EXPLORING THE ROLES AND EXPERIENCES OF HEALTH MANAGERS PARTICIPATING IN THE APPOINTMENT SYSTEMS LEARNING INITIATIVE IN CITY HEALTH FACILITIES IN CAPE TOWN

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KEY WORDS

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ABSTRACT

Background: The appointment system learning initiative (ASLI) was introduced in 2016 as a way of implementing appointment systems in the City of Cape Town, in response to lengthy waiting times at PHC facilities It was intended as a safe space for learning, and piloted facility-generated planning in which knowledge was shared in workshops over 18 months. Variability in how well appointment systems had taken root was noted at the second feedback workshop. Currently, there is little information on the experiences, perceptions and roles of managers with regard to the initiative, or what unforeseen issues may have had an impact.

Aim: This study aimed to reach an understanding of how the *Appointment Systems Learning Initiative* approach and its implementation was experienced by participating facility and PPHC managers at City Health facilities in Cape Town. This includes an exploration of the roles and experiences of health managers, including their perceptions of the benefits and challenges of the process.

Methods: A qualitative, exploratory design was used. Individual, semi-structured interviews were conducted with a sample of twelve facility managers and two PPHC managers. Manager's roles were analysed deductively according to Mintzburg's 2009 framework, while other data analysis was inductive. Ethical clearance was obtained from UWC BMREC prior to commencement. Informed consent was obtained from participants and confidentiality was preserved at all stages of research.

Results: Managers viewed the learning experience positively and felt that facility-generated planning was preferable to hierarchical imposition of programmes. They found it motivating to learn how other facilities had solved problems and designed their systems. Contextual changes to the health system affected ASLI by increasing the pace and prescriptiveness of implementation, and impeded the capacity for PPHC managers to offer support. Facility managers fulfilled critical leadership roles according to Mintzberg's model, but the way in which they carried out roles such as delegation, team building or communicating may have affected implementation. Challenges included issues with human resources, insufficient time available for managing implementation, lack of preparation beforehand, insufficient support and contextual changes. Benefits included shorter working hours for staff, better organisation in facilities, shorter waiting times and improved satisfaction for end-users.

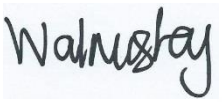
Conclusion: Due to the benefits which were described, appointment system implementation appears to be an effective way to improve the functioning of PHC facilities for end-users as well as staff. Steps should be taken to address challenges to the process, and optimise role performance of facility managers. Facility-generated planning could be pursued as a way to enhance managers' capacity and improve implementation by giving facilities ownership of plans and a sense of increased control over their environment.

Recommendations: Ongoing workshops featuring shared learning could assist with future implementation of appointment systems. Peer-to-peer support could be a means of up-skilling managers, many of whom have not had management training. The root of human resource problems should be addressed, and there should be improved preparation for initiatives in terms of technology, materials and community buy-in.

DECLARATION

I declare *that Exploring the roles and experiences of health managers participating in the Appointment Systems Learning Initiative in City Health facilities in Cape Town* is my own work, that it has not been submitted for any degree or examination in any other university, and that all sources I have used or quoted have been indicated and acknowledged by complete references.

Full Name: Ulla Walmisley Date: 08 November 2018

Signed: 

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ABBREVIATIONS

AS	Appointment System
ASLI	Appointment System Learning Initiative
BANC	Basic Ante-natal Care
CCT	City of Cape Town
FM	Facility Manager(s)
HIV	Human Immunodeficiency Virus
HR	Human Resources
MDHS	Metro District Health Services
NDOH	National Department of Health
PHC	Primary Health Care
PPHC	Personal Primary Health Care
SLB	Street Level Bureaucrat
TB	Tuberculosis
UWC	University of the Western Cape
WTS	Waiting Time Survey

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1. 1. Introduction:

1.1. 1.Background to the current health system:

The South African population suffers a quadruple burden of disease. This disease burden is composed of non-communicable diseases, such as diabetes, communicable diseases (particularly TB and HIV), traumatic injury, and maternal and child health issues (Rispel, 2016). Despite being described as a middle income country, South Africa also has the dubious distinction of being the most unequal society in the world (Feketha, 2018). Only 17% of the population have private medical insurance, with the vast majority of the population depending on state-run health services (Bateman, 2017).

1.1.2. PHC and the District Health System

Health care in South Africa has made great progress since 1994, when the Government of National Unity took over a fragmented, inequitable and racially-divided set of services (Department of Health, 2001). The majority of health care spending was directed towards treating white South Africans, with an emphasis on tertiary health services. The need to extend health services in a more equitable way lead to a focus on primary health care, which has long been recognised as the best way to deliver appropriate, accessible services within communities. In order to effectively roll out PHC in South Africa, the District Health system was introduced. This was intended to administer locally appropriate solutions, unified by the policies of national government.

1.1.3. A dual public health care system in the Western Cape

When rolling out the District Health System, the National Department of Health (NDOH) focussed first on the provinces which were most in need of re-structuring. (Department of Health, 2001). Larger provinces such as Gauteng and the Western Cape had historically had strong and well-resourced local governments, and so it was decided to devolve these regions later on. This has resulted in difficulties in integrating local government and provincial health services, however, because the pace of local government restructuring in the Western Cape outstripped that of restructuring provincial health services. This has led to the existence of a

dual public health care system where services are provided by both the Provincial Government and the City of Cape Town municipality.

Therefore, within the City of Cape Town municipality,, health services are organised in a partnership between City of Cape Town (CCT) and the Provincial Health Department's Metro District Health Services (MDHS) (Scott et al., 2014). MDHS has divided the area which it manages into four sub-structures, while CCT has divided its domain into eight sub-districts. Two of these sub-districts overlap with areas managed by MDHS.

At some facilities, the two authorities share premises. The details of this collaboration are regulated by service-level agreements, and the Provincial government provides the majority of the funding for PHC services. As can be expected when two governmental entities are required to plan and work together, some tensions exist around policy interpretation and funding (Parliamentary Monitoring Group, 2018).

Over the course of several years there has been debate about the structure of health districts, amid speculation that the two health authorities would merge (Scott, Mathews, & Gilson, 2012). This air of uncertainty, accompanied by a multitude of health system interventions, has dampened staff moral and introduced "change fatigue" amongst staff.

1.1.4. Primary healthcare in the City of Cape Town

PHC services in CCT are delivered at eighty-two clinics, twenty-four satellite clinics, four community day centres (CDCs) and four mobile clinics, divided between 8 sub-districts. ("City Health Department", 2018). In some cases, one manager oversees two or three small clinics (Daniels, Zweigenthal, & Reagon, 2017).

CCT provides most of the available personal primary health care (PPHC) services. These include preventative and promotive services – usually headed by nurses - as well as specialised services such as male health clinics. Over the years, the number of services provided by CCT has expanded, including basic antenatal care (BANC), anti-retroviral therapy (ART) and treatment of an increasing burden of non-communicable diseases (NCD). MDHS provides adult curative services (Department of Health, 2006).

Between 2011 and 2016 the population of the Western Cape grew by 1.5% and is currently stands at approximately 6 278 000 (Department of Health, 2018). The Western Cape has the

highest life expectancy of the provinces, at 63.7 years for males and 66 years for females. The proportion of people living with HIV has increased from 3.8% in 2008 to 5.2% in 2012. In line with the UNAIDS 90-90-90 programme which aims to scale up testing and treatment for HIV and TB, it is intended that 90% of people infected with HIV or TB will be aware of their status, 90% of those will receive treatment, and 90% of those, in turn, will reach viral suppression or be cured of TB. This places a heavy load on public health care, which needs to be as efficient as possible to meet the demand for services.

1.2. The significance of lengthy waiting times:

A report on service delivery at PHC clinics in the Western Cape published 2015 found that patients are frequently dissatisfied with the quality of service they receive (Scheffler, Visagie, & Schneider, 2015) Excessive waiting times are the most common complaint made by patients (National Department of Health, 2014; ASLI information letter April 2016), with South African patients currently spending up to seven hours waiting for service at PHC clinics – most of which do not currently have patient appointment systems in place. This is a barrier which reduces the accessibility of healthcare services and causes patients to miss appointments and default on treatment regimes. In turn, this negatively affects patient outcomes (Dalal & Dawad, 2009). Without an appointment system, it is difficult to track patients who default on treatment, and this leads to serious complications which places a greater load on the healthcare system (Chalker, Wagner, Johnson, Wahlstrom & Ross-Degnan, 2013; Sastry et al., 2017).[1]

1.3. National Core Standards and the Ideal Clinic Initiative:

In 2011 the National Core Standards were published by the South African Department of Health. The Minister of Health, Dr Aaron Motsoaledi, identified waiting times as an essential area requiring urgent improvement (National Department of Health, 2011).

The Ideal Clinic programme was initiated in 2013, with the intention of standardising PHC services in preparation for the implementation of National Health Insurance (NHI) (National Department of Health, 2015). Ideal Clinic guidelines include an appointment scheduling process to be followed, as well as a Waiting Time Survey to monitor performance.

[1] **Please note:** References with six or more authors are cited here using only the name of the first author, even on the first in-text citation.

The eHealth Strategy was introduced in 2012 as a framework for a digitised information system to be used in health care (Wolmarans et al., 2015). This system is to be used in planning and operating NHI. It will include a national database of patient records and the introduction of electronic registration tools at PHC facilities. As part of the strategy, a streamlined process was designed for clinics so that patient appointments, registration and record retrieval are combined within reception areas. Before this can be achieved, work flow at clinics must be functioning optimally.

1.4. The Appointment Systems Learning Initiative (ASLI)

Reflecting the national move to reducing waiting times, a waiting time survey was carried out by the City of Cape Town (CCT) in 2007 at all PHC clinics. Even before publication of the National Core Standards, City Health recognised lengthy waiting times as problematic. In 2007 a waiting time survey (WTS) was carried out at all PHC clinics (Daniels et al., 2017). The results thereof and suggestions for improvement were given to facility managers Following this, Eastridge clinic undertook to independently design and implement an appointment system (AS) at their facility (ASLI information letter, April 2016). This was a successful initiative, which took approximately two years to achieve (ASLI Steering Committee Minutes, May 2016). The project was characterised by a high level of engagement from the facility manager, strong staff support, and was driven by the clinic itself.

Inspired by the Eastridge example, and driven by the need to retain an increasingly large number of patients on ART, in 2015 the CCT Health Directorate established the Appointment System Learning Initiative with the intention of rolling out appointment systems at other PHC clinics (ALSI information letter, April 2016). Most previous attempts at appointment system implementation had failed, so it was decided to try a different approach to design and implementation.

1.4.1. The Guiding Principles of ASLI

The intention of ASLI was that selected health facilities, who expressed an interest, should explore the development of appointment systems (AS) best suited for their context (ALSI information letter, April 2016). Their learning and experiences would be shared. The process would be documented to inform the implementation of AS at other facilities. ASLI made use

of a grassroots approach, in which senior managers were engaged and facility manager were supported. The intervention was planned as a safe space for shared learning, with a time frame of 18 months. The guiding principles of ASLI were that it would be an iterative process, that facilities should be supported over a long time period, and that facilities should be able to learn and make mistakes without censure. ASLI was not intended as just a technical intervention – it was intended as a change to the system. From previous experience of health system interventions it was evident that the attitudes of patients and staff, their knowledge of the system, and their trust in the process present the greatest challenge to success (Harley, 2015).

1.4.2. Initial Steps in the Process

Two facilities from each sub district were selected – one which had already had some success in implementing an AS for some of its services, and one which was motivated to do the same (Summary Notes for ASLI, February 2017). Managers were told to begin implementing appointment systems prior to the first workshop, and this was being carried out at some facilities. PPHC managers were required to actively participate in the process. They were responsible for selecting, briefing and supporting facilities, and helped to decide what services the facilities should target first.

In 2016 two workshops were held, facilitated by the University of the Western Cape (UWC). The first workshops was held in May 2016 and representatives from twenty clinics attended, as well as managers from CCT and staff from UWC (Appointment Systems Workshop Report, May 2016). Dr Z Mahlangu, then Executive Director of Health at CCT, addressed the workshop participants and stressed the goal of working together towards delivering an optimal experience for clients. She encouraged staff to “think outside the box” and develop a plan for an appointment system that was tailored to the specific needs of each facility. Facility teams that attended the workshop were required to introduce the system to the rest of the clinic in their staff meeting, roll it out, and report back in the second workshop.

While facilities were required to implement a system, they were not issued with materials, such as diaries, which could be used for making appointments (ASLI Steering Committee minutes, April 2016). The software system for booking appointment dates – Premhis – did not have the functionality required for booking time slots for patients.

The steering committee noted that there should be someone external driving the process in each facility, although this task ultimately fell to the facility manager (ASLI Steering Committee minutes, May 2016). There was also some debate around what role would be played by health committees, which are composed of community members who act as an interface between clinics and the community. At the time, most clinics did not have a functioning health committee.

1.4.3. Progression

Six months after the first workshop it was suggested by one of the PPHC managers that ASLI should be introduced at two additional clinics per sub-district. This ran contrary to the original principle of allowing the process sufficient time in which to generate learning before stepping up the pace (ASLI Steering Committee Minutes, June 2016). At that stage, it was recommended that clinics should be added more slowly. Although facilities were told to design their own appointment systems, PPHC managers requested that CCT draw up a standard operating procedure as a guideline for clinics. It was also suggested that CCT inform clinics what the basic requirements of an appointment system are - for example that dates and times should be set, and that patients' folders should be drawn in advance (ASLI Steering Committee Minutes, June 2016; ASLI Steering Committee Minutes, September 2016). This introduced an element of prescriptiveness to the process. Newsletters which communicated both success stories and challenges in the process were sent to clinics to motivate them. It was also announced that clinics who were motivated could begin implementing appointment systems even if they had not attended the workshops (ASLI Steering Committee Minutes, August 2016). Monitoring of appointment systems would be included in the Ideal Clinic assessments which are conducted four times a year (ASLI Steering Committee Minutes, March 2017).

From the second workshop which was held in November 2016, it emerged that there had been variability in the experiences of design and implementation and in the range of clinic services involved. Most clinics had been able to implement an appointment system to some extent, while three had not done so at all (Notes from the second ASLI workshop, November 2016; Summary Notes for ASLI, February 2017). Reasons for this were thought to be lack of buy-in by the staff and facility managers. Clinics who had a working appointment system, however, reported various benefits: shorter waiting times, an increase in the number of patients seen, less congestion, a more manageable workload, the ability to identify patients

defaulting on treatment, and patients being able to receive care and still go to work or school that day (ASLI Steering Committee Minutes, Feb 2017). The experiences and perceptions of facility managers who oversaw implementation in their clinics could shed light on the variability of implementation within clinics.

Scale-up workshops were held in various areas within CCT in June and July 2017, and these were well attended by clinics. Appointment systems remained a priority, with CCT requesting an acceleration of the process, including the requirement for 4 clinics to implement appointment system for all services within six months (ASLI Steering Committee Minutes, August 2017).

1.4.4. Contextual changes during the period of ASLI

In early 2017 CCT was restructured according to the Organisational Development and Transformation Plan (ODTP), which aimed to improve service delivery (City Health Directorate of Social Services, 2017; City of Cape Town, 2017). ODTP divided Cape Town into four large areas, each encompassing a wide geographic range. The northern area, for example, stretches Atlantis on the West Coast to Hout Bay in the South. The PPHC managers were each responsible for supervising the clinics in each area. The Ideal Clinic initiative also intensified during this time, with PPHC managers required to do four Ideal Clinic assessments per clinic per year. In addition, City Health also expanded the package of services offered – including Adult Curative Care and ARV enrolment - to more facilities. This massively increased PPHC managers' work load and reduced the amount of time they had available for supporting facility managers, who were themselves increasingly burdened by new requirements... These plans for modernising the structure of the system and increasing efficiency also increased the imperative for rolling out appointment systems as speedily as possible. It was within these changing contextual factors that ASLI proceeded.

1.4.5. The future

During the course of the process, CCT secured funding for IT modernisation, which would move clinics from a paper-based to an electronic record keeping system, as well as an electronic booking system which would enable patients to book their own appointments electronically (ASLI Steering Committee Minutes, March 2017). This would make the functioning of appointment systems much simpler but development was only scheduled to

begin in 2018. There was some debate about the wisdom of requiring full implementation of appointment systems at clinics before the availability of the electronic systems, but there was pressure to get the appointment systems off the ground (ASLI Steering Committee Minutes, October 2017).

1.5. The need for research into ASLI

Implementation of new initiatives within the health system can be unpredictable even when it appears that conditions are optimal (Egbujie et al., 2018). Successful implementation depends on ownership, trust, cooperation, communication, willingness to change, and good leadership (Magadzire, Marchal, Mathys, Laing, & Ward, 2017). Indeed, when implementing change, the "software" of knowledge, skills, decision-making, communication practices and values are as important as the "hardware" of funding and technology (Nyikuri, Tsofa, Okoth, Barasa, & Molyneux, 2017). It is the facility manager at PHC clinics who is tasked with driving the process of implementation, and their "software" that affects implementation. Managers play a critical role in change management (Nyikuri et al., 2017; Stonehouse, 2013). There is a need, therefore, to understand the role of managers within the implementation of appointment systems, as well as the difficulties and facilitating factors they faced. It is intended that this knowledge could be used to facilitate the further implementation of appointment systems or other health system interventions in similar contexts.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Long waiting times in health care setting have been recognised locally and internationally as a problem which needs to be addressed (Ansell, Crispo, Simard, & Bjerre, 2017; Brandenburg, Gabow, & Steele, 2015; Sastry et al., 2017). In global north countries, such as the UK, Canada and the USA, issues around waiting times relate largely to the period between making an appointment and actually seeing a clinician. This can be a period of days or weeks, depending on the service, with patients usually making telephonic appointments prior to attending a facility (Jones et al., 2003). There is also a move to web-based appointment scheduling (Zhao, Yoo, Lavoie.J, Lavoie., B & Simoes, 2017). In contrast, many global south countries, including Brazil, Indonesia, and South Africa employ walk-in systems by which clients access services in primary care facilities. Waiting times in these settings refer to the actual time spent waiting between arrival in the facility and seeing a clinician. Whether in the global north or south, prolonged waiting times have been found to negatively affect patients' experience of the care they receive, as well as their health outcomes (Chalker, 2017; Mukumbang, van Belle, Marchal, & van Wyk, 2016). The introduction of appointment systems has been identified as an effective way to tackle this (Al-haqwi & Al-shehri, 2007; Mardiah & Basri, 2013; Vieira-da-Silva, Chaves, Esperidião, & Lopes-Martinho, 2010) .

2.2. Waiting Times and their significance in the healthcare setting:

Extended waiting times have negative impacts on all stakeholders in the health system:

End-users – Since 1997 the concept of Batho Pele, or "people first" has been a guiding principle of health care in South Africa. A client-centred approach, which respects the needs of the patient, has become the gold standard for care. The prerequisite that the needs of clients should be central to service delivery depends on ensuring optimal access to care – the provision of "the right services at the right time in the right place" (Naidoo & Mahomed, 2016; Rogers, Flowers, & Pencheon, 1999; Whittaker, Shaw, Spieker, & Linegar, 2011). Excessive waiting times impede clients' access to care and reduces their satisfaction with the service they receive, and it is their most common complaint (Scheffler, Visagie & Schneider, 2015; Sokhela, Makhanya, Sibiya, & Nokes, 2013).

According to the National Core Standards, which were introduced in 2011, patients have the right to be treated with dignity and respect (National Department of Health, 2011). Their experience of the service they receive is monitored through annual patient satisfaction surveys. Through these surveys, waiting times were identified as one of three essential areas requiring urgent improvement in South Africa. Patients who are faced with long waiting times lose motivation to attend health care facilities, and more frequently default on treatment and have poorer health outcomes (Dalal & Dawad, 2009; Gupta & Denton, 2008; Sokhela, Makhanya, Sibiya & Nokes, 2013). Their absence is hard to monitor as it is difficult to follow up on patient non-attendance without an appointment system. This is a particular problem in the context of South Africa, which carries a high burden of HIV and TB infection, and where non-adherence to treatment can have life-threatening consequences (Chalker et al., 2013).

Walk- in patients are forced to arrive early in the morning to queue before facilities open, which exposes them to physical danger in many areas in South Africa (Scheffler et al., 2015). They also need to miss an entire day of work in order to wait for treatment, which has adverse financial implications for these patients who are frequently living in conditions of poverty already.

Staff – Waiting times feed into a vicious cycle of human resource shortages in the health system, being both a cause and effect of the situation. A study into the impact of health service variables on service delivery in Gugulethu in Cape Town found that, while facilities are staffed according to approved post lists, in practice there were insufficient staff numbers relative to the number of patients at PHC clinics (Scheffler et al., 2015). This situation is compounded by high absenteeism. Lengthy waiting times aggravate this situation. They create a chaotic work environment, with congested waiting rooms and bottlenecks of patients waiting to be seen. Clinicians eventually become demoralised when faced with patients who are angry and frustrated (Egbujie et al., 2018; Isaacs & Hellenberg, 2009). A high correlation has been found between work overload, exhaustion and staff absenteeism in the South African context (Munyewende, Rispel, & Chirwa, 2014). South Africa is already faced with a situation of staff shortages. The suggested clinical workload for nurses should be approximately 35 patients per day, but in some areas professional nurses see up to 92 patients per day (Sokhela et al., 2013).

The health workforce is one of the fundamental building blocks of the health care system (Mutale, Balabanova, Chintu, Mwanamwenge, & Ayles, 2016). Given the importance of the

health workers in improving health systems and outcomes, every effort should be made to optimise staff satisfaction in their work environment (Scheffler et al., 2015). This is a global problem – even in the better-resourced USA, prolonged waiting times contribute to the burnout of primary health care providers (Brandenburg, Gabow & Steele, 2015). Job satisfaction can be improved, however, if measures are taken to improve work flow and efficiency. This is significant in South Africa, where an unsatisfactory work environment is a factor for clinicians changing their place of employment (Mokoka, Oosthuizen, & Ehlers, 2010).

The health care system - The loss of clinicians places an additional burden on the health system (Sokhela et al., 2013). In addition to overloading the remaining clinicians, staff losses incur costs in terms of time and finances required to recruit and train new personnel. New staff are not as productive as seasoned staff, and the quality of care suffers (Deane & Howard, 2004; Isaacs & Hellenberg, 2009). In addition to staff costs, the system is disrupted as patients may avoid long waiting times at their closest clinic by attending a facility that is further away (Daniels, 2015; Masango-Makgobela, Govender & Ndimande, 2013). This causes unpredictability of patient numbers and thwarts planning efforts.

2.3. Causes of excessive waiting times

In their report on best practices to reduce waiting times in the USA, Brandenburg et al. (2015) state that promoting access to care requires systems-level transformation. The causes of long waiting times are also systemic. Gupta and Denton (2008) state that factors which affect access to health care include the physical assets and equipment which are available in facilities, allocation of resources between facilities, staff numbers, prioritisation of access to resources, and appointment scheduling.

Internationally, as well as in South Africa, acute care appointments are usually unscheduled due to their unpredictability (Ansell, Crispo, Simard & Bjerre, 2017). Non-acute and chronic care appointments are generally scheduled telephonically or electronically in the global north. Even in relatively privileged countries, however, non-acute patients sometimes struggle to access appointments and instead present at emergency units for non-urgent conditions. This increases waiting times for these services.

In the South African context, major factors associated with prolonged waiting times were found to be high clinician work-load, the arrival of patients in large batches at one time, and patients arriving before clinics open (Daniels, 2015). There has historically been a lack of formal appointment systems with patients being seen on a first-come first-served basis (Egbujie et al., 2018). Waiting times within government facilities in South Africa have been found to vary, but patients tend to arrive as early as possible in the morning to ensure that they are seen on a particular day, and can wait up to four hours for treatment (Scheffler et al., 2015). At the extreme, patients have been found to spend up to seven hours - and as much as 80% of their time in facilities - waiting to see a clinician (Department of Health, 2014). The combination of a mismatch in supply and demand, and a poorly organised system were described in a 2009 study which investigated introducing the "Kaizen method" to improve patient flow in a community health centre in Mitchells Plain the Cape Metropolitan region (Isaacs & Hellenberg, 2009). It was reported that approximately 900 patients per day arrived to be seen at a facility that had the capacity to serve only 800. This resulted in an overburdened triage system, angry patients, and low morale among staff. Similar situations exist in many clinics in the area.

2.4. Methods used to reduce waiting times internationally

2.4.1. Open Access Scheduling

Open-access scheduling is a method which involves filling some appointment slots for chronic-care patients in advance, but keeping at least half open to be filled daily, as patients contact the facility (Ansell et al., 2017). This was found to promote flexibility and deliver the greatest improvement in patient satisfaction and health outcomes.

2.4.2. Improving operational efficiency and management

Brandenburg et al. (2015), describe practices to tackle scheduling and access problems, including enhanced operational improvement through the generation and use of meaningful data. Techniques such as Lean and Six Sigma have been recognised internationally as effective strategies to improve efficiency systems and processes. These are techniques which reduce waste by analysing work flow and removing components which do not add value.

2.4.3. Appointment Systems

In contexts which previously used walk-in systems, the introduction of an appointments scheduling has successfully improved access to care. In Brazil, Saudi Arabia and Indonesia the introduction of appointment system in PHC facilities was found to be a simple and effective way of reducing queues and waiting times and improving end-user satisfaction (Al-haqwi & Al-shehri, 2007; Mardiah & Basri, 2013; Vieira-da-Silva et al., 2010).

In the African context, a Kenyan study investigated the introduction of clinic appointment systems to monitor and improve adherence to ART treatment (Boruett et al., 2013). A diary-based appointment system was implemented to track attendance of patients who attended clinics to receive ART. Facilities were provided with diaries and staff were trained beforehand. After the initial introduction of the intervention, supportive supervision was carried out at 2 week, 2 months and 5 months – ie, 4 visits were made to facilities over the course of the year – during which gaps and challenge in implementation were discussed. The result was that appointment systems were successfully implemented and adherence to treatment improved.

2.5. Waiting times and interventions in South Africa

In South Africa, various methods have been employed over the years to tackle waiting times, but few of them have seen sustained success.

2.5.1. The Fast Queue System

The Fast Queue system was introduced 2011 at PHC facilities nationally, as stipulated in the National Core Standards (Sokhela et al., 2013). This was not an appointment system, but rather a means of streamlining the flow of chronic patients who had previously been assessed by a PHC clinician. Services available in the fast queue included routine follow ups of vital signs and parameters such as cholesterol and blood glucose levels, prescribing routine medication for conditions with a standard treatment protocol, and counselling services. A qualitative study investigated the experience of patients in the Fast Queue system in eThikweni, near Durban in South Africa. It was found that patient waiting time significantly affected how satisfied they were with services. Patients perceived their experience to be positive when the work flow was smooth, when staff were efficient, and when clinicians communicated well with them. Clients appreciated a logical flow between services, with a particular bug-bear being a situation where patients were sent back and forth between

services. The study suggests that staff at facilities should actively monitor the development of bottlenecks to improve flow. The physical space inside the facility was also found to affect patients' experiences as limited space and long queues resulted in congestion and confusion. Communication from nurses had the greatest impact on how patients experienced the services. Staff shortages were a major factor affecting waiting times and client satisfaction, with the study concluding that this needs to be addressed by the Health Department.

2.5.2. The application of Lean Thinking

Naidoo and Mohammed (2016) studied the impact of Lean thinking on waiting times in the outpatient department of a district hospital in rural KwaZulu-Natal After the intervention, an assessment of waiting times were carried out at six services nodes in the outpatient department. All showed a statistically significant reduction in waiting times. This intervention improved patient flow by making the system more efficient, but did not include introducing an appointment system (Naidoo & Mahomed, 2016).

Price (2014) reported on a Lean thinking-based intervention in the New Somerset Hospital in Cape Town which aimed to reduce waiting times and increase patient satisfaction. At the time, in the Orthopaedics Outpatient Department clinics saw between forty and seventy patients daily, and while some had appointments most were walk-in patients. Prior to the intervention, there was a sense that clinician's time was more important than patients' and patients had to move between services, which increased their time at the facility. In the intervention, patients were booked in batches to stagger their arrival. Walk-in patients were given numbered stickers in order of their arrival at the clinic and the process within the clinic was streamlined. Staggering the arrival of patients meant that queues were significantly reduced.. This took some pressure off the doctors, who then spent more time with each patient. Congestion was reduced, waiting times were reduced, and patients were more satisfied with the treatment they received. This was achieved with no additional input of resources.

2.5.3. Experiences of appointment system implementation in South Africa

A study published in 2018 describes the implementation of appointment systems at 9 clinics in Kwa-Zulu Natal (Egbujie et al., 2018). Implementation was supported by Kheth'Impilo (KI), an NGO funded by PEPFAR. It was found that while waiting times decreased in 2 facilities where appointment systems were successfully implemented, they actually increased

in clinics where implementation was poor. It would have been better to have no appointment system than one that was badly implemented.

Measures which were taken by KI during implementation included reorganising health services into three broad streams and having one health care worker attend to all health care needs of a patient in one room at one time. KI also provided clinical appointment registers that were used to book dates for patients. This was reported as a critical factor as it was observed that some facilities failed in implementation when using inappropriate tools.

A month of patient education was undertaken prior to implementation, so that clients would be prepared for the system when it was introduced.

The results of the study were mixed. It was found that of the nine facilities under study, five had shorter waiting times, of which two were statistically significant. Four facilities had an *increase* in median waiting times, of which three were statistically significant. Prior to the appointment system, patients who came for MNCWH, HCT and child curative services were more likely to spend more than 3 hours waiting than patients who came to see a doctor or access TB services. After the intervention, patients were more likely to spend more than three hours if they came for chronic or MNCWH than if they came for acute minor illnesses. KI's main strategies were to reduce overbooking of patients and stagger their arrival over a greater time. Even with the assistance of KI, there was variation in how well clinics managed to implement the systems. This study suggests that further research is needed into what aids in successful implementation.

Due to the growing number of patients requiring ART, in 2015 City of Cape Town investigated ways of making the health system more efficient. Facility managers were sent an email asking if they had tried implementing an AS at their clinic, whether this was successful, and what barriers to implementation had been. The main barriers which were reported included patients lacking money or access to transport to attend appointments, lack of patient buy-in, and staff shortages. Appointment systems were abandoned because patients didn't stick to their appointment dates, because of staff absenteeism or staff shortages, and because new staff lacked the skills needed to fulfil their function (linked to high staff turnover) (Harley, 2015).

Daniels, et al. (2017) assessed the impact of a waiting time survey on waiting times in 22 PHC clinics in Cape Town. A waiting time survey was done in 2007, and the result - along

with recommendations for reducing waiting times - were given to facility managers. These recommendations included implementing an appointment system where long waiting times were caused by patients arriving en masse in the mornings. Managers were not required to submit a formal plan for reducing waiting times, nor were their interventions – if any – monitored. In 2011 a follow up WTS was conducted, which found that 40% of managers didn't implement any interventions at all. However, at 55% of clinics, waiting times had decreased by 15 minutes. At these clinics, 2 factors were associated with improvement: the manager having received a written report detailing recommendations, and having 5 or more years of management experience. Grey et al., (2015) found that managers with more experience had developed informal knowledge which they applied to problem-solving in their local contexts. Facility managers stated that meeting with peers to discuss common problems was a useful way to spread the experiential knowledge and was especially valuable when addressing a new intervention. Peer-to peer learning was optimised if structured meetings were held to facilitate shared learning.

2.6. Issues relating to implementing Health System interventions

There is constant pressure for improvement in health services globally, and South Africa is no exception. New policies and programmes are frequently introduced but with a failure rate of up to 70% and organisational change frequently does not have the desired outcome (Mahomed & Asmall, 2017). Having seen that a properly implemented appointment system can reduce waiting times and improve health outcomes, it becomes necessary to examine the factors that aid successful design and implementation of health system interventions.

Best, Greenhalgh, Lewis and Saul (2012) reviewed the factors that facilitate large-system transformation in PHC in Canada and compiled five "simple rules" for success: 1) a mix of formal and distributed leadership should be present in the change process, 2) the presence of feedback loops, 3) taking note of the system's history, 4) engaging frontline staff, 5) engaging clients/end users of the system.

"Distributed leadership" is the concept of focusing on the practices and relationships of leadership, while developing shared leadership through mentoring. Distribution of leadership means that implementation is shared between professionals and teams, as well as with partner organisations. Due to the complex nature of the health care system, distributed leadership is

critical for the successful implementation of change (Best et al., 2012). These factors may be equally applicable in the South African context.

There is not a great deal of data about implementing appointment systems in South Africa, but factors which affect other health system interventions may be applicable:

2.6.1. Barriers to implementing change

When investigating the gap between policy and implementation of a national plan for integrating TB, HIV and PMTCT services, researchers interviewed facility managers and found that barriers included insufficient consultation with stakeholders, a lack of supportive guidance and insufficient human resource capacity (Uwimana, Jackson, Hausler, & Zarowsky, 2012). Lack of staff engagement can cause feelings of passivity and resistance to change (Scott et al., 2014).

A study into the constraints of implementing an equity-promoting staff allocation policy in South Africa found that resistance to organisational change occurred where staff felt unsupported and overwhelmed (Scott, Mathews & Gilson, 2012). Although the managers in question were district managers, they were faced with the same type of contextual challenges as are currently experienced by managers at facilities. Due to staff shortages and financial constraints, managers felt that they were "doing much more with less". Many had not had any management training, and felt unsupported. They cited a lack of change management as a problem, and reported that constant organisational change had brought about a feeling of change fatigue.

Similar factors may be acting as barriers to implementation in ASLI.

2.6.2. Facilitating factors

In a study of the views of nurses charged with implementing an integrated chronic care model at PHC clinics in South Africa, it was found that key features of successful implementation include support and leadership from managers, employee involvement in planning and implementation of interventions, effective communication all round, provision of training for staff members, appropriate supervision, shared learning between staff, and benchmarking to set performance standards (Mahomed & Asmall, 2017).

The need for decentralised planning was emphasised in a study of the insights of district managers on the implementation of PHC outreach teams in South Africa. This qualitative

study found that district managers disapproved of centralised planning of this initiative, and felt that facility managers were best placed to implement it, as they were closer to the front lines of service. This echoes the need for distributed leadership noted by Best et al. (2012). Lack of communication with staff members was noted as a adversely affecting the success of the plan, with managers recommending that all staff should have been orientated, and thus prepared, prior to the start of the programme (Moosa, Derese, & Peersman, 2017).

In the study by Naidoo and Mohammed (2016), of Lean thinking in KZN , the authors attribute the success of the programme to the fact that staff acknowledged that there was a problem and that it needed to be addressed; staff were involved in generating a solution from the beginning, managers or implementing agents had knowledge of Lean principles and educated staff, there was buy-in from upper management, the medical manager championed the project, and numerous follow up meetings were held in which adjustments were made where necessary.

2.6.3. The need for a learnings approach to planning

As can be seen from the examples of successful implementation in South Africa, a common feature is the involvement of staff and clinicians in the planning process. In the study by Naidoo and Mohammed, the fact that staff acknowledged the situation and worked through the solution reflects a process of "sense-making" – defined as "the process individuals undertake as they try to understand what is going on around them, as they try to make sense of events and experiences" (Balogun, 2003:74). The need for thus engaging staff when planning and implementing interventions can be explained by their behaviour as "distributed leaders" – they act autonomously within their spheres of influence, take action based on their own decisions, and are responsible for the ultimate manifestation of policy. Staff who operate at the front line of service can be considered "street level bureaucrats" who work at the plane of implementation and who have discretionary power over their daily interactions. The theory of Street Level Bureaucracy (SLB) was first described by Lipsky (1980), who contends that front-line workers interpret policy and behave in ways that are a response to the dynamics and context of their work environment. In their work settings they are often overburdened and under-resourced, and these factors affect their behaviour in ways that are unpredictable. Top-down planning is therefore undesirable, as it cannot account for the reality faced by front line implementers. A better approach is to involve these workers in the planning initiatives in a way that allows them to make sense of their environment and gives them a feeling of

ownership (Gilson, Elloker, Olckers, & Lehmann, 2014). This can be accomplished using a "grassroots", or collaborative approach to planning.

2.6.4. Collaborative Action Research

Collaborative action research was successfully employed to reduce waiting times in two PHC clinics in Cape Town (Sastry et al., 2017). This approach involves bringing together multiple stakeholders, including facility managers, staff, end-users and researchers to collectively produce health system improvement by drawing on the knowledge and experience of all health system actors (Lehmann & Gilson, 2015). Knowledge is generated and shared in in an iterative cycle so that implementation of programmes can progressively be monitored and improved. The advantage of including all levels of stakeholders is that this harnesses the power of distributed leadership by engaging the "street level bureaucrats", or front-line staff who do the actual work of implementation. In the study by Sastry et al., researchers worked with staff from two PHC clinics in Cape Town. In Clinic A, they focussed on reducing waiting times in the pharmacy, and in Clinic B there was a focus on improving efficiency to reduce patients waiting time and improve flow generally. At Clinic B there was already an appointment system in place for some services. Planning, action and evaluation took place in three phases, involving support from researchers, reflection and collective problem solving over a nine month period. At the end of this time, it was found that mean waiting times were significantly reduced at both facilities. Facilitating factors were found to be engaged leadership, a sense of ownership by staff and shared focus on practical solutions. Barriers were identified as staff resistance, staff turnover, changes in leadership and human resource shortages.

Collaborative (in this case known as participatory) action research was found to be an effective way to strengthen the capacity of health care managers, including facility managers, in Uganda (Tetui et al., 2017). This qualitative study noted that there is currently limited research around the use of participatory action research to improve health care managers' capacity, particularly in low income countries. The approach was used with the aim of improving maternal and neonatal health outcomes, and included mentoring facility managers, providing supportive supervision and recognition for good performance. Managers were engaged in identifying the issues affecting maternal and neonatal health, and were responsible for generating solutions. The action research cycle was repeated four times annually in a process of iterative improvement. As a result of the process, managers' capacity

was enhanced. They became more creative and proactive – with an improved ability to identify problems and solutions within the system, and reflect on actions and learning. The project encouraged managers to explore their own - rather than external - resources when designing solutions. Managers became more responsive to the needs of clients, resulting in better health-worker attitudes and shorter waiting times. Managers also reported increased confidence in their own decision-making abilities. The study states that the participatory approach must be matched by organisation-level commitment to facilitate collaboration, or it can become demotivating as managers "fail to positively interact with stakeholders….such as local government officials" (Tetui et al. 2017:50).

2.7. The Role of Facility Managers

2.7.1. Facility managers' position within the system

Leadership and governance are critical to systems-strengthening initiatives, and health outcomes are related to their performance within the health system (Gilson & Daire, 2011; Munyewende, Rispel & Chirwa, 2014). Facility managers (FMs) play a pivotal role in programme implementation because they are located between upper management and front line staff. Appendix 1 gives a graphic representation of their position.

Facility managers are required to have a focus on population health needs, specifically those of communities they serve, and need to be responsive to patients and their environment (Gilson, Ellokers, Olckers & Lehmann, 2014). They are tasked with managing resources, people and perceptions, with the latter two described as most challenging. Facility managers all began their careers as nurses, and have been promoted to leadership positions, although frequently without sufficient training and support for this new role. Many of them therefore feel more comfortable working as clinicians than managers. They frequently still carry the hierarchical mind-set of the old health system, which is in contrast to the new health system orientation towards population health and PHC.

Given their importance within the system, and their part in implementing health system interventions, it is of interest to examine more closely the activities and roles they undertake..

Daire and Gilson (2014) investigated how FM perception of self-identity shaped their leadership and management practice. This study was conducted with FM of PHC facilities in Cape Town, and included a sample of eight managers drawn from MDHS and CCT clinics.

Participants – like most facility managers - had previously been trained and worked for a number of years as nurses. Management requires a different set of skills to nursing, however. Personal identity was described as a critical factor in shaping the way in which managers practiced. The authors theorise that the longer managers occupied their role and the more experience they gained, the more they internalised their new identity. This changed the way they thought, and shaped their behaviour.

Three out of the eight managers were observed to have internalised their management identities to a larger degree than the other participants and were more confident in carrying out their management roles. They managed more effectively "through other people" and they referred less to their PPHC managers. They were also more likely to organise meetings to identify and address problems, and to delegate tasks, thus performing better as managers.

In an effort to help managers better internalise their management identity, participants were asked to suggest methods for helping to develop leadership and management skills. Suggestions included supporting personal reflective practice to develop self-confidence and self-awareness and organising peer-to-peer support to share learning and experience. It was also suggested that peer mentorship could be used to transfer tacit knowledge. Shared learning, therefore, could be a valuable tool to improve management practice.

2.7.2. Competencies and skills required

Gilson and Daire (2014), describe management as "behaviours that managers use to improve and sustain organisational performance over time. They note that it is composed of two aspects: managing the internal activities of an organisation, and leading staff in a way that achieves results. This includes being able to inspire others and make good decisions. FM are expected to perform within five areas of competency: leadership and governance (including change management), operational management, quality improvement, service delivery and information management (Health Systems Trust & National Department of Health, 2016).

Tension can result when there is ambiguity in the definition of what managers are expected to do (Willcocks, 1994). Senior management may expect certain roles to be fulfilled, but health managers themselves may perceive the requirements of their role quite differently, and this mismatch can cause problems for the organisation. Effective managers should be able to accurately assess what is required by their work, how they fit into the organisation, and

respond by carrying out appropriate management roles. In the case of clinician-managers this can be hampered where there is a lack of formal induction and management training support.

2.7.3. Leadership styles

In carrying out their function, facility managers fulfil a leadership role. Literature describes several different leadership styles exercised by managers.

Transformational leadership –The transformational leader inspires staff through their behaviour, and includes employees decision-making in a way that encourages creativity and is intellectually stimulating (Judge & Piccolo, 2004). This empowers staff by increasing their feeling of competence and self-efficacy – the degree to which they feel they can cope with the demands placed on them.

Empowerment instils a feeling of confidence in one's abilities and a "can-do" attitude, even if staff don't succeed in a particular task – as long as their leaders reinforce this by praising the positive aspects of their performance (Conger & Kanungo, 1988). This is valuable because employees who are empowered are more likely persist in the face of obstacles. Factors which hamper empowerment are authoritarian management styles.

Transactional leadership - focusses on getting the job done, and on the exchange of resources. The leader explains what is expected and what rewards are offered if these expectations are met. Effective managers often employ a combination of transactional and transformational approaches.

Laissez-faire leadership – this style is characterised by reluctance to take action or give direction. Group members are left to make decisions on their own.

2.7.4. Leadership identity

Globally, as in South Africa, managers in health care facilities tend to be clinicians who have been promoted into the role (Daire & Gilson, 2014). They are often expected to combine clinical practice with a management role, which contributes to stress and burn-out (Askheim, Heggen, & Engebretsen, 2017). Frequently, they struggle to internalise a new sense of self identity as a manager rather than a clinician, particularly if they feel more competent as a clinician and lack management skills (Spehar et al., 2015). People have a tendency to seek out activities in which they are competent as they experience this as rewarding, and will

avoid activities in which they feel they are unsure of themselves. It is important therefore, to give managers the skills they need to fulfil their role, and for it to become part of their self-identity. The need to feel competent and fulfilled is thought to be associated with role transition and building a professional identity. The WHO has advocated mentoring as a way to improve management skills and professionalization.

In a study of occupational health in a hospital setting in Sweden, it was found that uncertainty and stress in the work environment took a toll on managers' mental health (Nilsson, Hertting, Petterson, & Theorell, 2005). However, transformational leadership, including opportunities for shared learning and support was found to promote a healthier work environment and decrease stress. Other factors which contributed to a positive work environment were comprehensibility, meaningfulness and manageability. Comprehensibility is the idea that changes in the workplace should be predictable, meaningfulness implies that work should be socially rewarding, and manageability that there should be sufficient resources to accomplish a task including supportive resources. Giving managers increased control and autonomy was associated with decreased stress, staff turnover and absenteeism.

2.7.5. Mintzberg's model of managing

Henry Mintzberg (1973) published a concept of managerial roles grouped into three categories: interpersonal, informational roles, and decisional roles. Mintzberg updated this conceptualisation in his comprehensive Model of Managing (2009). This integrated model situates management roles in the context of stakeholders and the unit, and describes managerial roles as taking place on three planes: through information, with people, and to action directly. Figure 1 below gives a graphic representation.

Managers are located at the centre of the unit, between the rest of the organisation, and the external stakeholders – including partners and end-users. Managers frame the work that is to be carried out, and bring the frame to life by assigning time to activities – by scheduling. They are situated further away from the "action", as they usually get work done -

- with information:
    - Managers communicate, which involves promoting the flow of information and monitoring the situation around them,

    - Managers exercise control through decision-making. This includes directing the behaviour of subordinates by designing systems, strategies and structures, and by delegating responsibility.
- through people:
    - Managers lead by energizing and developing individuals, building teams and strengthening organisational culture.
    - Mangers link the unit to the rest of the organisation and the outside world
- to action directly: The roles here relate to carrying out the actual work of the unit, managing projects and handling disturbances, for example stepping in to take the place of a staff member who is unexpectedly absent.

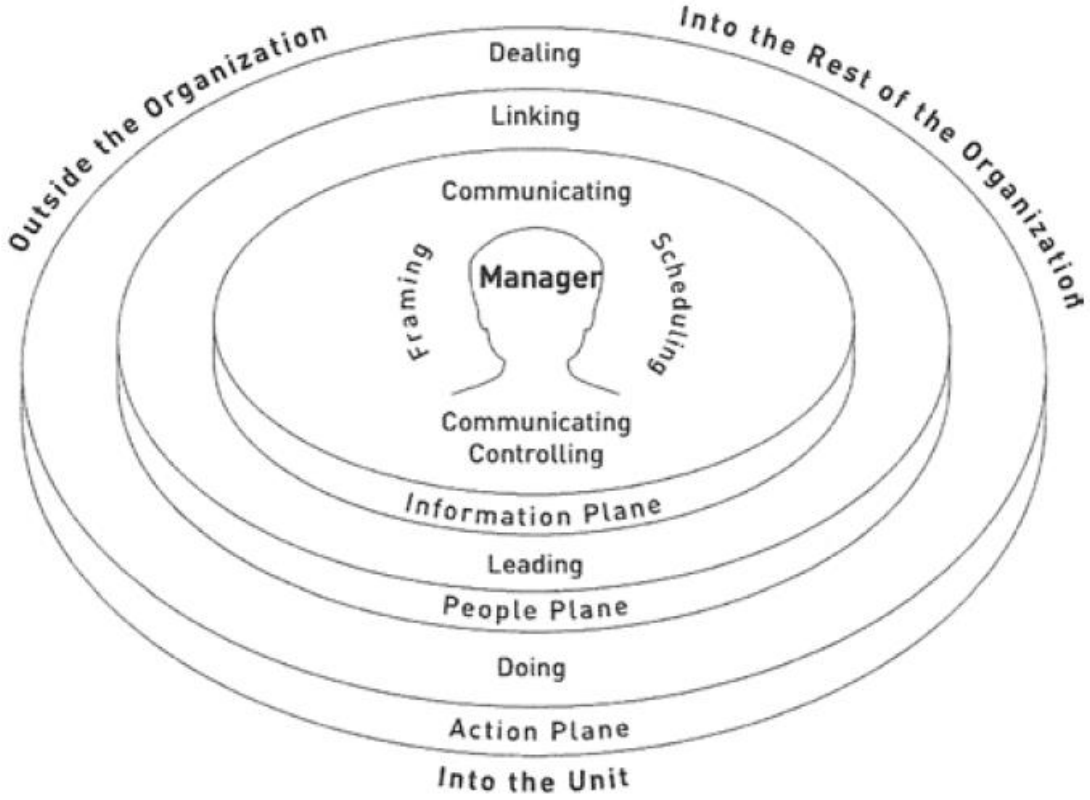

Figure 1: Mintzberg's Model of Managing

Managers are not usually involved in activities related to the core purpose of the organisation. Facility managers, however, frequently do carry out clinical work – often to the detriment of their management function (Elloker, Olckers, Gilson, & Lehmann, 2013).

Currently there is insufficient research around the micro level of governance, at the level at which managers and staff interface with policy and clients (Gilson & Raphaely, 2008). More

information is needed in relation to implementation and the role of health managers in order to improve health system strengthening (Scott et al., 2014; Tetui et al., 2017). Analysing management roles can help to identify mismatches in expectation and actual role fulfilment, as well as challenging areas that can be strengthened.

2.8. Conclusion:

Waiting times can be reduced, but this will require thoughtful implementation of an intervention, based on learning from previous health system interventions. Studies of successful programmes have emphasised the need for staff engagement and ongoing management support. The role of the facility manager must be examined as they play a fundamental part in implementation, and this information can be used to optimise extended roll-out of appointment systems.

CHAPTER 3: METHODOLOGY

3.1. Introduction

This study aims to reach an understanding of how the *Appointment Systems Learning Initiative* approach and its implementation was experienced by participating facility and PPHC managers at City Health facilities in Cape Town. This includes an exploration of the roles and experiences of health managers, including their perceptions of the benefits and challenges of the process.

The **objectives** of this study are:

1. To understand how facility managers experienced the bottom-up approach in ASLI
2. To explore what benefits and challenges facility managers encountered when implementing an AS
3. To understand how facility managers view their roles in leading and supporting implementation of an AS
4. To understand the role of programme managers in supporting facility managers who are implementing an AS.

3.2. Study Design

This is a qualitative, exploratory study which forms part of an initial enquiry since there is limited information currently available on the research topic. This design was selected because the researcher sought to explore and describe participants' understanding and interpretations of events (Ritchie et al., 2003). Findings from this study could generate "generalizations about the group, process, activity or situation under study" which could be applied in similar contexts (Stebbins, 2014:6). A flexible design with a combination of induction and deduction was used. This was considered appropriate as it was anticipated that while some aspects of the research topic would require an open-ended approach to allow for unexpected elements of participants' experience to emerge, it was also important to cover specific issues related to the role of managers (Gale, Heath, Cameron, Rashid, & Redwood, 2013). Flexible study design is a feature of qualitative research and permits adaptation of design to best answer the research question. Qualitative methods are also most appropriate for

investigating the dynamics of *how* things happen (Ritchie et al., 2003), both of which are applicable and useful in this study.

3.3. Study Setting

This study was conducted in the City of Cape Town. The City has a population of approximately 4 million residents and covers an area of 2 446 square kilometres. Approximately 24% of adults of working age (between 16 and 65) are unemployed. There are 1 068 573 households in CCT, of which 81.6% have access to formal housing and 377 813 are indigent. Apartheid spatial planning has resulted in most non-white residents living in areas which are further away from the city centre, where services and employment opportunities are limited (Western Cape Government, 2017). Rapid urbanisation has compounded this problem, leading to overcrowding in informal settlements.

Non-communicable diseases are the leading cause of death, followed by HIV/Aids and TB, and traumatic injury. The number of residents on ART has increased by 11.4% between 2011 and 2016 while HIV prevalence is at 12.6% (Human Sciences Research Council, 2018). Increasing financial pressure due to the struggling economy, as well as the high cost of private medical aid make it likely that increasing numbers of people will seek treatment at public health facilities. It is anticipated that these will serve a larger proportion of residents as private medical aid becomes too expensive and financial pressures increase (Western Cape Government, 2018).

3.4. Population and Sampling

The study population consists of the programme managers and the facility managers of 20 clinics initially involved at the first workshop (ASLI Steering Committee minutes, Feb 2016).

Purposive sampling was used to deliberately select participants from the study population who would be able to provide rich information on the research topic (Ritchie, Lewis, & Elam, 2003; Robson & McCartan, 2016). In order to get an understanding of how managers experienced the process in its entirety from initiation, the sample included all facility managers involved in ASLI who had not changed their place of employment during the course of the initiative. Eleven managers met this criterion. After consideration, a decision was made to include a facility manager from a large clinic who had moved to a different position approximately four months before data collection. It was felt that they had been

involved from initiation to near-completion of ASLI and would thus still be a valuable source of information (Marshall, 1996). Accordingly, twelve facility managers were included in the sample.

Additionally, two Personal Primary Health Care (PPHC) managers were purposively selected on the recommendation of City Health management. Their inclusion was based on their active involvement in ASLI from its initiation. PPHC managers are responsible for overseeing the facilities and facility managers within a health sub-district. Within ASLI, their buy-in was deemed critical to the success of the project, and they were tasked with spreading the concept throughout their sub-district. PPHC managers were required to select and prepare facilities that would participate in ASLI. They were required to consult with facility managers and assist them in deciding which services should first introduce appointment systems (ASLI information letter, April 2016).

PPHC managers acted as key informants with particular in-depth knowledge of the facilities, managers and context around ASLI (Marshall, 1996; Mays & Pope, 2017). The data collected from their interviews was also used in triangulation; to corroborate the data collected from facility managers and increase the validity of the study (Yin, 2011).

3.5. Data Collection

3.5.1. Semi-Structured interviews

Face-to-face, semi-structured interviews were chosen as the method of data collection. These were conducted with participants individually in order to maintain confidentiality, while also allowing the researcher to build a rapport with participants and encourage a frank discussion of views (Ritchie et al., 2003). This method was appropriate as there was the possibility of sensitive information being divulged about participants' work environment, colleagues, personal beliefs and perceptions. It was felt that participants would speak more freely in individual interviews than group discussion which lacked anonymity.

3.5.2. The interview process

The researcher obtained a list of area managers for the selected clinics as part of the letter of permission from City of Cape Town. The relevant area managers were contacted as a first point of call, and provided details for the facility managers. In the case of the programme

managers, their email addresses were obtained directly from them at a meeting attended by the researcher as a follow up to ASLI. Emails were then sent to participants explaining the purpose of the research, and requesting an interview at a date and time that was convenient for them. A participant information sheet and a consent form were attached to the email. The managers were asked to provide a suitable room within their facility or place of work where the interview could be conducted with minimal disruption. Participants were reminded of their interview dates two or three days prior to the appointment by email or telephonically.

On the day of the interview participants were met at the agreed-upon venue in a private room. Written informed consent to the interview, including the recording thereof, was obtained. Participants were assured of their anonymity and were given the opportunity to ask questions about the project. It was expected that interviews would be approximately an hour in duration. Most took about forty-five minutes and were voice-recorded on the researcher's cell phone, which was password protected.

.An interview guide was used to provide a framework of areas of interest to be covered. This was compiled after a reading of the literature, and included specific questions originating from the roles of managers described by Mintzberg.

The approach was flexible, allowing the researcher to deviate from the guide and follow other avenues of questioning that seemed fruitful (Ritchie et al., 2003). Open-ended questions were used to allow the participant to freely share their thoughts and opinions (Creswell, 2014). Interviews were conducted in English as City of Cape Town confirmed that all participants were fluent and comfortable in this language.

3.6. Data Analysis of Interview Material

Data collection and analysis in qualitative research is not a linear process, but occurs in a cyclical manner (Ryan, 2006). As data was collected during interviews it was analysed based on the research question, reading of literature, and information that was forthcoming from participants. This "interim analysis" allowed for refinement of the data collection process, as areas of interest can be explored in further depth (Pope et al., 2000).

Once an interview was completed, the voice recording was downloaded onto the researcher's laptop and deleted from the recording device. The researcher transcribed ten of the interviews and used a transcriber for four of them. Thereafter, the researcher read through each

transcription again to ensure thorough familiarisation with the material. Transcripts were loaded onto the software programme ATLAS.ti for coding and analysis.

Thematic content analysis was used. Data related to categories of management roles was analysed deductively, and slotted into predetermined categories outlined in Mintzberg's 2009 Model of Managing (Pope et al., 2000). Analysis of the remaining information was inductive, with patterns emerging from the data. A process of initial coding was carried out, during which a supervisor was consulted to ensure validity of codes. Data segments which expressed the same idea were linked under the same code in a process of constant comparative analysis. Phenomena which were coded included actions, events, meanings (or perceptions) activities, states, relationships, or consequences (Robson & McCartan, 2016). These codes and groups were reassessed for coherence and iterative changes were made until it appeared that the themes and codes are representative of the data. These were arranged in a thematic network.

When reviewing the transcripts, some quotes made by participants were identified as being typical or emblematic of the meaning which managers attached to events (Weddle, 2013). These quotations were included to illustrate the research findings. In some cases, however, colloquialisms, pauses or other artefacts of speech made these clumsy to read. The quotes were therefore sometimes shortened or extraneous words and pauses were removed to make their meaning more apparent while preserving their authenticity. This was checked with the research supervisor.

3.7. Document Review

Documents provided by City of Cape Town provided an additional source of data. These included the minutes of the steering committee meetings, documented feedback from workshops, case reports of progress from the facilities, and CCT newsletters. Documents were purposively chosen for inclusion if they related to the research question. These documents were used to provide background and context information regarding ASLI, to clarify potential areas for questioning and supplement information gathered in the interviews (Bowen, 2009). Documents were skimmed, and then re-read in an iterative process to identify and extract meaningful data according to the data extraction sheet (Appendix 5). Thereafter, thematic analysis was deductively applied according to the themes and sub-themes generated from the interview data. Information gained from the documents was triangulated with interview data to ensure its credibility and trustworthiness.

3.8. Rigour:

Rigorous study design was undertaken to structure the research in a logical way. Care was taken to ensure internal coherence between the problem, the research question, the aims of the study, and data which was collected (Malterud, 2001). The research process has been transparently described above.

3.8.1. Credibility and Trustworthiness

During the course of interviews, the researcher engaged in "member checking" and sought to clarify information provided by participants, in order to ensure their meanings were accurately understood. The researcher met with supervisors during the process of conducting the study to confirm that they agreed with her thinking and methods.

Triangulation strengthens validity by finding accord between information from various sources (Creswell & Miller, 2000; Robson & McCartan, 2016). Data was triangulated by checking if information from facility managers was corroborated in other FM interviews, by information from PPHC managers, and through documentary evidence. Data was found to be congruent across sources.

The researcher exercised reflexivity during the process, frequently considering how interviews were conducted, how her own biases affected questioning and by trying at all times to maintain neutrality. Reflexivity contributes to rigour as the researcher maintains a sense of self-awareness of their influence on the research process (Mays & Pope, 2017). See Appendix 4 for reflections on the research process.

3.8.2. Transferability

Due to the fact that the accounts provided by participants corroborate each other, it is felt that interview data is typical of this study population (Krefting, 1991). A thick description of the research context and participants has been provided to allow the reader to gauge the transferability of this research to other settings.

3.9. Ethical Considerations:

Before this study commenced, ethical clearance was granted by the Biomedical Research Ethics Committee at the University of the Western Cape, as well as by CCT.

Participants were contacted by email to requesting their permission when arranging interviews. A consent form and information letters were attached to enable potential participants to make an informed decision. The consent form explained the rationale and value of this research and emphasise that participation is voluntary and could be withdrawn at any stage without negative consequences or loss of benefits. Participants were assured that if they removed themselves from the study their information would not be used in the analysis and would be destroyed. Before the interview started the researcher reiterated that consent was voluntary and that obtained written consent for participants, which included permission for audio-taping the interview. They were given the opportunity to ask the researcher questions about the study. Should any participant have experienced distress as a result of participating in this research, they would have been referred to the City of Cape Town Employee Assistance Programme for counselling, however, this has not proved necessary.

Although the specific clinics that participated are known to the City of Cape Town, the identity of those who took part was concealed by assigning numbers to them to be used instead of their names on transcripts and during analysis and reporting. Only the researcher is aware which numbers correspond with which particular participants and will not divulge this information. Recordings and transcripts are stored on a laptop and a USB stick which are password protected. Only the researcher has access to them, and they will be destroyed 5 years after the research has been finalised.

CHAPTER 4: FINDINGS

4.1. Introduction

This study sought to understand how facility managers in selected clinics experienced the implementation of the *Appointment Systems Learning Initiative*, both in terms of the learning approach initially taken to planning, as well as managers' roles in leading and supporting implementation. PPHC managers played a significant part in kick-starting ASLI, and so this study includes an exploration of the perceptions of two key PPHC managers. It also investigates what role was played by PPHC managers in supporting facility managers. The findings presented here draw on interviews with facility and PPHC managers, as well as project documents, such as meeting minutes and newsletters.

4.1.1. Description of participants

It was decided that the sample should include all facility managers who participated in ASLI and who had remained in their posts for the duration of that project, as they would be able to give a reliable and full account of the process. A total of 12 facility managers from City of Cape Town were identified for participation. Of these, one left her facility to take up another position with City Health. This manager was still considered to have a wealth of knowledge and experience, and had been involved for the duration of ASLI. Therefore, she was included as a participant.

The facilities overseen by participants were of a range of sizes, dealing with varying burdens of disease. Some smaller facilities had very high burdens of HIV and TB, for example, or served a high population of children under five years of age. They provide an idea of how appointment systems work in differing contexts and circumstances. All managers had worked as clinicians prior to their appointment as managers. An interesting angle which emerged during the interviews was that managers who reported satisfaction with their appointment systems tended to also have a management qualification such as nursing administration, business administration, or having attended a course such as Monitoring and Evaluation.

Both PPHC managers who participated had extensive experience of ASLI and of supporting facility managers throughout the process, a long history of service in City Health, and in-depth knowledge of the context in which the facilities operated. . One was also part of the ASLI steering committee. This lends credibility to the information and views which they relate in the interviews.

4.1.2. Description of facilities

All of the twelve facilities that were visited had implemented an appointment system, or attempted to do so. Eight facilities were large, seeing around 6500 patients per month. Two were medium-sized, seeing around 4000 to 4500 patients per month, and two were small, with head-counts of around two thousand patients each month. The small clinics offered reproductive health, child health, PMTCT and BANC and TB services. The bigger facilities offered these services, as well as nutrition, TB and ARV services, and well-women services. Two big facilities were community day clinics, and also offered treatment for chronic conditions. Another large facility shared premises with MDHS so patients could access adult curative services there.

Among the eight big clinics, five had implemented functioning appointment systems, by their own report. Three big clinics had made some progress but felt that they were struggling. Of these, two seemed overwhelmed by the amount of work that they faced in the clinic, and spoke in particular of staff resistance and staff turnover as being problematic. The last big clinic had had a change in management. Initially the appointment system there had worked but the clinic was without a manager for a few months and had regressed. The manager from this clinic was the participant that was included in this study despite having left their original position.

Of the medium sized facilities, one had an effective appointment system, and the manager was very proactive. She particularly mentioned how she enjoyed analysing data, which may have helped with monitoring during implementation. The other medium-sized clinic reported staff resistance as a challenge to their appointment system, which they felt wasn't going as well as they would have liked.

Both small facilities had implemented an appointment system without much trouble, but both questioned whether appointment systems were suited to small clinics. One manager felt that targets for patient numbers that were set were unrealistic given the size of the clinic and the requirement of having an appointment system.

4.1.3. Prominent themes

Themes and sub-themes, which emerged during data collection, fall into two broad categories: The first cluster deals with the iterative learning approach taken in the ASLI. The second cluster contains themes dealing with implementation, as detailed in Table 1 below.

The first theme deals with the planning phase (category 1), and the others with implementation (category 2).

The theme which featured most prominently was the role played by managers in leading and managing the appointment system initiative. Managers repeatedly spoke about the importance of getting the buy-in of staff, and of working to motivate and monitor staff, encourage team-work and strengthen the culture of the clinic. Also prominent was the role of managers in designing the system and solving problems related to the way the system worked. Communicating with patients was a notable area of activity. Linked to their role in handling information, were widespread accounts of circulating and scanning the environment of the clinic, receiving input and acting accordingly – acting as a nerve centre. Many managers spoke about their role in doing the work of the unit – actual clinical or clerical work – which is not a management activity in most organisations.

Managers spoke at length about the challenges they faced, with a lack of human resources and time for the work of implementation being particularly difficult for many. An aspect that came up numerous times was a lack of materials and technology, related to the need for appointment diaries and functionality of the software system which is used for bookings.

All managers acknowledged that there were benefits in implementing the appointment system, with advantages in organisation and planning being mentioned repeatedly.

There was appreciation of the learning approach to planning, with managers reflecting satisfaction with their autonomy in the planning process and collective problem solving.

Facility managers did not have strong feelings about the roles of PPHC managers. In contrast to the desire for autonomy expressed by the facility managers, both PPHC managers who participated both spoke about the need for more a more prescriptive approach as way to offer support to facility managers.

Themes and sub-themes which were identified are represented in the table below:

Table 2.Themes and Sub-themes:

Theme	**Sub-theme**
Category 1: Planning	
1. Learning Approach	Selection of staff for workshop attendance by FM Facility-driven v Prescriptive planning Learning experience
Category 2: Implementation	
2. Role of Facility Managers in ASLI	Leading facility staff Controlling activities inside the facility Involvement in clinical work
3. Role of PPHC Managers in ASLI	
4. Challenges	Human Resources Time Preparedness Support Changes in the context of the health system
5. Benefits	Folders could be pre-drawn Shorter working days for staff Improved satisfaction for end-users Improved waiting times Facilitation of better HR planning Improved data for decision-making

4.2. Theme: The Learning Approach

This theme deals with the managers' perceptions of the facility-driven approach to planning, featuring shared learning, which was the foundation of ASLI. As seen in the introduction, the original intention of the initiative was that facilities should be given the opportunity to analyse the work-flow of their clinic so that they could make sense of the way it functioned, and of factors that could affect the way their appointment system worked. They would then design and implement an appropriate appointment system, over which they would feel a

sense of ownership. The learning from this experience would be shared between facilities so that they could support each other. They would also receive support over the course of 18 months from City of Cape Town and its partners.

Facility managers were introduced to the initiative at a workshop held in May 2016, at which the then executive director of health in the City of Cape Town

"encouraged each person present to contribute to the workshop, saying that each person's experience, perspective and ideas were important. She encouraged colleagues to be part of a learning process, saying that management did not have any easy, set answers as to what an appointment system needed to look like – they recognised that a system would have to be tailored to each facility. She freed colleagues to be creative and to "think out of the box" in designing appropriate appointment systems" (Appointment Systems Workshop Report, May 2016).

4.2.1. Selection of staff to attend workshops by FM

Each participating facility had been invited to bring a team of five staff members to the first workshop.

Several managers spoke of the advantage of being able to choose which staff members they brought to the workshops. They described how this gave them a sense of autonomy as they strategically chose staff in a way that would facilitate implementation.

P8: "With some of the staff I went there. And then the staff members were the ones that introduced the appointment system. I took one of the clerks because the clerks need to do the pre pulling of the folders. I took one of the sisters that started the immunisation appointment system and she introduced it and started it."

P11: "But I decided to take the person that is in charge of the reception area so she was doing well. So ya, I thought because she is in charge in the records room…if I take her with to a workshop and then she knows - she actually has an idea of what the appointment system is all about. So I took her with [me] and when we got there then she was like "oh, now I see what this is all about". Then she's the one that is reinforcing it to the record room staff."

Managers who noticed that there was some resistance to the initiative were able use their in-depth knowledge of staff dynamics at their facility to individuals who were "influencers" and send them to the second workshops. This was seen as a means of motivating them and

overcoming negativity. This approach required intimate knowledge of the clinic environment and was reported as being successful:

P6:"…one of the staff nurses wasn't also into this appointment system because she was running this immunisation…And then she also went. Now, she's a talker! When she came back she was so interested in this appointment system. I don't know what they did tell her but she was the one [who started implementing] and she said let's start with immunisation."

The practice of sending staff members who were influential and possibly resistant had the dual effects of helping to spread information and reinforce the project back at the facility.

4.2.2. Facility-driven v Prescriptive planning

Participants at the workshop were tasked with working in facility groups to plot the flow of clients in their clinics, and to make sense of their specific circumstances (Appointment Systems Workshop Report, May 2016). This was intended to produce a plan appropriate to each facility, and of which staff would have a sense of ownership. The "bottom-up" method of planning was well received by managers:

P5: "I'll tell you, the workshops, they were very good. If I remember well, we started at UWC. It was the facility manager – myself - my second-in-charge and a few nurses from the rooms and there were some clerks, one or two. And there was a doctor. The doctor has gone already, that was here [at] that time. So, it was actually the baseline of what was going on at the clinic at that time. So, we had to do a sketch of our clinic floor and we had now to think if we had this appointment system, what is the clinic floor going to be like? What do we want to take this clinic from here to there? You know, to the other point: how do we want our clinic to function - now in terms of basic flow?"

Working through their challenges and solving problems as a team was perceived in a positive light, as the plans were seen as facility-generated, not imposed from above. Managers also appreciated not being dictated to, in terms of how the system should work. A bottom-up approach was viewed as preferable to the imposition of plans from City of Cape Town, which was seen as being given "extra work".

P4: "It was fine. [Its better that it was] not prescriptive. Because once they are prescriptive it's like "No, they are giving us extra work". But the way they have done it [was good]. Ok, like in your facility; it depends on your facility's needs....Because it really helped us a lot -

even with the flow of clients. With an appointment, you can't just say "I want to make an appointment" because you have to first devise a flow of your clients; the flow of your folders. And then you have to come up with a system. For example...your clerks: who is going to be responsible for what."

I: " So if this process is imposed on you from above it's not as beneficial?
P3: Exactly, because you didn't work towards it. We knew where our faults were, we knew where our flaws were, and we knew how to get better and improve. And look, we improved on our system."

Managers favoured this grassroots approach to planning, as it allowed them freedom to adjust their appointment systems as they felt was best for their context. The communities served by clinics have varying disease profiles - for example some clinics serve populations with very high levels of HIV and TB infection. The demographics and culture of the communities also differ between clinics. These factors mean that facilities don't all offer the same mix of services, and that clients have different expectations of facilities.

P13: " In the workshops I find it helpful, us going to present, to say this is how far [we have come], and where we could [improve]. I understand why they cannot tailor it down. Because the dynamics of each facility differs. So it's for us to go back and tailor it to suit my facility. And even the programmes, if you look, not all of the facilities are ARV sites. It's going to be different, and we know the pandemic has a huge toll on the health system already, let alone the staff. So that is all the things you need to consider -when it comes to your time slots also."

However, some managers were of the opinion that the appointment system was inappropriate altogether in the context of a very small facility such as the one at which they worked.

P7: [pause] "Ya, that's...You see things are...as I say....if you've got enough staff it's a good idea but in a small place....no. They, they didn't think it through; they didn't really come into a place and say "Three sisters?" Some places have two sisters. HOW do you think you're going to make this work"?

She felt this way because it was difficult to have one sister devoted to walk-in patients while the other two saw all appointments for the services that were offered – in this case, TB, family planning, well babies and chronic adults. To her it appeared that a walk-in system at

such a small facility was preferable because children who were acutely ill otherwise had to wait longer because priority was given to appointment patients

In contrast to the facility managers, both PPHC managers favoured a more prescriptive approach:

I: " So what difficulties do you think they faced?
P2: I think they faced actually putting a system in place. Because they were not given...we were not prescriptive...to say it must be, um, there must be time slots. Then they looked at it and thought ok, it's to do with time, so we'll say between that time and that time so many people can come but it wasn't individualised into clients. But then they...now they still find this load coming in the morning.
I: Hmm mmm
P2: And I think that's where they lost a little bit of faith in the whole system. And then I spoke to [=CCT Manager=]...maybe a year ago...and I said to him we have to be more prescriptive in what we require. Almost as if to say...there's an appointment system and this is what it must have…"

P1: "I think it's all fine and well to say - to give - the variety of different ways in the policy, but there should be one that we say: this particular method is strongly advised for this healthcare facility. So there is five other ways but this method is advised. So we're still leaving it open to them."

The PPHC managers had seen the struggles of facility managers to iron out the wrinkles in the system, and also how pressed for time they were. Many were too busy for extra administration or planning, and the PPHC managers felt the prescriptiveness would allow for the introduction of "best practice" guidelines.

4.2.3. The experience of shared learning

Managers found it beneficial to share their learning and hear from the experiences of other clinics.

Eastridge clinic had successfully implemented an appointment system over the course of three years, and made a presentation of their methods and experience (Appointment Systems Workshop Report, May 2016). This was also found to be motivating:

P8: "Yes, the sister from Lentegeur [Eastridge] was the one that introduced it. She introduced it and it was an eye opener that it can work if you space the clients. And we came here and we started it…"

P13: "But I mean, it was explained very well. Where it was benchmarked, like the sister from Tafelsig or Eastridge. So, when she explained it, it was....I mean, I felt that this can work, and if it worked for her I know it will take time but it can work somewhere else."

Managers also appreciated having the time to try a system and then tweak it. Previous appointment systems had been unsuccessful, so the intention this time was that facilities would learn from each other and from their mistakes, and be able to implement changes as the process progressed. As the PPHC managers explained:

P1: "[We were given the task of] rolling it out but as a learning opportunity - something to learn by. That's why the name was so long. So it was going to be almost like a test to see would it work because it's just never worked, [appointment systems have] always fallen flat, fallen flat, all the time. So we selected then a slow approach which was: select two clinics from every sub-district and see if it's going to work and then it snowballed from there."

P11: "That worked, in the sense that you were given space to put things in place and you were given enough time to evaluate."

This is reflected in the statement by the facility manager below, where she relates how young and enthusiastic staff members would share their ideas with her, which would then be put into practice to improve the system:

P10: "I did my rounds, and I was always there so they could come to me. So I had a lot of discussions with the champions, you know, especially the sisters. They were very young sisters so they [are] very enthusiastic, and they will come and tell you their ideas, and you implement and see how it works."

Of course, this was not the case at facilities which experienced staff resistance and change fatigue, but it does demonstrate how facility-generated planning and implementation can be effective. It had taken Eastridge clinic two years to get their appointment system running optimally, and in the case of one interviewed facility manager who reported successful implementation, she had started the process the previous year.

One facility that had very successfully implemented an appointment system by the time of the second workshop was asked to distribute their plan to other clinics, but the facility manager demurred. She explained in her interview that facilities need to work through their issues and come up with a system on their own, in order to properly analyse the functioning of their facility, and examine their strengths, weaknesses, opportunities and threats:

P3: "And then they wanted me to send the presentation to all of them and then I said no. You need to go through the challenges that we went through. If you are going to get something easy, if you are going to get it from somebody else - you are not going to appreciate it. But if you go through that then you know how..."

She had found the process of analysing the environment of the clinic to be useful, and had effectively put an appointment system in place. She had, however, had begun the process of independently prior to ASLI (a year prior), and so had a longer time frame in which to get it running smoothly.

The PPHC manager below agreed that there is a process of trial and error to be expected during which facilities will need to try a system and then tweak it to make it work:

P2: "Ya, you need to keep on looking to see how to improve it and say "We're going to try this". We're going to give it that period and then we'll look at it again. You've got to do that constantly because things change - until you get it to where you want it."

The need to give facilities time to review and improve their system was at the heart of the learning experience introduced in the initial phase of ASLI.

4.2.4 Changes in the context of the health system

The initiative started with a strong focus on learning and customized solutions, with the executive director having encouraged cycles of experimenting, sharing and learning in the initial workshop (ASLI information letter, 2016). This changed, particularly from early 2017.

CCT management decided on fully rolling out appointment systems for all services at the pilot clinics by November 2017, as part of ASLI Phase 2 (ASLI Steering Committee Minutes,

August 2017). In April 2018 the introduction of appointment systems at all clinics was officially announced in the media, with a City official saying of ASLI "It is this learning from the project that is now being used to inform the appointment systems in all City Health facilities" (IOL, April 2018).

According to a manager, the essence of the approach changed over time. Whereas in the beginning there was encouragement of experimentation and learning, which generated real buy-in from facilities, and there was a sense of excitement at the participatory approach to problem solving, this was gradually replaced by hierarchical approach in which targets were imposed. Clinics who were late adopters of the appointment system and who had not had the benefit of working through their challenges and making sense of their clinic's context were told to implement systems without the benefit of iterative learning and collective problem solving. Their experience was therefore one of imposed change, rather than learning. The information above demonstrates how the process began as one of shared learning, with space for trial and error, but evolved into an intervention which was constrained by requirements for an expedited roll out.

The change in approach and pace was not well regarded by managers.

P9: "Ya, but now they start becoming prescriptive. That is what I find...in the beginning it was perfect. And now they started to be very specific about how they want it. Now they talk about standardisation, every clinic must have the same sort of appointment system and areas are different. And what works for that specific clinic and the flow in that structure differs from other clinics. So now they start becoming "No, you can't do this, no you can't do that" So it's a bit of a conflict now. But in the beginning it sounded wonderful."

P7: "Now they are very prescriptive actually, and you [have to] start it [from] this time til this time. Every place is unique and I think you've got to work out what's going to work for you and your staff."

This change in approach was brought into relief in the ASLI Steering Committee notes of October 2017. This meeting was held approximately 18 months after the first workshop, in other words, near the end of the initial ASLI period. It should be borne in mind that there had been a large amount of variation in how effectively implementation had occurred, even within the small pilot group. Six out of the twelve clinics included in this study reported

success, two had an appointment of sorts but expressed unhappiness about the status thereof, and four felt they were struggling. Two of the "successful" clinics fell within a sub-district in which the PPHC manager was unusually supportive, organising three additional workshops which she ran on her own in aid of the appointment system. These clinics, then, may owe their success in part to the increased level of support they received compared to other facilities. According to the ASLI Steering Committee notes, IT modernisation was being carried out with priority being given to implementing appointment systems. During the initial phase of ASLI, Premhis had lacked the capacity to book time slots. It was anticipated that IT development would start in early 2018 and that a staff-facing system would be completed within six months, possibly accompanied by a patient-facing system for making online appointments. Concerns were raised about the preparedness of patients to make their own bookings, and the advantage that this would give to patients who lacked, or could not afford, internet access. This would be in conflict with the goal of the health system to increase equity. It would be necessary to engage with the community around this issue (ASLI Steering Committee Minutes, October 2017).

4.3. The Role of Managers in ASLI

This section on the role of the facility managers has been analysed according to the model of managing developed by Mintzberg (2009). He which describes how managers operate on three planes: with information, through people, and directly - to action. Additionally, the manager personally carries out the roles of framing the work, and scheduling time for its execution.

4.3.1. The Information Plane

Mintzberg (2009) describes the information plane as the level at which managers process information which is used to take action. They use information to drive behaviour in the facility, which is termed "controlling", and promote the flow of information by communicating all around with various stakeholders.

4.3.1.1. Communicating

Managers communicated "up" outside of their units with CCT and PPHC managers and "laterally" during their shared learning at the workshops. They communicated outside of the facility with health committees or community health fora, in the few cases where these existed. The majority of their communication, however, was with facility staff and clients in the facility.

4.3.1.1 i) Introducing ASLI to the unit

All managers reported that they introduced the system at a staff meeting. Some mentioned using their posters and materials from the workshop as a way of demonstrating the thinking behind the system they had designed. Meetings were held, at which the results of the workshops were presented and the potential benefits of the system were discussed.

P14: "So we, we sat down. I even showed them the presentation that was presented there (at the workshop) I took it. I borrowed the projector (from another clinic) and put it up, I took my laptop and put it on, and explained. They asked questions and I explained to them."

Most managers did not speak about going to the effort of finding a projector to show the presentation from the workshop. The manager who did report this had an appointment system that was running well.

4.3.1.1 ii) Monitoring activities

Many managers reported that they did not have much time to allocate to implementation of the appointment system. After the initial introductory meeting, they followed up largely on an ad-hoc basis during the work day, or in staff meetings which were sometimes held only once every six weeks.

P6: "Feedback meetings is different from staff meetings. Staff meetings is probably… we try to have them on a monthly basis it's difficult to do; so it could be a month and a half too but burning issues are being sorted out…

I: …as you go?

P6: [nods] Because in a staff meeting appointment systems cannot…it can be mentioned but it cannot be on a discussion. It's too much things to listen to and sort out."

Although this was the case in most clinics that were involved, the facilities at which the AS seemed to be functioning well managed to have regular meetings:

P3: "We had more meetings. Every week we had an appointment system meeting. We had meetings where we discussed one thing so we would know what we are going to do. So we would discuss the process. We would say, ok this is the process today. Then we would discuss the talks - how are we going to...how many times. Then we look at the time...when you see there's something wrong with the system - .you see they don't give time slots, then we address again the time slots."

The manager at the clinic above had more time to devote to managerial work as she did not have to perform much clinical work, so it was easier for her to schedule time specifically for the appointment system. The manager below managed to set time aside for informal meetings, so there was time available to monitor the appointment system and attend to problems.

P11: " Like, okay, on a Monday and a Thursday, in-house thing, we gather in the office and we kind of, how can I say, talk about problems we are encountering in our consulting rooms and then I will also have my own talks because I'm getting the reports from the clerk that the appointment system is going like this. On a weekly basis, even 'though now we don't write, it's not an official meeting; it's just a debriefing kind of thing, so on a weekly basis we will talk about the appointment system and reinforce and much improvement from those also."

It was rare that managers were this "on top" of the appointment system, because they were usually quite short staffed and involved in clinical work themselves, but the benefits of scheduling time and creating space for a new initiative is that it kept it fresh in the minds of staff and provided a forum to address issues that arose.

4.3.1.1. iii) Acting as a nerve centre

Managers widely described spending time gathering information from both formal sources such as staff meetings as well as informally, such as when doing their rounds in the clinic. Even if they were not specifically doing a "round", they would scan the environment as they

walked between rooms and act on what they saw happening in the clinic. This could include noticing that a particular patient had been waiting for some time, and either treating the patients themselves or addressing it with staff. They would speak to clients in the waiting room where they saw the need: a manager who was accompanied on one of their rounds had great rapport with clients. She spoke warmly to them, checking that everyone was happy and familiar with the system, and they responded by telling her how they felt things were going. The act of scanning the environment included noticing if staff were sitting idle or not adhering to the appointment system. Managers also generally had an open door approach so that staff and patients could pop in and speak to them about issues in the clinic, and these could be addressed promptly.

P5: "They pop in anytime and talk to me, even the clients, as you can see, they pop in and talk to me and if it needs urgent attention I'll attend it urgently, if it doesn't need urgent attention, I'll keep it for our meeting. We meet every week on Wednesdays. With the clinicians. Just five or ten minutes."

Managers very much acted as the "nerve centre" of the clinic, monitoring what was going on around them and directing action in the clinic based on what they found. Some managers would ensure that clients received effective communication about the appointment system by putting together a roster in which staff had the responsibility of delivering talks in the waiting room at particular times. They also organised posters about the appointment system and ensured that these were displayed where patients could see them, and asked staff to regularly speak about what was contained in the poster so that patients who were unable to read would still be informed.

Some managers described an intensive level of communication with staff, to remind them what to do and reinforce the system. There was a need for constant communication, both in meetings and during the course of the day, to solve problems and relay information to staff members. That was true for all managers

The other notable area of communication was with clients. This was the case whether the managers regarded their appointment system as successful or less so. One manager discussed the importance of talking to clients in the morning, both to transmit information and deliver a sense that the manager is present and actively involved. Several managers set up a formal system of delivering talks to clients by delegating the task to a particular person and monitoring that this was done. This tended to be reported by managers who were satisfied

with the way their system was running. In facilities which were less satisfied with their system, there was ad-hoc communication, with one manager hoping that the official launch of the system in the news media help to create community awareness, and the another speaking of the need for the health committee to do talks in the waiting rooms. One-on-one talks were regarded by many as the most effective way of communicating with patients, with managers instructing staff to speak to clients in the treatment rooms.

4.3.1.2. Controlling activities inside the facility

Mintzberg describes how managers use information to control, or direct, the behaviour of staff. This is done in part by setting up systems for staff to follow.

4.3.1.2. i) Designing structures and systems

Managers and staff planned the system together, and decided on the structure and functioning of their particular appointment system. Most facilities decided to start with services which involved predictable appointment times and return dates, such as ARV services, immunisation, family planning. These usually take a finite length of time, so facilities could calculate how many patients could be seen in a particular period. They could be given a specific time slot, or be part of a "batch".

P4: "*And we had to sit together and work out how we were going to do it - what services we were going to do. So initially we started with immunisation - the child health services. And then the women's' health - family planning. And then of course we had to do something for our adults. We just selected to do the time slots. The two hour time slots. Whereas in immunisation we did the fifteen minute time slots."*

The batch was two hours long, and there would be several in a day: 8-10 am, 10 – 12 pm, and 12 til 2 pm. Clinicians were expected to be at work at 07h30 in order to see the first patient at 08h00.

Managers took into account the need for staff to do their administrative tasks such as capturing data appointment data, and had their last appointment at 2 pm to facilitate this.

P10: "Family planning will see patients right up til 16h00 but like… the immunisations don't take the whole day. So you have to give them that leeway where they can capture at the end of the day."

This approach took the workload of staff into account and helped to prevent frustration.

Some facilities decided that the first two hours of the day should be devoted to seeing sick children and acute cases, as these cannot be scheduled and are more urgent. Clients with sick children or an acute illness usually arrive early and create a backlog of "walk-ins", so this problem could be solved by all clinicians seeing acute cases in the morning, and scheduling the first appointments from 10 am.

Managers had to decide how to make and capture appointments, with some clinicians being able to capture their own return appointments on Premhis, and some giving clients a return date after seeing them. Clients were then sent back to reception to get an appointment time for that date.

Manager who successfully implemented appointment systems commonly reported designing ways to check that staff performed tasks as instructed. This manager designed a process for ensuring that folders were drawn prior to appointment, and reconciling this with patients who actually attended:

P14: "I draw a report on the Premhis system. We copy and paste it on Excel and then open two columns, whereby you say "Found" - meaning the folder was found. And the following day when the client comes you are supposed to tick "arrived". That means the client attended."

Clerks therefore had to make sure that they drew all folders, captured the follow-up appointments, and kept a record of whether a client came that day or not.

One manager described how she used information to direct the activities of staff:

P14: *"I like to analyse data. So what I found was that the staff leaves past six o'clock almost every day. But the data says that we only see 3500 patients each month. So I had to sit down and look the data - the clinic is full every day, so why do we only see 3500 patients every month? I found there's a problem with filing. There's a problem with capturing and so on."*

She then addressed these issues to help the system run more smoothly.

Methods for controlling how work was carried out included colour-coding files, finding ways of recording lost and duplicate folders, and checking that staff had both made and captured appointment dates and times. Another problem that was mentioned was folders being mis-filed, which wasted time and caused duplication of folders. The following manager reported their solution:

P4: "We suggested, let's have numbers. For example - we've got 100 to 300. And then that particular clerk is responsible for capturing those numbers. And also filing them. So if there's a mis-filing, then you know who to get to."

Managers regarded these measures as important and noted that if they didn't follow up on performance, then staff would revert to their previous ways of doing things or "slack off" . The need for monitoring as an activity that had to be carried out featured prominently in the accounts of managers who had managed to put an appointment system in place. Designing systems and enforcing them is work that requires time. At the clinics which were struggling with implementation, managers often performed clinical or administrative work for a large part of the day, which impedes this function.

As part of designing the system, managers had to examine their work flow and decide on how best to deliver an efficient service. One innovative facility manager took things further and decided to streamline her clinic flow by equipping each treatment room for the full spectrum of clients, so that any appointment client could be seen in any room. This avoided queuing and bottlenecks developing as clients waited for a particular service:

P3: "Then before - we had to equip our rooms, so I went to Cash Converters, so we could make it a one stop shop. The City cannot give for 13 consulting rooms, 13 whatever, so we had to work budget-wise. So what happened was, I did, we equipped all the rooms with a scale, a blood pressure apparatus, a temperature ...a thermometer. And everything is in that room. Even sputum jars. So what happens, when a client comes, we don't send them from pillar to post! So what happens is, the only time that they will go elsewhere is to go to the sputum booth and then they will come back. When they were equipped, the people came and they realised no, but this service is very quick, there's no waiting in the morning."

This creative and effective distribution of resources optimised work flow and helped the appointment system to succeed.

4.3.1.2. ii) Delegating responsibilities

Mintzberg (2009:60) states that in delegating, "the manager identifies the need to get something done, but leave the deciding and the doing to someone else". This forms part of the role of controlling through decision-making.

Managers selected champions, as mentioned, who were responsible for implementation. This helped to spread the load of work related to implementing the appointment system. One manager formed an appointment system committee made up of clinic staff that would monitor the system and report back to her, thus freeing her to perform other tasks. The same manager encouraged staff to be proactive as it meant that staff could solve problems for themselves, which lightened the burden for her:

P4: "That really helps. Because at times Sister is on leave, or maybe I have to start in a meeting. And then if now we don't allow them to be proactive that means the whole unit is going to stand still, but now they know that - ok, if so-and-so is (absent) then we have to work out something."

The appointment system at this facility was working well, and the manager achieved this in part by giving responsibility and ownership of programmes to staff:

P4: "Because that is another thing that we do...when we give staff responsibility, we give them the whole programme. Even how to monitor that programme. But we support them. Because we've got the millennials, and they get bored if you just give them a little bit."

Facility staff were entrusted with duties including monitoring the programmes themselves and reporting back to her. This freed her to pursue other tasks and let staff members feel independent.

4.3.2. The People Plane – Leading facility staff

According to Mintzberg's model, this conceptual plane deals with the role that managers play in getting the work done through other people. Most managers perceived their activities relating to people to be central to their management role.

4.3.2.1. Imparting a sense of vision

On returning to the facility after the first workshop, managers had to get the buy-in of staff and convey a vision for the appointment system and the facility. This required persuading and inspiring staff.

P13: "You know when you come back with something new, you have to convince people, or at least get their buy in of those who are going to implement....basically."

There was resistance to the new initiative from staff, who regarded it as more work which they would have to carry out in an environment which was already extremely busy. This resistance was mentioned by many managers.

P6: "So when they introduced this thing, it looked nice, it sounded nice but when we came back there was no buy-in - the buy-in of this whole appointment system. Because people were thinking it's more work and it's not going to work for us.

Managers had to address this lack of buy-in. One way of reducing resistance among staff was to target the leaders among the staff:

P13: "There are ones who take longer to see the vision of what we are talking about; the benefits - how it's going to benefit me, how it's going to benefit the client. Now, the problem lies with the fact that the one who is a bit....I will say....negative....is actually a leader. That is a challenge - a person who is negative and a leader. Now, that person is going to influence negatively the other ones, because this person is a leader. So at times you find it works better if you start with the leader".

Managers also found that staff needed to see that the system actually could work in order to support it. A failed system, or a system beset by difficulties was demoralising and hampered implementation:

P10: " I saw myself as the leader. I had to lead the process, ne, and I had to do the check-ups constantly...to make it work. You have to make the system work, you know....for the staff to buy in."

Since staff are the ones who have to implement a system, the need to motivate them is paramount in achieving success. And as success breeds success, so failure also leads to further failure. Systems had to be perceived as achievable from the outset for staff to be enthusiastic.

4.3.2.2. Energizing Individuals

Managers who had success in implementation invested staff with a sense of enthusiasm for their work in order to motivate them. They gave them a sense of purpose and focus. At two big clinics where the systems seemed to be working particularly well, managers did this by giving staff a "pep talk" in meetings, or by giving them co- responsibility for running aspects of the clinic so that all staff felt they had a stake in its performance of the clinic. Staff then tended to be proactive, as reported by the manager.

P3: "We say to the staff: I don't want tired staff, I want energetic staff. You get those that drag....this is business. This is not an NGO, this is not a crèche. We are being paid, this is not sheltered employment so here we are supposed to…[interviewer laughs] Yes! So here we are supposed to....we work for a salary and we work with clients and we are supposed to give quality care. I am a no nonsense manager!"

At one of the big facilities at which the system was reportedly running well, the manager gave staff full responsibility for running a service, including monitoring it and completing the requisite statistics, which she would then approve. She felt that this was a way of challenging staff to keep them energised and motivated.

4.3.2.3. Building and maintaining teams

Managers set the tone through their own behaviour and their own level of motivation. The rest of the team took their cue from them. Managers perceived the importance of building a sense of cohesion, and setting an example.

P3: "If you want it to work you need to work as a team. And the team can only be as strong as the links. So if you are going to say no, it's not going to work. And it also depends on the manager. If the manager is also laissez faire or she's not driven then she will not be able to drive the rest of the [team] coaches."

This participant felt that a manager who is lax in the execution of their duties creates the impression that staff can underperform without consequences. In contrast, a manager who emphasises the need for everyone in the team to pull their weight creates a more productive unit. This was the case for the manager in question, who had a successful appointment system.

Managers found that one way of motivating staff was to plan as a team. Most managers described planning as a group activity, This increased ownership of the appointment system by framing it not as the managers' initiative, but as a facility-driven initiative:

P9: "Yes, we brainstormed. Otherwise, I mean we not going to be able to get a buy in and then it's going to be my baby, or [=SisterX's=] baby. And then we make people that are kind of, champions...."

"Champions" are staff that were chosen to spearhead implementation among staff, further entrenching the idea that the appointment system is staff-driven, not simply the "managers thing". The act of working as a team to plan the system had the additional benefit of increasing creativity and improving problem solving:

P13: "It's good to have all those people sitting....maybe they come up with something that you didn't even think about."

Team work was encouraged by managers during the planning stages, and further emphasised during actual implementation. The need to work as a team was spoken of widely. Staff had to become accustomed to the fact that appointment system patients are shared between all

clinicians. There is generally a heavy patient load in facilities, and managers had to ensure that everyone pulled their weight:

P14: "And the matter of team work - now you are finding that some people don't want to be team players. Ya, it's like they don't want to be team players: If the time is up, I am taking my bag and leaving. I don't care what's happening. So I always explain that the fact that we do allocation is for ORDER. For order only. It's not a matter of "Can I work…?" [smacks her hands together to demonstrate "quick quick"]. No, the clients are for everybody in the facility. It's just that now we've got the order, the flow of the clients. They allocate this one here and this one here. But the clients are for everybody."

The manager above was from a medium sized facility where the system worked well. Her opinion was echoed by several other managers – that staff should be encouraged to think of themselves as team and work together to achieve the goals' of the facility.

4.3.2.4. Establishing and strengthening the culture of the facility

A manager who was successful in implementing a system created a culture of being proactive and energetic. She had a terrific can-do attitude which set the tone for the clinic:

P3: "So I said to them, "You will not be tired if you enjoy what you are doing and you keep onto your work." I said, "Leave your tablets at home, leave all your stuff at home and we are going to come and work now." Remember, you had to try and get the negative apples out immediately because in the end it's almost like a fester, like an abscess. And it I never gave that a chance."

She did not allow "slacking off" or negativity, and the staff knew this and responded by working well and with zest.

4.3.3. The Action Plane – Carrying out the core work of the facility

At the level of this conceptual plane managers are involved in the nitty-gritty "doing" work of the unit, instead of being removed from it. The work of project management is considered to lie on the "action plane". While some managers worked with their staff as a team and delegated implementation of the appointment system, others were involved in the details of implementation themselves. The other functions that placed the managers at the level of

action in their facility were their involvement in clerical and clinical work. This was a widely reported situation. Some managers only treated clients for a small part of their day, whereas in other clinics the majority of time was spent on this:

P13: "My thing is - we cannot think more out of the box. I am doing 100% clinical work during the day - when am I going to get to managerial duties? So I know we are not the exception. I know there are other facilities that might be in the same boat."

Several managers spoke of the fact that vacancies took a long time to be filled. During the reportedly slow recruitment process, managers would take on the clinical role which had to be performed. Other managers reported that their staff complement was insufficient even if there were no vacancies, and that this was the reason for them assuming a clinical role.

If assistance was needed in the record room, managers would step into the role of a clerk to get things running properly:

P14: "Because, I went on leave for two weeks, now when I came back, the folders are lying in the report room. It's full of folders, now we are going back to looking for the folder. Now what is happening as a result is that is that I have been leaving here past six myself now, because I am trying to assist now the one who is doing folders for the following day."

In addition to taking on the role of clerks or clinicians, this manager reported that CCT staff who should be arranging clinic maintenance told her that she would need to chase the service providers herself:

P9: "But no one will ever say "Yo, that clinic is short on staff, we will take over some of their duties. No. Even some of their clerks that must do the requests for maintenance and something. They will just say "We don't have time, sister. If you want that thing fixed we will do the requisition but you must follow it up with the company."

This manager therefore took on another administrative role that cut into the time available for management functions, but she did not feel that she had a choice as clinic maintenance would otherwise be neglected.

4.4. The Supportive Role of PPHC Managers

Two PPHC managers were interviewed as key informants. Facility managers were also asked about the support they received from their PHC managers, who were not necessarily one of the key informants.

Facility managers responded with equanimity, describing support which consisted mainly of "box ticking", with their PHC manager checking that they did have a system in place.

P12: "She comes to get evidence, like this one [shows file]. She said "Show me that you…", so we show her that we do make an appointment system. It's those that are there, [points at a form in the file] and then she signs."

Managers noted that their PPHC managers did the best they could, given their workload:

P6: "…we will never get the support that we want, you know, that we really want to have because of staff challenges because one person cannot run around for 17 clinics daily and still have meetings to attend all over and whatever."

They seemed to feel that their PPHC managers were as overworked as they themselves were, and that it would be preferable to have an external person to assist with supporting implementation:

P6: "I would like an outside person to come and have control over those meetings or interact in terms… I would say the PPHC Manager, but somebody that's running the project."

Managers did not express resentment that more support was not forthcoming. Indeed, some managers reported being satisfied with the level of support they received, but again, this was not necessarily the type of support in implementation that had been envisioned for ASLI to succeed:

P4: "The PPHC manager knows exactly what's happening in our facilities, because she's got more contact. She comes and then we have meeting contacts with her. Ya. And we just feel free, any time. Even if, for example, they want a clerk somewhere else and then you just target something. And then you know you say...please can I just not send them because you don't want this to fall apart. And then she will listen and see what she can do."

One PPHC managers reiterated the opinion of the facility managers that staff shortages scuppered the possibility of more extensive support:

P2: "Our problem is that in this sub district we don't have enough staff and the director knows that that's where we lack."

The same PPHC manager described how meetings about the appointment system tended to become side-lined by discussions of all the other challenges faced in facilities. Even though she listened to the facility managers, many challenges were not within her power to resolve:

P2: "OK, so it's more coaching and mentoring but then all other issues come out with staff as well, you know there are other challenges. So you can be talking about the appointment system but they'll tell you...oh we don't have enough stationary, or the computers are not enough, or they go down, or we are unable to capture. The capturing is a big thing, so like I say, staff challenges are um, more highlighted. Ya, when we go there and...I'm coming to talk to you about the appointment system today and then all that comes. Stuff that you know...but you have to listen to them. And sometimes there's not much you can do."

She felt concerned and would have liked to help and be more supportive, but was unable to do much beyond lending a sympathetic ear. She did, however, play the role of enforcer when requested by the FM, by going to the facility and addressing resistant staff.

The second PPHC manager had driven ASLI from the outset, and was highly motivated to get AS up and running at her clinics. Between the two workshops organised by CCT in May and November 2016, she held another three for her facilities:

P1: "So I would have a workshop with my facility managers and I would ask them, what is your challenges? How can you - what is your ideas on overcoming the challenges? What is your idea on expanding the appointment system at your clinic? And then I would tell - ask - the clinic managers: now with your permission can we now have a workshop where you bring me 4-5 key role players of your clinic?
I: So the first one was the facility manager and the clerk?
P1: It was just the facility managers and the senior professional nurses and we just worked for 2-3 hours. I mean nothing else but the appointment system."

This PPHC manager had successfully rolled out AS to all 11 facilities in her sub-district during the time that ASLI was ongoing. She not only organised three extra workshops devoted entirely to appointment systems, she also prepared food in her own home which she provided to participants in order to boost their morale. Another example of her going out of

her way to support her FM can be seen in the fact that she noticed that managers did not have time to make boxes for organising patient folders, so she herself made a sample of the type of item they needed and got someone to copy it. She then distributed these boxes to facility managers. When her managers said that there weren't enough clerks, or their record room was too small, for example, she would spend a morning working with the clerks in the record room to see where problems originated and organise for the record room to be refurbished if necessary. Judging from the FM interviews, however, she was the exception, not the norm. On questioning, it appeared that she is a person who is generally exceptionally energetic and organised. FM generally reported that support from their PPHC managers involved checking that they had an appointment system in place, so she should be considered an outlier in terms of how she carried out her work.

4.5. Challenges

Managers were all very forthcoming about challenges. Various categories of resources were identified as challenging during ASLI. Human resources, in the form of staff shortages, staff turnover and absenteeism were mentioned particularly frequently. The need for greater support from CCT was also discussed, and to a lesser extent the limitation of space within the facility.

4.5.1. Human Resources

Almost all managers spoke of inadequate human resources as a challenge which they faced in implementing the appointment system:

P13: I would say just make sure that there are staff to do the work and that's it. That's my main thing and I think it's all over like that. Because if you want to let the system work, I mean - human resources is the biggest asset of City. It's the most valuable asset. That is the staff member at a station, or a clerk to do the work. If you don't have that you are crippled. So, City needs to realise that, and I have been thinking about this deeply for the past couple of months since the high staff turnover.

Unfilled vacancies at facilities, coupled with absenteeism, created shortages of clinical as well as clerical staff. Unpredictability of staff numbers, caused by absenteeism, hampered planning, and even when vacant posts were filled, new staff took time to be trained in all the

skills required and so clinics were still not running at full capacity. This lack of capacity impacted on the number of patients who could be seen:

P13: We were so short staffed that we - I mean, we had to…normally we would see whoever comes in, irrespective of whether you have an appointment or not....that we had to turn people away if it's not your appointment. Because we have to prioritise the appointments. Otherwise the community loses trust in our system.

The issue of needing to be able to turn people away based on capacity was contentious, as this practice was strongly discouraged by CCT. Managers viewed capacity as finite and there was tension between the need to see all patients who arrived, and the need to maintain the appointment system or risk losing the faith of clients in the system.

In terms of human resources, one PPHC manager noted the importance of good leadership from the facility managers. She stated that if the manager does not buy into the system, then it will never get off the ground.

4.5.2. Space

A few managers noted that there was limited space for putting folders which had been drawn for the week ahead. Managers also spoke about struggling to find space to keep the folders of patients who didn't arrive as they needed to be kept ready in case patients came the following day.

Another spatial limitation that was mentioned, although not by many managers, was that of where to put services that needed to be separate. Family planning appointments needed to be scheduled in the afternoon, when there was also well-baby appointments to attend to, and there was a requirement that adolescent sexual health clients should be seen on their own. In the certain facilities that was not possible.

4.5.3. Time

It was mentioned by most managers that there was not enough time for the work of implementation, with several managers suggesting that a third party should implement the project. One of the big facilities that had successfully implemented a system did have an external implementer – an NGO called Core Design had assisted them.

Several managers felt they that both they and their staff were already overworked and that the appointment system only added to the amount of work they needed to do. An aspect which came up repeatedly was having insufficient time to monitor the system

P11: " I haven't had a chance now to see who is capturing and who is not capturing. I haven't really...At the moment I'm really busy."

The manager above was filling in for a staff member who was on leave, which meant that there was no time for additional administrative work.

Managers reported that meetings to discuss or support the appointment system often had to be cancelled because there was clinical work to attend to:

P6: "Um, for this facility the vision or the ideal is to have regular meetings with the team. The team must take responsibility - regular meetings in terms of where they are and sometimes those things cannot happen because there are a lot of other clinics that is busy running in the facility and patients that needs to be seen and things like that so sometimes it's just bypassed."

Some managers felt overwhelmed by the amount of work they already had to do:

P9: "So, like, at the moment my desk this morning....I limited it a bit already...the post was lying like this...because I must do audit's here and stats and reports, and I must do it for [= a satellite clinic=] and I work on the floor, and I come and help them on the floor here and I must do Ideal Clinic, and I must do action plans, and I must make sure that we reach our targets and I listen to the staff complaints "Sister, we can't any more. There is too many people." So it's all that. Everybody wants their things done now."

While the appointment system had the potential to improve organisation and improve the flow of work in the clinic, the extra work involved in the initial implementation stage was reported as a hurdle.

4.5.4. Preparedness

4.5.4.1. Materials and Technology

ASLI began in the middle of the year, which posed a problem when it came to obtaining diaries to be used for the appointment system. No such materials were provided for the facilities, and managers found various solutions such as hardcover A4 books, printouts from

the Ideal Clinic pack, and some did manage to find diaries. However, the lack of materials needed to actually make appointments was noted as a challenge.

Other materials that were mentioned as being desirable but not available were posters to put up in the waiting room which could explain the appointment system.

P1: "I think a lot of stuff came afterwards that should have come before. The appointment posters, our appointment schedules. Imagine we had to start out with that. We would have been far ahead."

The Premhis software system which was available for recording appointments only had the capacity to book one hour time slots at the time of ASLI. This meant that while patients' names could be recorded, their appointment times had to be physically written in a diary, unless the clinic was using two hour batches for their system. This system is currently being improved to allow for the booking of 15 minute time slots and the intention is for the improved IT system to be introduced at all clinics.

4.5.4.2. Awareness within the community

Managers reported the existence of a culture of arriving early at clinics, which was ingrained in the community. Patients had always, historically, been expected to arrive early, and it was seen by clinicians as disrespectful if they did not. Nurses would, in the past, react angrily to patients who arrived later in the day.

P6: "It's not there where it should be you see because either today the client won't pitch, the clients was also scared in terms of …they wouldn't really believe in this appointment thing because nurses you know they skel them, "(saying) "but why you come this time of the day?'

This pervasive culture seemed difficult to change, with patients arriving early even when they had an appointment for a later time slot. Managers did encourage patients to change their behaviour by consistently seeing patients in the order of their appointment, rather than the order of their arrival. However, vestiges of the culture of arriving early and queuing proved difficult to erase. This was compounded by the fact that communities were not aware of the appointment system when it was introduced. Most clinics did not have functioning health committees, so there was limited engagement with community members and a lack of awareness about the change in the system. A lack of posters and information within the clinics contributed to the problem, although some managers made their own signs and

organised for staff do talks to patients in the waiting room or individually when treating them. The result of this lack of awareness prior to the intervention was that community members became angry and impatient, and this, in turn, damaged the morale of the staff that had to deal with this unpleasantness.

4.5.4.3. Staff buy-in

Many managers referred to staff resistance and lack of buy-in as a problem. Some of spoke of the need for ASLI to be introduced to all clinic staff at once by CCT, to improve staff buy in for the initiative:

P11: "Not that I minimise my duties, but sometimes when somebody from outside comes in and says this is what is happening, then they get a more positive response."

Staff felt antipathy towards the appointment system being "sprung" on them (their perception), which could potentially have been minimized had the groundwork been laid before the initiative began:

P14: "Now he's saying: one of the clerks: "Aaaah, I didn't know about this appointment system. This appointment system came with a new manager. It started when she started in the facility and I didn't have a clue what is this."

Again, it seemed that this resistance could have been reduced by preparing the staff better, perhaps through an introduction by CCT.

4.5.5. Support from CCT

Both participating PHC managers felt that more support was needed for facility managers

P2: "I must say the staff don't have the time to actually think of all this. You know so you've got to...when you ask about the support, the support maybe needs to be more specific. Clinic specific.....erm, and more like on a regular basis. Maybe not once a quarter; maybe once a month."

P1: "It's also that there should be a team of health information persons that actually supports every clinic so whether it is that they are only there once a quarter because you don't need support more than once a quarter. A four hour visit to every clinic to strengthen that appointment system at that clinic by helping, assisting and giving on the ground advice to those clerks and those clinic managers and clinicians how to trouble-shoot the challenge

that they have. It cannot possibly all rest on their head and that is currently what's been happening."

The desire for external support in implementation was discussed by several facility managers themselves, who felt that PPHC managers were already very busy and that assistance from someone specifically focussed on change implementation could improve the process. One facility that reported success in the AS had assistance from an external partner called Core Design, and they felt this had been beneficial. Another manager, who had successfully implemented an appointment system, expressed a desire for ongoing workshops.

4.5.6. Changes in the context of the health system

Changes in the structure and functioning of City Health during 18 months the initial phase of ASLI, as well as ramping up the Ideal Clinic initiative, meant that there was pressure to accelerate the pace of implementation. This included a move towards standardisation and prescriptiveness, in contrast to the spirit of collaborative problem solving that formed the basis of the learning initiative. It also meant that PPHC managers' workload increased, making them less available to offer support. The August 2017 ASLI Steering Committee minutes demonstrate the change in approach, including a directive for four clinics to implement appointment systems for all services within six months – although three months was preferable. This gives a sense of the drive to achieve implementation goals within a much shorter time frame than was originally envisioned, despite the fact that implementation had not been universally successful even in the small ASLI pilot group of specially selected clinics. Although Eastridge clinic was an appointment system success story, the system there was started two year before ASLI and so the system there had a long time period in which to become established.

4.6. Benefits

4.6.1. Folders could be pre-drawn

Clerks were able to draw folders the previous day so that they could continue with other work instead of having to individually go and find the folder for each patient that arrived. This also mitigated the effects of unplanned absenteeism because it clerks had already prepared for the following day's work.

P4: "So that helps us a lot because even with clerks as well, if maybe now there a shortage of clerks. You know those folders already in the morning, you know - they are retrieved. And then we've got a clerk that is...can do any other job, you see."

Clerks had more time to find files that were lost, so there were fewer duplicate folders in the system.

4.6.2. Shorter work days for staff

In addition to smoothing work flow for clerks, clinicians were able to leave work earlier as walk-in patients could be seen by all clinicians during the first part of the day, which decreased the bottlenecks that had characterised the flow of clients.

I: "And what time are you finding everyone leaves now? Before it was half past six.

P14: Yo, and then we improved. At least now by twenty to five, if it is late. But it is mostly half past four."

Appointments were booked until 2 or three o' clock, to give clinicians time to do their administration in the last hour of the day. Even with late walk-ins, this meant that staff finished work earlier.

4.6.3. Improved satisfaction for end-users

Managers reported that appointment clients were happier and supported the appointment system. They appreciated the improved efficiency when arriving at clinics as they did not have to wait for their files to be drawn:

P12: "And then the patients are happy because they can't say "Eeeey boetie, I've been standing here waiting" [smacking the desk] Because the folders are there! So there's...its better, much better."

One of the issues which increased waiting time for patients was a tendency to all arrive en masse in the morning and queue, which was part of a culture inherited from the previous health system, in which clinicians had a quota of patients which they saw each day, and any patients outside the quota amount would be sent home without treatment. With the appointment system patients could be staggered throughout the day, decreasing congestion, bottlenecks and waiting times.

P11: "And people that keep the appointments and their times, they are leaving the facility happy and they are motivated to keep their appointments and their times. You know sometimes when you're just passing and you hear them talking or they're sitting here in front, then you hear them talking about how good this appointment system is."

4.6.4. Improved waiting times

Managers reported decreased overall waiting times as measured by a waiting time survey that was carried out, and decreased complaints from clients regarding waiting times.

P5: "Less complaints about the waiting time because waiting time was a BIG, BIG problem. The waiting itself, for our clients- they do not wait here for the whole day to be seen. They know now if it's going to be seen say at 11 am. Within two hours, they are out of the clinic."

Clients were able to choose an appointment time which suited them, so they could go to work in the morning and avoid missing an entire day. They also had the option of being able to call to make or change an appointment instead of having to physically travel to the clinic to do so.

4.6.5. Facilitation of better HR planning

The appointment system improved the ability of managers to allocate staff according to the number of patients that were scheduled. This meant that staff could attend training, for example, because fewer patients would be scheduled according to how many staff were available.

Managers also felt that the appointment system would provide objective data on the true capacity of their facilities, which would support them when they dealt with upper management. They felt that they would be able to prove how many patients could be seen in a working day, and would be able to ask for more staff, or the possibility of deferring patients.

P13: "... we put our comments in when the policy came up for review and they didn't take note of that policy at all. They just sent it back and only one thing was changed - a professional nurse can also do that process. It doesn't have to be a facility manager or the SPN to do that. So when the appointment system came I was thinking "Oh, this is something good" because now we have something to back us up."

They described that sometimes unrealistic expectations existed around how many clients could be served in a work day, and felt that the requirements for, or prohibition of deferral were too onerous.

4.6.6. Improved data for decision-making

Managers were able to use data from the appointment system when dealing with staff. For example, if they had to decline a request for leave it was possible to demonstrate the reason for this with how many staff were available relative to patients booked. They could also use the data to show the benefits of the appointment system to staff and to motivate them. The appointment diaries provided evidence, for example, that clients should be booked to spread their arrival throughout the day.

Generally, there was a sense that the appointment system improved organisation and was a positive initiative:

P10: "On a good day, there's lots of benefits. Waiting times was just easier, shorter, and the patients...once they understood it, they were much happier. And once the system worked for them they were so much happier. Imagine just coming in to the facility and in ten minutes you're seen. So there was good reviews. But obviously when it doesn't work, on the day...."

This was followed by the caveat that appropriate resources need to be in place to maintain the system and avoid frustration for clients and clinicians alike.

4.7. Conclusion

The themes that were identified indicate that managers had a positive experience of the initial, planning phase of ASLI. The learning experience and workshops were constructive, enabling managers to think about how their facilities work, to formulate plans specific to their contexts, and benefit from hearing about how other clinics made their systems work. In the implementation phase, managers played a central role, directing the action of the clinic although this was hampered in many cases by a lack of available time to do the work of implementation and managing. While managers found that the appointment systems they implemented were delivered improvements in organisation and planning, the challenges were numerous. A lack of human resources, time, support and preparation beforehand were

identified as the main issues. Information from key informants corroborates the experiences of managers.

CHAPTER 5: DISCUSSION

5.1. Introduction

Given their central role in the health system, it is not surprising that the roles played by managers in leading and supporting featured prominently as a theme in the implementation of ASLI. From designing and monitoring the system, to motivating staff, to communicating with end-users, facility managers carried the process. Just as facility and PPHC managers are not a homogenous group, there were variations in how they carried out their roles, and how the appointment systems functioned. Challenges were another prominent theme, with human resource issues, lack of time and preparation, deficient support, and changes in the greater context of the system being identified as factors which created difficulties. Despite the hindrances, the significant benefits of the appointment systems to staff and end-users should be recognised.

5.2. The experience of shared learning

According to management theory, authoritarian management styles where staff have little control but a lot of responsibility - and where there is a lot of organisational change - can produce feelings of powerlessness and inertia (Conger & Kanungo, 1988). However, an emphasis on creativity and initiative are both hallmarks of transformational leadership and empowerment, which motivates staff to go the "extra mile". One of the features of ASLI was that facilities were encouraged to be creative and "think outside the box". Managers were given autonomy as to which staff they brought to the workshops, and how they designed their systems.

Participants approved of the bottom-up approach to planning, stating that it was beneficial to work through how the system could best be designed for their specific clinic. The process of ironing out potential flaws and difficulties in their contexts was described as useful, and the fact that the plan was generated by staff may have instilled a sense of ownership. Front line staff are the eventual implementers of programmes – the "street level bureaucrats" who affect the outcome of implementation in unpredictable ways (Lipsky, 1980), so their involvement in the planning phase can narrow the gap between policy and implementation.

The shared learning approach of ASLI brought together managers of differing levels of experience and management training. Greater levels of management experience were found by Daniels et al., (2017) to be associated with better implementation of measures to reduce

waiting times at PHC clinics. Shared learning in ASLI may have benefitted managers because peer-to-peer support and mentoring have been suggested as ways to maximise management competence by transferring tacit knowledge and solutions gained through experience (Daire & Gilson, 2014).

A learning approach has been successfully employed to reduce waiting times in two PHC clinics in Cape Town, in a study that used collaborative action research (Sastry et al., 2017). Managers and staff worked with researchers in an iterative cycle where ideas and knowledge were generated, shared and then monitored in a feedback loop to improve performance in a process which mirrored the learning experience of ASLI. The success of implementation in this study should be borne in mind when deciding how to proceed after the ASLI pilot period. The transformational leadership approach taken in this example as well as ASLI may help to produce staff who are empowered by contributing to finding solutions to the problem of lengthy waiting times at their clinics. Being given a sense of autonomy and control has been found to produce a sense of self-efficacy which determines how to what extent employees will persist when facing challenging situations (Conger & Kanungo, 1988). This is potentially quite useful in the context of PHC facilities which face a variety of challenges for implementation

5.3. Challenges to implementation

Challenges to implementation included human resources, time for implementation, preparation beforehand, support, and a change in contextual factors.

5.3.1. Contextual Factors

Initially there was a sense of energy and excitement among managers at the participatory approach of ASLI. However, this changed over time as the atmosphere of experimentation and learning was replaced with a more hierarchical, top-down approach. This was in part due to the need to conform to the Ideal Clinic requirements for standardisation, an increasing pressure for programme expansion, and the far-reaching restructuring of the City's administration through the ODTP process – all of which led to a replacement of the iterative learning approach with a rapid, scaled up implementation.

Literature around staff empowerment states that people become empowered when they feel that they have the skills and capacity to cope with the challenges they face. This can be achieved if leaders allow staff leeway for self-determination and encourage staff to persist in

their activities even if these efforts are initially unsuccessful (Conger & Kanungo, 1988). Leaders should emphasize the positive aspects of employee's performance to maintain a sense of confidence in their abilities. This was the initial approach taken to learning in ASLI, and may be the reason why it was received with enthusiasm by facility managers. They were given time and space to determine how their systems should function, and there was no judgement if things didn't work. Rather, facilities were encouraged to learn, change, and try again. Although Eastridge clinic was an appointment system success story, the system there was started two year before ASLI and so the system there had a long time period in which to become established. ASLI Steering Committee

The authoritative approach is identified in literature as dampening initiative and energy, so this may hamper further roll out of effective appointment systems rather than encourage it.

5.3.2. Support during implementation

Both participating PPHC managers felt that managers needed more support in implementation. One of the contextual changes that affected this was that the health system was restructured, so that PPHC managers were required to cover a much bigger area. Whereas initially it had been intended that they would drive ASLI and support the facilities, this became difficult as they had many more clinics to oversee. The requirement for four Ideal Clinic assessments per clinic per year also took up a lot of their time and meant that little support could be offered specifically for ASLI.

In fact, the role of PPHC managers in ASLI was something about which FM did not have much to say. They did not expect much support. Their interactions generally were reported to consist of the PPHC managers checking that there was paperwork substantiating the appointment system implementation.

While one participating PPHC manager did get appointment systems implemented in all of the clinics in her sub district during the ASLI period, she held three additional workshops focussing only on appointment systems. In addition to this focussed type of support, she exercised transformational leadership. In her interview she came across as particularly inspiring in her personal conduct, she was energetic and charismatic to a degree that was striking. The participating facility managers who worked with her also remarked on it. They both also exercised transformational leadership, perhaps due to her influence, and had appointment systems that were working effectively – complete with proactive staff to whom

a lot of the responsibilities for implementation had been delegated. Perhaps this was indicative of her management style.

The lack of support for facility managers may have hampered implementation in many facilities. A lack of supportive guidance is identified repeatedly in literature as a barrier to implementation (Scott et al., 2012; Uwimana, Jackson, Hausler & Zarowsky, 2012).

5.3.3. Human Resources

The majority of managers felt they were short staffed, either because staffing norms were insufficient, because vacancies took too long to fill, because of absenteeism, or because of high staff turnover. Agency nurses and new staff didn't have all the skills needed to switch between services in the clinic, which hindered management of staff allocation. Human resources shortages is an issue which comes up repeatedly in literature dealing with the health system interventions in South Africa, and internationally (Naidoo, R., Naidoo, S. & Hariparsadi, 2016; Sastry et al., 2017; Uwimana et al., 2012) , with staff saying they felt like they were required to accomplish more work with fewer resources (Scott et al., 2012). This may have contributed to a feeling of being overwhelmed, which can have a paralysing effect on staff motivation (Management Sciences for Health, 2010).

Apart from being demoralising, staff shortages hindered ASLI implementation because managers reported that sometimes there would be too many patients to be seen on a given day. In order to reinforce the appointment system, however, those patients with appointments had to be prioritised over walk-in patients. This created tension, with people having to be turned away from the facility, although this was strongly discouraged by City Health. Not doing so, however, created distrust in appointment patients.

High staff turnover meant that new staff weren't familiar with the appointment system and didn't comply with it. This was reported as contributing to its failure in some clinics.

5.3.4. Time

Many managers reported having insufficient time for implementation of the system. They found that while the workshops were useful, once they got back to the facility there wasn't enough time for regular staff meetings, without factoring in extra time to discuss the appointment systems. In addition, many facility managers remained heavily involved in clinical work, a fact that is discussed further down.

Several managers therefore expressed a desire for an external implementing partner, and one clinic actually did have assistance with implementation from an organisation called Core Design which they experienced as very helpful. A facility manager cited her positive experience of being assisted by UWC to conduct a waiting time survey, saying that without their help the survey would have been less accurate because staff did not have the time to administer this properly. Overwork has been show to decrease the quality of administration (Lebese, 2010), and external implementers have been successfully employed in reducing waiting times at facilities (Naidoo & Mahomed, 2016; Price, 2014), so this may be something to consider.

5.3.5. Space

Spatial constraints related to folders and filing should be resolved with the transition to digital record keeping as per the eHealth initiative (Wolmarans et al., 2015). Issues related to the lack of space for separate services may be harder to resolve, but managers may be able to use scheduling to stagger patients' arrival in such a way that particular rooms can be kept free for use at particular times.

5.3.6. Preparedness

Best et al. (2012) describe the five "simple" rules for implementing large scale change, including taking note of the system's history, and engaging end-users of the system. This is significant because in the context of PHC facilities, there has historically been a culture of patients arriving early and queuing for services. This is ingrained in both staff and patients, and is likely to be hard to shift. Communicating with end users about the new system could have helped change this mind-set, but they were not prepared for the new system. Problems with patients not arriving for appointments, not going to make follow up appointment times at the front desk after seeing clinicians, and continuing to arrive early and queue could have been reduced had communities been prepared beforehand. The IT system also didn't have the functionality required to make appointment times – only the date could be recorded. This mismatch between requirements and capacity may have affected implementation of ALSI as clinics were required to use appointment diaries. These were not provided to clinics, and they were required to find materials themselves.

Managers also reported staff resistance, expressing a desire for CCT management to address staff in order to orientate them to the plan. Staff buy in is crucial, as described by Best et al,.

so perhaps this measure would have reduced resistance and the feeling that the manager was springing it on the facility. Lack of communication to prepare staff for new programmes in PHC clinics has been found to hamper success in other studies (Moosa, Derese & Peersman, 2017; Scott et al., 2012).

5.5. The Role of Managers

Leadership and governance are critical factors in health system strengthening, and are related to health outcomes (Gilson & Daire, 2011). Better leadership means better implementation of programmes, and improved outcomes for the end-user. Facility managers have a big impact on the health system, but there has not been a great deal of research into how they perform their functions (Daire & Gilson, 2014).

CCT management has particular views of the roles of facility managers, but it interesting to see how they view it themselves.

5.5.1. Managing with information

The role of managing through information has gained increasing importance as technology and organisational structure have evolved (Mintzberg, 2010) and is one of the competencies expected of facility managers (Health Systems Trust & National Department of Health, 2016). Design of systems and structures by facility managers is an example of micro-level governance (Scott et al., 2014). This is therefore a role which needs to be optimised.

5.5.1.1.Controlling activities within the facilities

5.5.1.1 i) .Designing structures and systems - As plans for appointment systems were facility-generated, managers played a key role in system design. Implementation thereof seems to have been enhanced when measures were taken to fine-tune the system, by introducing ways of monitoring performance, improving efficiency in the system, and checking that staff were carrying out tasks correctly. The presence of such feedback loops for monitoring systems and making adjustments is a factor associated with effective change (Best et al., 2012). Seemingly minor tweaks to the system, like this, may be effective because they signal what expectations exist around the way work is performed, so staff are aware that there may be consequences if expectations are not met (Judge & Piccolo, 2004)

5.5.1.1 ii) Delegating responsibilities - Another management role that seemed to improve the functioning of the system was that of delegating responsibility. Frew managers, however, seemed to be delegating to large extent. Managers may struggle to delegate because they have been promoted from amongst their peers, and thus feel awkward issuing instructions (Willcocks, 1994). The ability to delegate enables managers to do less clinical work (Daire & Gilson, 2014) and avoid working on the "action" plane. This allows more time to monitor and direct the activities of the unit (Mintzberg, 2009), facilitating better management. Delegation also empowers facility staff by giving them responsibility and a degree of freedom in decision-making (Judge & Piccolo, 2004), which increases staff resilience in the face of challenges.

5.5.1.2. Communicating all around

5.5.1.2 i) Communicating with staff - The initial role that managers fulfilled when returning to their facilities after the workshops was that of getting staff buy-in for the project. Variations in the way in which this was performed immediately set the tone for ASLI by indicating how much time was set aside to implement the project and how it was prioritised. Some managers went to more effort than others carrying out these roles, which may have affected the buy-in from staff. This may be something to discuss with managers to improve implementation.

5.5.1.2.ii) Communicating with end-users - All managers spent a great deal of their time receiving information , monitoring their environment, and communicating with staff and end-users. Communication with patients was particularly important in ASLI because there had not been preparation or community engagement prior to implementation, and there weren't many functioning health committees. Perhaps communication with communities could also be considered on a larger scale by CCT as end-user support for the appointment system is critical.

5.5.2. Managing through people

This was a prominent activity, but also one that was described as challenging by facility managers.

5.5.2.1. Conveying a sense of vision

Managers saw themselves as leaders, motivating staff and giving them a sense of vision. Dealing with people was widely held to be challenging, and required managers to motivate staff and create a positive outlook on the task of implementation. This is evident in the activities undertaken to overcome staff resistance. It takes skill to navigate the line between enforcing a course of action while overcoming the prevailing sense of change fatigue.

5.5.2.2. Energizing individuals

The ability to motivate and energise individuals was key, as a sense of inertia can result from feelings of being overwhelmed (Management Sciences for Health, 2010). There had previously been numerous new programmes to implement, and uncertainty around re-structuring the health system , so there was often a sense of change fatigue when faced with yet another initiative (Scott et al., 2012). Despite this, managers who succeeded in implementing a system were strategic in overcoming resistance, often by targeting particular staff members who threatened to spread negativity.

5.5.2.3. Building teams

The role of leader was evident also in dealing with staff who threatened to spread discontent. Especially in fairly small teams such as those found at PHC facilities, a “bad apple” can have a significant impact on the team as a whole (Felps, Mitchell, & Byington, 2006). At clinics where the appointment systems were functioning well managers appeared to have formed a team with facility staff that displayed “high collective efficacy” (Felps et al., 2006), describing staff members working together in support of each other. These managers found effective ways of motivating staff, by investing them with a sense of enthusiasm. Team building is an important aspect of the managers’ role, with literature suggesting that teams produce uniformity among members by co-regulating each other’s behaviour - in other words, attitude is infectious (Felps, Mitchell & Byington, 2006).

5.5.2.4. Strengthening the culture of the facility

Facility managers strengthen the culture of the facility through their example. They should be made aware of the theory of transformational management practices, which contend that staff are inspired by, and emulate, their leader. Participants in this study who were organised and energetic seemed to transmit these qualities to staff, and experienced better implementation of ASLI.

5.5.3. Carrying out the core work of the facility

Mintzberg's model is useful in analysing the role of facility managers because it reveals one of the challenges experienced in ASLI : many managers are too engaged on the action plane; in doing the actual work of the unit. Management is usually achieved with information and through people, as managers direct the operations of the unit. Mintzberg describes managers who do the core work of the unit as "disturbance handlers", who step in when a staff member is unexpectedly absent. In PHC facilities, however, some managers spent the majority of time doing clinical work, citing staff shortages, absenteeism and a slow recruitment process. Human resource issues do pose a challenge, but it is possible that some facility managers feel more comfortable in a clinical role (Daire & Gilson, 2014). Facility managers have primarily been trained as clinicians, often with little or no management training. Meeting with peers and sharing knowledge increases feelings of competence and can also help managers to internalise their new professional identity (Askheim, Heggen, & Engebretsen, 2017), and move away from clinical work (Daire & Gilson, 2014), which could improve their performance as managers. In this study it did appear that managers whose appointment systems were running well focussed more on management but whether this is because they suffered less from human resource issues or handled them more effectively is unknown.

5.6. Limitations

This is an exploratory study of a small pilot project, and represents the views of only a segment of facility managers. Causal associations cannot be made as this is qualitative research.

5.7. Conclusion

ASLI delivered significant benefits to managers, staff and end-users of the system. Managers reported shorter waiting times, increased patient satisfaction, and better organisation in facilities. Implementation was not uniform, but managers and the contexts of facilities vary too. Best et al., describe 5 simple rules for optimising implementation – a mix of formal and distributed leadership, the use of feedback loops, and the engagement of both front-line staff and end-users. However, making large-scale changes to the health system is a complex task, and outcomes can be unpredictable, even when it seems that all elements for success are present (Egbujie et al., 2018). Facility managers played a key role in leading and managing within ASLI. They describe differing approaches to leadership, but dealing with people and communicating featured strongly in their activities. Facility managers approved of the learning approach used in ASLI, finding that autonomy and a supportive learning environment were salient features. This may be because the act of solving problems and generating plans themselves gave them a greater sense of self-efficacy and control over their environment. PPHC managers were not able to play as much of a supportive role as had been originally intended, and a lack of support was one of the challenges which hindered the initiative. Human resources issues were most commonly cited as a major challenge, but measures to reduce absenteeism and staff turnover could be introduced without actually changing staffing norms. Despite the challenges, managers describe that the outcome of ASLI delivered many benefits which made significant improvements for managers themselves, end-users and staff.

5.8. Recommendations

Managers had a positive perception of the experience of shared learning, preferring it to a hierarchical approach. Collaborative planning and shared learning are supported by literature as effective ways to optimise implementation without increased access to resources. The learning experience should be pursued as a way of engaging managers and staff, and increasing the presence of distributed leadership in the system. Perseverance is required as this is an iterative process and novel in this context.

Shared learning can improve management practice by spreading tacit knowledge and providing support. Ongoing workshops would allow for solutions in designing and implementing systems to be shared and for changes to be made. In follow-up workshops, managers could also share experiences of effectively motivating staff , building teams and

increasing staff self-efficacy in ways that include transformational leadership in their management practice. Peer-to-peer support could be a means of up-skilling managers, many of whom have not had management training.

- Sufficient support should be provided to facilitate implementation, through additional workshops and more regular and appropriate support at facilities.
- Human resource issues need to be addressed. Staff retention should be examined. The underlying reasons for high staff turnover and absenteeism are a sense of being overwhelmed and powerless. Empowering staff may be a means of changing this mind-set. The recruitment process should be streamlined to fill vacant positions more speedily.
- Partnering with an external implementer could be considered as an additional means of support.
- Community buy in is required for the system to function, so health committees need to be engaged to prepare end-users for changes.
- Materials and IT systems should be aligned with the requirements of implementing and operating appointment systems.
- CCT could consider soliciting staff support before implementation of new systems by addressing whole facilities. Some managers struggled with staff buy-in and this could be a way of minimising the problem.
- Managers need to be supported in their management function to move away from the action plane to a position where they direct operations. Delegation is an effective means of freeing up manager's time and allows for more focus on management with information and through people. Managers should be taught the skills necessary to delegate effectively if needed.
- Management training could be considered, as facility management is a complex task which requires a variety of personal and professional skills.
- Further research is required to investigate how best to optimise facility managers' practice, given their critical role in implementing interventions.

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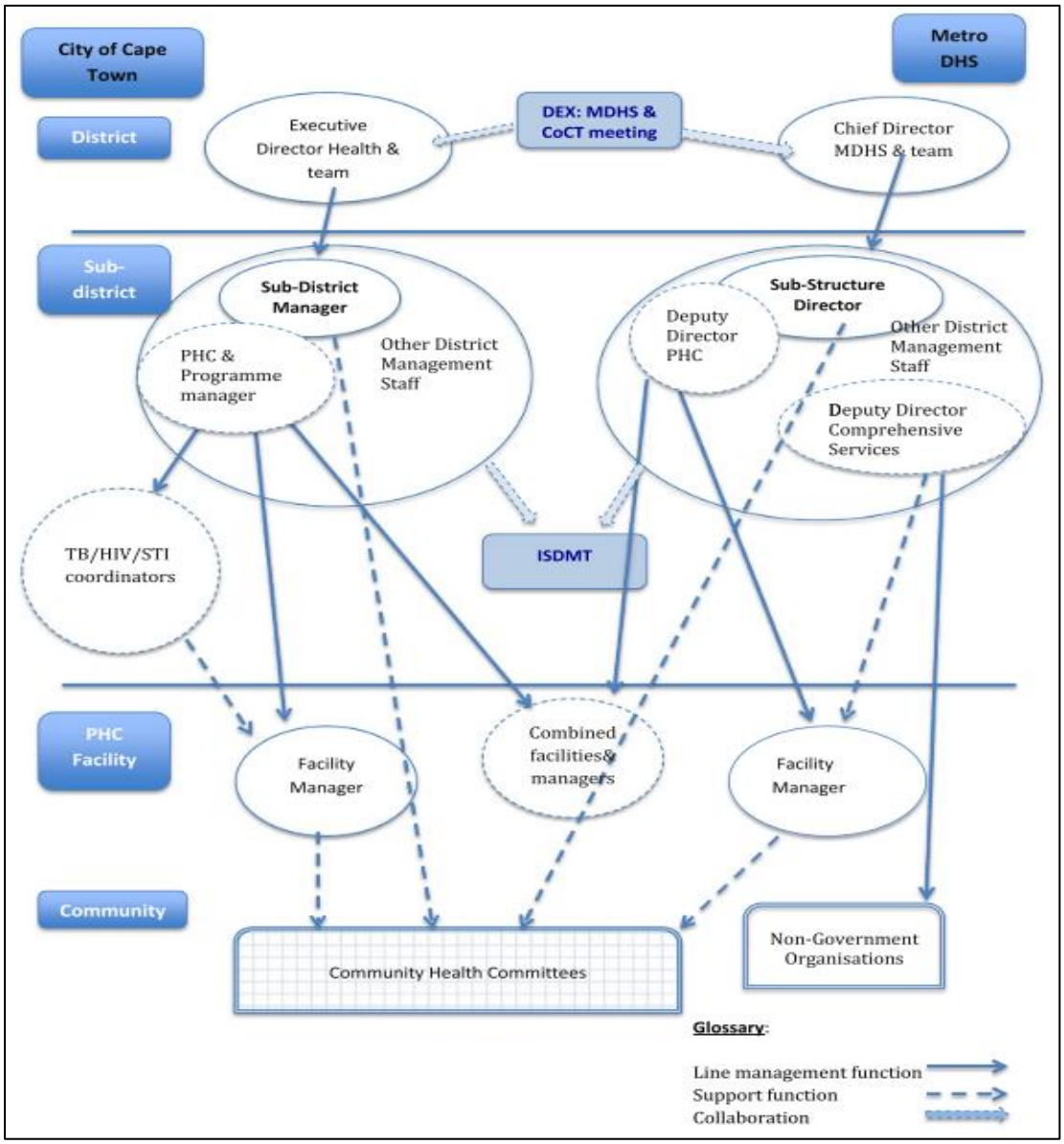
Appendices:

APPENDIX 1:

Fig 2: The position of PHC Facility Managers in the health system in South Africa



APPENDIX 2: Interview Guide

Interview Guide for Facility Managers:

[Welcome. Confirmation of informed consent, thanks for participation.]

1. Can you tell me about your facility?

- Probes
    - How many staff
    - What services are offered
    - Can you describe the community that is served by your facility

2. Tell me about your experience of ALSI

- Probes
    - How were your introduced to ALSI
    - What are your thoughts about appointment systems, and their importance
    - Did you attend the workshops, and if so, tell me about them
    - Were there things that you thought worked well or not as well
    - If you didn't attend the workshops, who did, and how did they tell you about what happened?

3. Tell me what you thought about the bottom-up approach used in ASLI

- Probes
    - What input did you give and did you feel you were heard during this process
    - How did you interact with other facility managers and staff at the workshops?
    - How did you find those interactions helpful, and what activities were of the most value?
    - Tell me what you learned from other facilities
    - How have the workshops been helpful?
    - What issues at the workshops or within the process could be improved on?

4. How did you go about designing the appointment system for your facility?

- Probes
    - What did you want to avoid or include when designing your system?
    - What previous experiences have you had with appointment systems?
    - What do you think are components of a good appointment system?

- How do you think this approach differs from previous attempts you may have experienced with implementing an appointment system?
- Which staff did you involve and when; tell me how you communicated the changes to them
- Were they motivated, and if not, how did you motivate them
- What roles did other people play
- In what ways is your facility's situation unique from other clinics – how did this affect the way you designed the system
- How did you communicate with patients

5. What role did you play in the process?

- Probes
  - How have found that this has changed the way that you worked
  - How did this challenge you as a leader
  - How did you find yourself moving out of your comfort zone
  - What new roles did you have to take on?

6. What made this harder or easier to do?

- Probes
  - Who helped you, and what did they do
  - How could this process have been improved
  - Can you tell me about things that made it easier to get the appointment system going
  - Can you tell me about things that made it harder
  - How did you deal with issues such as staffing shortages?
  - Tell me about the importance of relationships in getting this off the ground.

7. Measuring Success

- Probes
  - How do you measure success or failure?
  - What feedback have you had from staff and patients
  - How do you think it has helped; what changes do you see
  - Are there other changes you would like to make

8. Tell me about the support you received from CCT

- Probes
  - Do you think you received enough support, and how it be improved
  - Tell me about the support you received from PHCM
  - Did CCT listen enough to managers
  - How did they include your input

- What would you change about this process
- What lessons are there for other facilities

9. Framing – can you tell me how you approached the system when you returned to your facility?
10. Scheduling – can you tell me how you set aside time for the appointment system?
11. How did you communicate about the AS with staff and clients?
12. How did others communicate with you about the system (informal or formal communication, meetings, rounds in the clinic, health committees)?
13. Monitoring – how did you monitor the system?
14. How did you design the system?
15. How did you decide to divide responsibilities?
16. How did you motivate staff?
17. How did you build the team and solve problems?
18. How did you support staff in the course of implementation?

Interview Guide for Programme Managers:

[Welcome etc.]

1. Please can you tell me a about appointment systems in the clinics which you oversee?

- Probes
  - What particular difficulties have you noted with regards to waiting times at facilities
  - What previous experience have you had with appointment systems?
  - What are your thoughts about appointment systems, and their importance

2. Can you tell me how about ALSI?

- Probes
  - How were your introduced to ALSI
  - Did you attend the workshops, and if so, tell me about them
  - Were there things that you thought worked well or not as well
  - In what ways do you think CCT could improve the process in terms of design and support
  - What challenges have you noticed with the implantation of appointment systems
  - What things have you noticed that have made things easier

3: What role did you play in this process?

- Probes
    - How did you choose which facilities should participate
    - What support have you had to give them/ how have you lead them and motivated them
    - Are there any new roles that you have taken on during this process
    - Have you had to communicate with the community/ health committees and if so, can you tell me about it
    - How have you checked on progress with the facilities
    - How have you resolved difficulties that have arisen, and what were these.

4: What changes have you seen at the clinics as a result of ASLI?

- Probes
    - What feedback have you had from managers
    - How are improvements at facilities measured?
    - What do you think a good appointment system looks like?
    - Can you tell me about facilities that have been successful with this, and what made the difference?

APPENDIX 3: Information sheet for participants

INFORMATION SHEET

Project Title: Exploring the roles and experiences of health managers participating in the Appointment System Learning Initiative in City Health facilities in Cape Town.

What is this study about?

This is a research project being conducted by Ulla Walmisley at the University of the Western Cape. We are inviting you to participate in this research project because you have had in-depth experience of the Appointment System Learning Initiative (ASLI). This research forms part of a wider evaluation of ASLI by the City of Cape Town. The purpose of this research project is to understand the roles played by Primary Health Care Managers and Facility Managers, and to explore their experiences and perspectives of ASLI. This information will assist with the extended roll out of appointment systems at health care facilities.

What will I be asked to do if I agree to participate?

You will be asked to meet with the researcher at your place of work at a time that is convenient for you, and participate in a one-on-one interview. This process should take approximately an hour. Questions that will be asked during the interview will relate to your knowledge and experience of ASLI and your work. Please see the attached interview guide for examples of the type of questions you may be asked. The researcher may deviate from this guide should it be appropriate, in order to gain as much relevant information as possible.

Would my participation in this study be kept confidential?

The researcher undertakes to protect your identity and the nature of your contribution. Although City of Cape Town will know which clinics are included in this study, the researcher will conceal the identity of participants so that no one can link a particular interview with a participant. Numbers will be used instead of names on interview transcripts and during analysis and reporting. These identifying numbers

will also be used to identify recordings of interviews. Only the researcher will know which identifying number belongs to a specific participant. This information, as well as recordings and transcripts, will be stored on a computer which is password protected, and on a USB stick which will be kept in a locked box. Once the mini thesis is completed, the data will be removed from the researcher's computer and stored by the research supervisor for a period of 5 years after which it too will be deleted. Under no circumstances will the researcher reveal a participant's identity to any other party. If an article is written about this research project, participants' identity will be protected in the same way.

What are the risks of this research?

There may be some risks from participating in this research study. Participants may worry that there will be problems for them if they say something negative about ASLI, their workplace or colleagues. City of Cape Town has emphasised that they are would like to hear all information related to ALSI, even if it is negative. This is an opportunity for shared learning, so all comments are welcomed without judgement. The concealment of names is designed to minimise the risk of information being associated with a particular participant.

We will nevertheless act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research may not help you personally, but the results will help the investigator learn more about ALSI. We hope that, in the future, health managers will benefit from this study through improved understanding of how best City of Cape Town can support them in designing and implementing appointment systems. Ultimately, the goal is to have functioning appointment systems at all clinics in Cape Town. Healthcare workers should benefit from better organisation in the workplace, and decreased frustration from patients. It is intended that patients themselves will experience better access to care and that this may ultimately result in improved health outcomes for the community.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you initially decide to take part, you may still stop participating at any time without suffering negative consequences or loss of benefits. You can simply email the researcher and inform them that you do not wish to continue, and no information that you have shared will be revealed to anyone or included in the results of the study.

What if I have questions?

This research is being conducted by Ulla Walmisley, who is a Masters student at the School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Ulla at ullawc@mweb.co.za.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof Uta Lehmann
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This research has been approved by the University of the Western Cape's Research Ethics Committee. (REFERENCE NUMBER: *to be inserted on receipt thereof*)

BIOMEDICAL RESEARCH ETHICS ADMINISTRATION

Research Office

New Arts Building,C-Block, Top Floor, Room 28

University of the Western Cape, Private Bag X17, Bellville 7535

Tel: 021 959 2988 Email: research-ethics@uwc.ac.za

APPENDIX 4: Consent form for participants

CONSENT FORM

Title of Research Project: **Exploring the roles and experiences of health managers participating in the Appointment Systems Learning Initiative in City Health facilities in Cape Town.**

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. My permission has been requested for an audio recording to be made of the interview. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

☐ I consent to an audio recording being made of the interview.

☐ I do not consent to an audio recording being made of the interview.

Participant's name……..

Participant's signature……

Date……

BIOMEDICAL RESEARCH ETHICS ADMINISTRATION
Research Office
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APPENDIX 5: Example of the Data Extraction Sheet

Title:

ASLI Information Letter

Date on which it was generated and position in the time-line:

14 April 2016 – At the outset of the initiative

Purpose of the document:

To inform facilities and participants about the background, purpose and process of ASLI

Subject matter:

This letter documents the factors driving the need to implement AS and reduce waiting times; it lists participants in ASLI and the need for a new approach to planning and implementation, as well as the guiding principles and intended structure.

Author(s)/contributors

[City of Cape Town Manager]

Goals/intentions:

To clearly set out the premise and process of ASLI in order to motivate participants

Salient facts:

- Waiting times are the greatest contributor to client dissatisfaction
- Many facilities are full in the morning and empty in the afternoon, therefore there is a need to improve work flow and reduce bottlenecks.
- Appointment systems have been attempted at services in some PHC clinics; these have not always succeeded.
- Appointment systems are needed more than ever to cope with the increasingly large cohort of ARV patients
- Steering group composition: HIV/TB unit, DIAHLS, Health information, Quality Assurance,
- Keth'Impilo, PPHC/Programme managers/Facility Manager.

- Guiding Principles
    - Iterative process
    - Support over a long period
    - Facilities need time to learn and make mistakes
- 18 months in duration – it's a safe learning process
- Need to understand the whole system: staff and patient attitudes, their understanding of what works, past experience of appointment system implementation, develop trust in the change process.
- Initial Steps in the process:
    - 2 facilities from each sub-district, one of which already had some success and one which was motivated to try
    - The city as a whole can learn from facilities and we can document the process and lessons
    - PPHC/Program Managers should actively participate; their buy-in is crucial and they can spread the ideas further in the sub-district.
    - Need to consult facilities about where they would like to start (with which service)
    - Select and prepare appropriate facilities
    - Need the support and leadership of facility managers – they should select a team for implementation
- Underlying themes are the importance of relationships between stakeholders, especially trust, and values – in particular a client-centred approach.

APPENDIX 6: Reflections on the qualitative research process

I had read a number of articles in preparation for conducting this research, and as part of doing the research proposal. I also completed a Qualitative Research Methods module. I had thought that data collection, coding and analysis sounded simple enough, but the complexities and difficulties became apparent as I went deeper in the research process. The importance of asking open ended questions and probing became evident. Most participants were quite forthcoming and enthusiastic, but two definitely seemed like they had other things they would rather be doing – unsurprisingly, since they had facilities to run. This affected the richness of the data. The importance of encouraging participants to carry on speaking without interrupting also became clearer - I learned to smile warmly and nod! The best data came from allowing participants to speak their mind with guidance only where necessary. I completed the interview phase feeling a sense of awe at how much facility managers get done - the concept of a 25 hour day applies here.

Transcribing was quite a chore but I had a programme called Learn 2 Write that was helpful, and transcription was a useful way to familiarise myself with the data.

I debated doing manual analysis, but with three dogs and three children, and moving house, I could only envision disaster resulting from arranging papers on the floor. I downloaded Atlas ti. at UWC and watched some online tutorials to get a basic understanding of how it worked. I found it extremely useful, particularly the search function, and the ability to change codes and themes as my thinking developed. Cutting and pasting quotations into the thesis was also much easier than it would otherwise have been.

I went through the codes and themes several times to check that my thinking was consistent and coherent. I also met with one of my supervisors at the start of the coding process when I felt a bit lost, and she shed valuable light on the process. I decided to use framework analysis for the role of facility managers because a lot of research has already been done around management roles; they have already been delineated in literature, so I reasoned that the information from facility managers should fit into categories outlined in this body of work. Mintzberg's 2009 Model of Managing, which reflects how closely managers work to the "action" of the unit, seemed most applicable because it shows how managers function in relationship to their context and stakeholders. I went back and forth, looking at the codes to see how they formed themes; it is quite something to take a mass of information and give it

structure. I found writing up the findings time consuming, but after a couple of false starts, and a lot of reading of literature, it flowed.

The discussion section was laborious, because it involved reading even more literature which had to be included the lit review. It was truly iterative – thinking, writing, thinking and rewriting. I was satisfied with the way it turned out, and I found the process very mentally stimulating, like trying to solve a puzzle. This was a gargantuan effort, as my first foray into research, but very rewarding.