to see patients but due to a lack of equipment, rooms or other logistical needs, staff are unable to attend to the patients. *You can see if there is a logistical problem by looking at the Snapshot Graph and the staff questionnaire. There will be staff present but patients waiting and the staff questionnaire shows there is a shortage of equipment or rooms.* **You can solve this problem by providing equipment and rooms.**

6. **Flow problems:** Staff are available to see patients and patients are at the facility but they are being delayed at some other service point. *You can see flow problems on the Snapshot Graph. You will however have to look at 2 service point Snapshot Graphs. There will be staff present but no patients however patients are waiting long at a prior service point.* **This problem can be solved by solving the problem at the prior service point. You can temporarily solve this problem by getting the staff to temporarily help at the prior service point to allow a few patients to rapidly flow through to them.**

7. **Queuing problems:** This occurs when patients are attended to by staff in an illogical order, i.e. the patients are not attended to in the order that they arrive at the service point. This means that those who arrive first are not seen first, but are made to wait while others are seen before them. Illogical queuing *does not usually affect the Median Waiting Time* although it has a large effect on individual patient waiting times. It may however affect the *Median Waiting Time* if large numbers of patients are allowed to "jump queues". This is to be distinguished from "logical queue jumping" or "fast-tracking" where particular patients, e.g. urgent emergency or specific type of service are paced ahead of the general queue.

8. **High Service time:** An inappropriately high service time for a particular service point would result in higher waiting times for the other patients waiting in the queue. Service time *should not however be inappropriately lowered* just to reduce the waiting time of those in the queue. **The appropriate service time should be provided.**

General Survey Results:

Summary tables providing an overview of the findings of the survey and suggested actions that could be implemented to improve service efficiency and decrease waiting time are shown.

Complete Waiting and Service Time

Complete Waiting Time and Service Time						
Description	**(n)**	**5%**	**25%**	**Median**	**75%**	**95%**
Complete Service Time	508	3	10	17	26	48
Complete Waiting Time	508	10	63	126	192	335

Median Waiting Times per Service Point

Workshop Suggested Values		Acceptable values suggested by staff at your facility	Acceptable values suggested by clients attending your facility
16 - 30 minutes	Acceptable	30 Minutes	24 minutes

Median Waiting Times per Service Point

Workshop Suggested Values		Acceptable values suggested by staff at your facility	Acceptable values suggested by clients attending your facility
16 - 30 minutes	Acceptable	30 Minutes	24 minutes

Median Complete Waiting Times

Workshop Suggested Values		Acceptable values suggested by staff at your facility	Acceptable values suggested by clients attending your facility
31 - 60 minutes	Acceptable	76 Minutes	60 minutes

Staff working at Service Points and Patients Seen				
Staff Present	**Staff Absent**	**Total Staff**	**Full Time Equivalent Staff**	**Absent Equivalent Staff**
71	0 (0.0%)	71	61.5	0.0
Patients Arriving at the Facility on the day of the survey	**Patients already in the Facility at the start of the survey**	**Total Patients seen on the day of the survey**	**Patients Left in the Facility at the end of the Survey**	**Average no of service points visited by patients**
596	0	596	0	5.1
Patients arriving on survey day included in Waiting Times analysis	**Patients arriving on survey day who were Turned Away**	**% turned away who were given an appointment / referral**	**Patients arriving on survey day who Left Voluntarily**	**Patients arriving on survey day with no service recorded (forms not filled in)**
508	63 (10.6%)	0.0%	23 (3.9%)	1

General comments:

The overall waiting time of the patients are high and is highlighted by the high median waiting time, which is over 2 hours;

i.e. of the 314 patients surveyed on the day:

- 5% or less of patients wait for only 10 minutes (or 95% wait for more than 10 minutes - *n299*)
- 25% or less of patients wait for 63 minutes (or 75% wait for more than 63 minutes - *n236*)
- 75% or less of patients wait for more than 124 minutes (or 25% wait for more than 124 minutes - *n79*)
- 95% or less of patients wait for more than 312 minutes (or 5% wait for more than 312 minutes - *n16*)

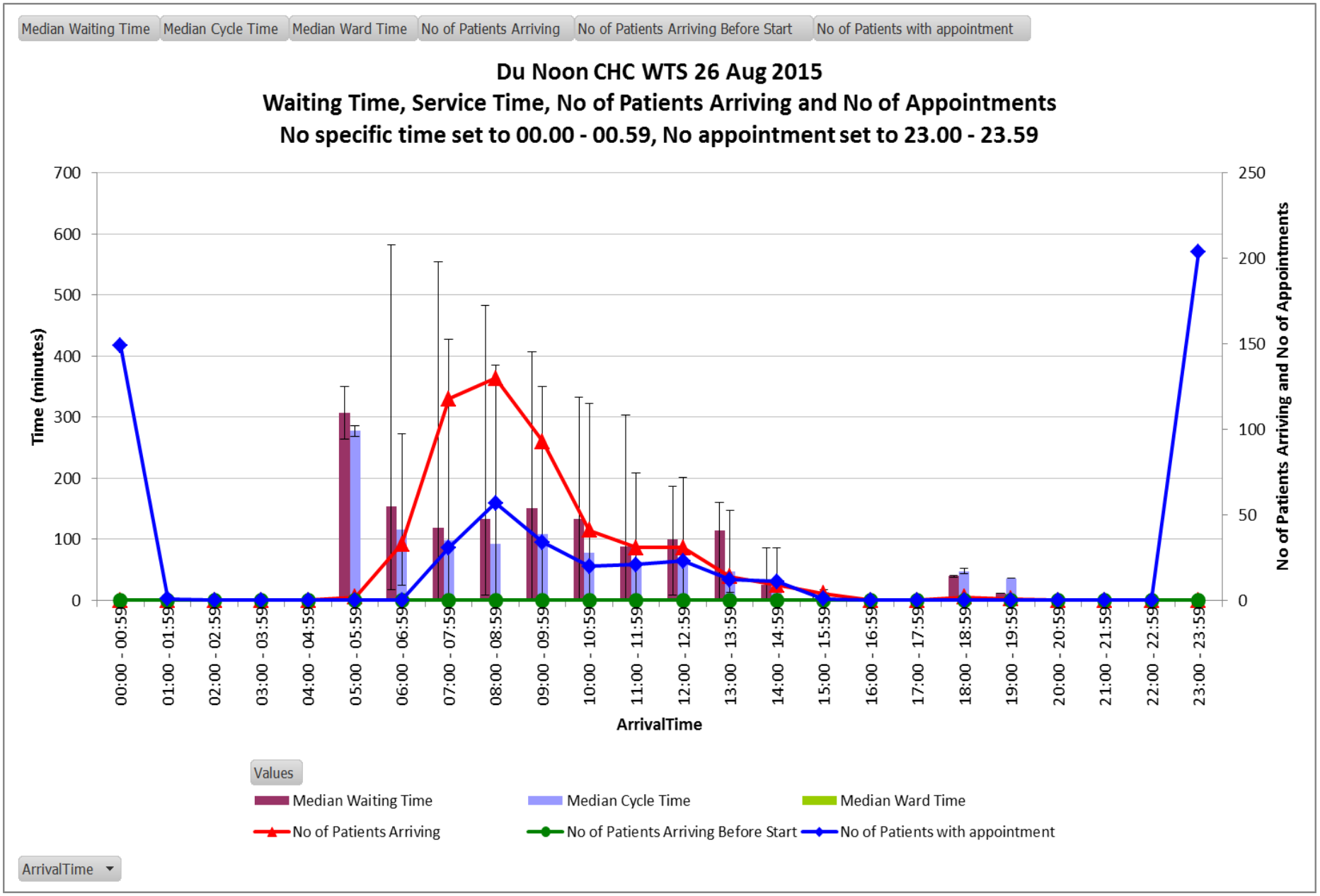
The median waiting time of 124 minutes is not acceptable and should be resolved urgently.

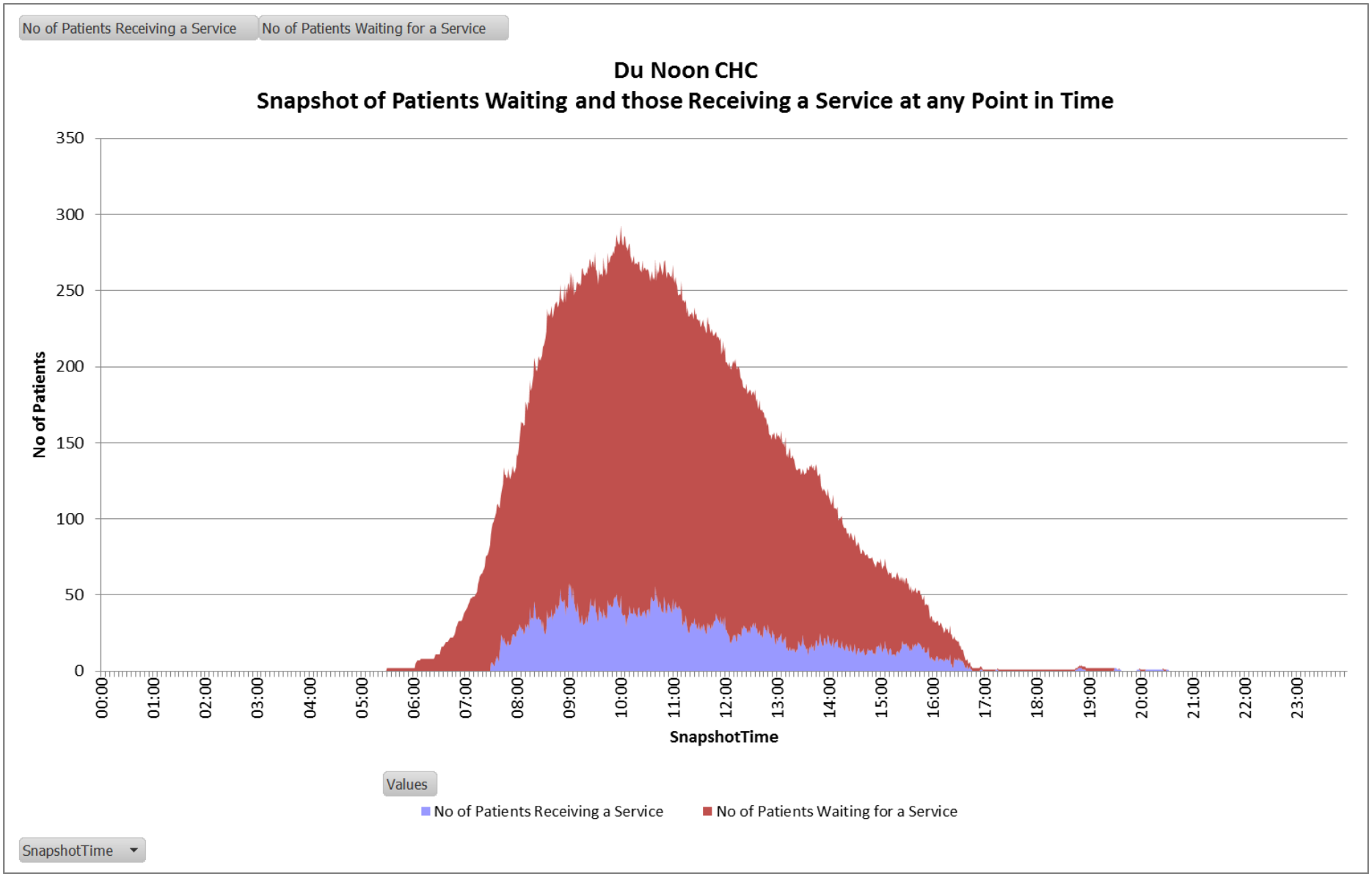
Time to travel to the facility is relatively short as the facility is in close proximity to the community, which is less than 2 kilometres away from the closest suburb.

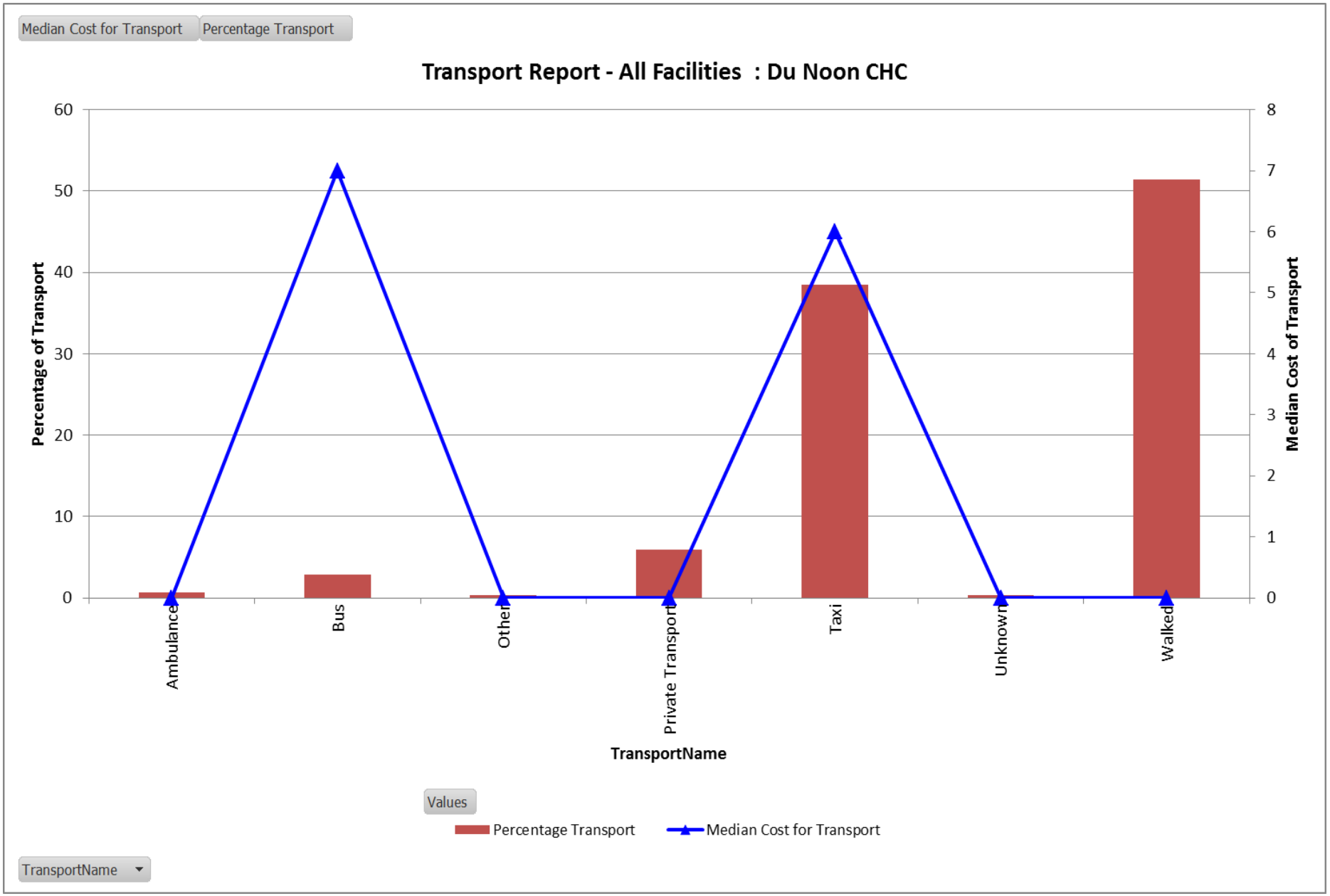
The outcome of the survey showed that patients are turned away or left voluntarily. Several staff forms were not filled in or filled in incorrectly. This could be the result of the staff misunderstanding the instructions on how to fill in the form or it's simply resistance from staff to participate in the survey.

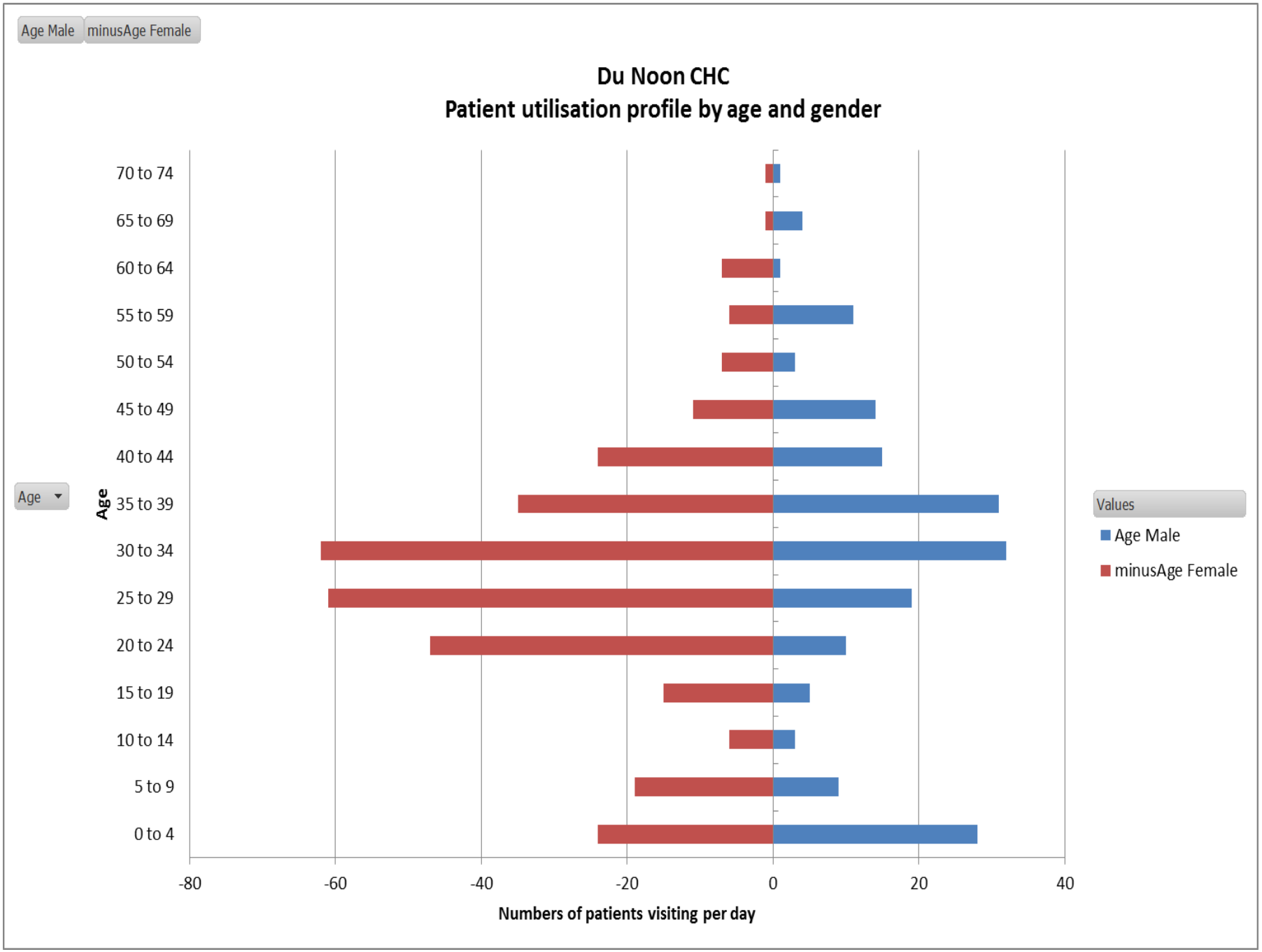
The survey also shows that patients bypassed certain service points. Two thirds of patients have been given appointment dates but unfortunately no appointment times were given. This can be considered as a missed opportunity and it further led to high waiting times at the facility. Data also shows us that there is a high potential to change the patients arrival patterns, which in turn can reduce waiting times, thus, turning it from demand to supply, where the suppliers (facility management) of the services can determine the arrival patterns of patients.

At Pharmacy a huge number of medicines per script were prescribed by the doctor and had to be prepa red by the pharmacist. In theory then, the pharmacist is spending a relatively high time with the patie nt due to the huge number of medicines per script. A challenge noted was the misunderstanding with i tems dispensed. The minimum time spent with the patients, i.e. one minute, shows that the quality of c are is worrying, however, what should be noted is that the forms were not filled in correctly by the pha rmacists.









Waiting Time Survey (WTS) 2011

Survey conducted on 23 November 2011

Summary Table of High Waiting Times, Quality of Care, Residual Staff Capacity and Causes of Waiting Times

** High Waiting Time is when the Median Waiting Time is split >30 minutes.

Poor Quality of Care is defined as, when the Median Service Time provided is insufficient to have provided an acceptable standard of care for the type of service being provided. A list of cut-offs for acceptable service time for each service point is provided in the appendix. $$ Residual staff capacity is defined as the percentage staff capacity unutilised below 60% of staff time usage. It is calculated as 60% minus the staff time usage

# of Service Points 16	High Waiting Times**	Poor Quality of Care##	% service points with 20% or more Residual Staff Capacity	Batching	Mismatch	Overworked	Inefficiency	Queuing Problems	Logistics	Flow	High Service Times
Number and % of Service Points affected	**10 (63%)**	**2 (13%)**	**9 (56 %)**	**4 (25 %)**	**11 (69%)**	**1(6%)**	**9 (56%)**	**7 (44%)**	**3 (19 %)**		
List of Service Points affected	• Reception • Triage • Child Health Weigh & Prep room • Immunisation & FP • PN Child Health • Adult weighing room • Dr consulting room • PN Adult • ARV Banc • ARV CNP	• Doctor TB Consulting Room • PN Adult Health Room	• Reception • Triage • Immunisation & FP • PN Child Health • TB Room • Counselling • PN Adult Health • Dispense Meds • ARV CNP	• Reception • Immunisation & FP • TB Room Meds • ARV CNP	• Reception • Triage • Child Health Weigh & Prep room • Adult weighing room • TB Reception • TB Room • PN Adult • Dispense Meds	• PN Child Health	• Reception • Child health and Weigh • Adult weighing room • TB Reception • Dr TB consulting room • Counselling • PN Adult • ARV Banc • ARV CNP	• Reception • Child health and Weigh • Immunisation & FP • PN Child Health Consulting Room • TB Room • Counselling • Dispense Meds	• Reception • Counselling • Prep Meds Pharm		

Western Cape Government
Health
BETTER TOGETHER.

Client Satisfaction Survey Report
2016/2017
DU NOON COMMUNITY DAY CENTRE

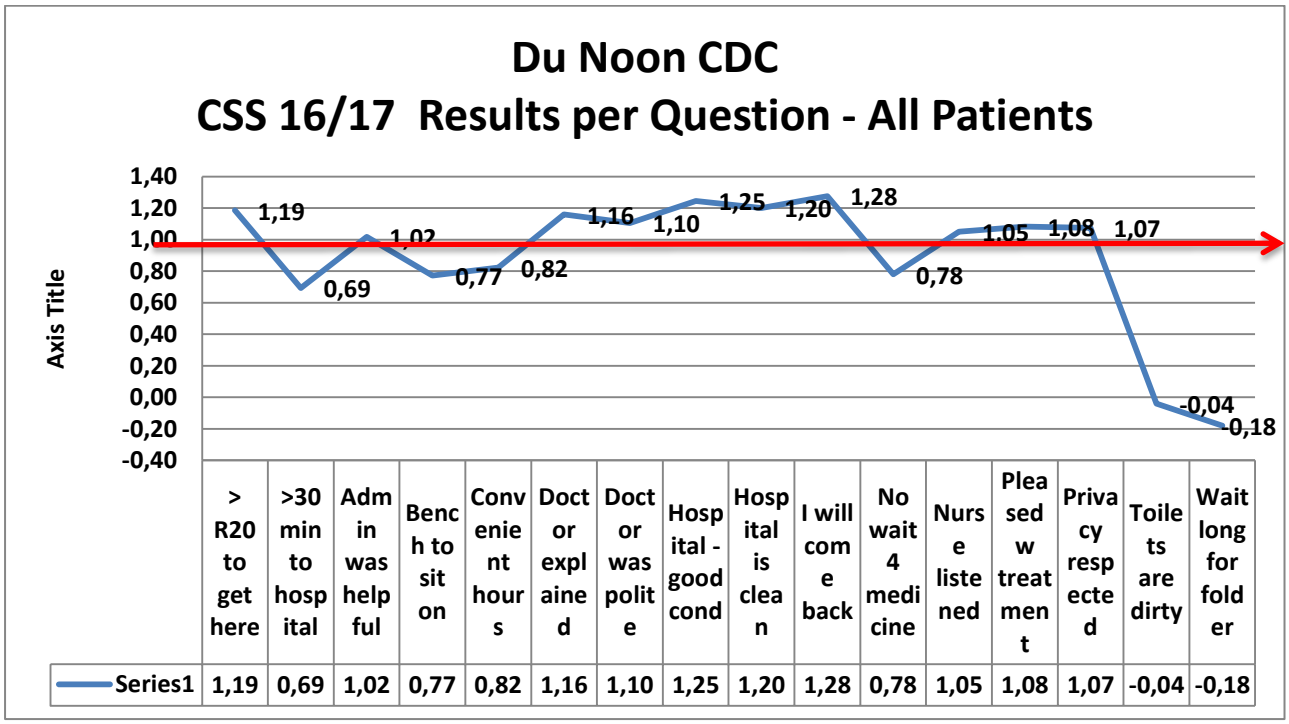
ACKNOWLEDGEMENTS

- Various Interns assisted in conducting the survey.
- Siyabonga for capturing the forms on Sinjani.
- Masibonge for Analysis.

CLIENT SATISFACTION SURVEY (CSS) PROCESS

- The survey period: July 2016
- The number of outpatients completed questionnaires: 219
- Training and Orientation was provided by Richard Burzelman & Theo.

Client satisfaction rate for: Du Noon CDC	95%
Agree/Totally Agree with Question; "I was pleased with treatment"	207
Total with answer against Question; "I was pleased with treatment"	219



University ethics approval

UNIVERSITY of the WESTERN CAPE

OFFICE OF THE DEAN
DEPARTMENT OF RESEARCH DEVELOPMENT

09 November 2015

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Mr R Piquer (Information Systems)

Research Project:	Exploration of the feasibility of implementing recommendations to reduce waiting times at a community health centre in Cape Town, South Africa.
Registration no:	15/7/17

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

Private Bag X17, Bellville 7535, South Africa
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E: pjosias@uwc.ac.za
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Department of health approval letter

Western Cape Government
Health

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5th Floor, Norton Rose House, 8 Riebeek Street, Cape Town, 8001
www.capegateway.gov.za

REFERENCE: WC_2015RP4_5
ENQUIRIES: Ms Charlene Roderick

Robert Sobukwe Rd
Bellville
Cape Town
7535

For attention: **MR Russel Piquer**

Re: **EXPLORATION OF THE FEASIBILITY OF IMPLEMENTING RECOMMENDATIONS TO REDUCE WAITING TIMES AT A COMMUNITY HEALTH CENTRE IN CAPE TOWN, SOUTH AFRICA.**

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

Du Noon Clinic	**Warren Caesar**	**Contact No: 021-200-4500**

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of research. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
3. In the event where the research project goes beyond the estimated completion date which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely

DR A HAWKRIDGE
DIRECTOR: HEALTH IMPACT ASSESSMENT
DATE: 19/2/2015
CC:

Staff consent form

FACULTY OF COMMUNITY AND HEALTH SCIENCES
School of Public Health

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STAFF CONSENT FORM

Title of Research Project: Exploration of the underlying causes of high waiting times and the feasibility of implementing recommendations to reduce waiting times at a community health centre in Cape Town, South Africa

The study has been described to me in language that I understand and I freely and voluntarily agree to participate.

My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant's name.....

Participant's signature.....

Witness.....

Date.....

Patient consent form

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Website:
http://www.uwc.ac.za/faculties/chs/sph

PATIENT CONSENT FORM

Title of Research Project: Exploration of the underlying causes of high waiting times and the feasibility of implementing recommendations to reduce waiting times at a community health centre in Cape Town, South Africa

The study has been described to me in language that I understand and I freely and voluntarily agree to participate.

My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant's name.....

Participant's signature.....

Witness.....

Date.....