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Exploring patients' experiences in accessing chronic care services during the COVID-19 pandemic in Ekurhuleni District, Gauteng Province

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DECLARATION

I, Felicity Moloi, declare that this research report is my own unaided work. It is being submitted for the Degree of Master of Public Health at the University of the Witwatersrand, Johannesburg. I confirm that it has not been submitted before for any degree or examination at any other University.

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(Signature of Candidate)

13 October 2025_____

(Date)

Boksburg_____

(Place)

DEDICATION

I give heartfelt thanks to God Almighty, Jesus Christ, for granting me the strength and resilience throughout this research journey. I dedicate this work to my supportive husband, Peter Moloi, whose unwavering love and steadfast leadership have been the cornerstone of the Moloi household, especially during my studies. To my incredible children, Tsebo and Bohlale Moloi, you are my greatest blessings—Mommy loves you.

I also dedicate this to my humble and caring parents, Mrs. Mirriam and Lucas Kgaphola, whose endless support and understanding of my vision have meant the world to me. I am truly blessed and forever grateful to call you Mom and Dad.

ABSTRACT

Introduction

Globally, the COVID-19 pandemic significantly disrupted healthcare services, particularly for chronic patients who require continuous medical attention. Access to healthcare was challenged by lockdown restrictions, financial constraints, and structural inefficiencies within healthcare systems. Considering South Africa's resource-limited health system, chronic health care services experienced similar challenges. Understanding the barriers is crucial for improving access to chronic healthcare services and in future pandemics and other health crises.

Aim

This study aimed to explore the experiences of chronic care patients in accessing chronic care services at the Ekurhuleni district, Gauteng Province, during the COVID -19 pandemic.

Method

An exploratory qualitative study design was employed, using in-depth interviews, which were conducted with 15 chronic care patients from a primary health care facility. Data were analysed using thematic analysis, while applying the Access Framework.

Results

Findings reveal several key barriers to accessing chronic care services, including financial constraints, long waiting times, and emotional distress. Despite these barriers, patients demonstrated resilience through support from family and community networks. However, mental and emotional well-being emerged as a critical concern, with patients reporting psychological distress such as fear, anxiety, and feelings of isolation. There were positive strategies that assisted patients to access chronic care. These included innovative healthcare solutions such as the Pelebox system for medication collection, which enhanced the ability to continuously access chronic treatment. Despite COVID-19 restrictions, the availability of healthcare providers ensured continuity of chronic care services.

Conclusion

The healthcare services adapted to the challenges caused by COVID-19 by adopting strategies for distributing medication and innovative technologies. However, financial difficulties, long waiting times, and psychological distress presented significant barriers to effective chronic care. Future healthcare strategies should focus on strengthening financial and emotional support systems,

enhancing communication, and ensuring sustainable healthcare innovations to improve patient experiences and outcomes during pandemic. Policy recommendations include providing strategies to reduce financial burdens, integrating mental health support into chronic care services, and expanding innovative healthcare delivery models during a pandemic. The study has highlighted the need for integrated healthcare innovations, robust emotional and financial support systems, and contingency planning to improve health system resilience during crises.

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LIST OF ABBREVIATIONS AND ACRONYMS

ART	Anti-retroviral therapy
ARV	Antiretroviral
CCMD	Central Chronic Medicine Dispensing and Distribution
CHW	Community health workers
CHC	Community Health Centre
CD	Communicable disease
COPD	Chronic obstructive pulmonary disease
DHMT-	District Health management team
DSD-	Differentiated service delivery
GDOH	Gauteng Department of Health
HIV	Human Immunodeficiency Virus
ICDM	Integrated Chronic Care Model
ICSM	Integrated health facility al service management
LMICs	Low and Middle-Income Countries
MDR	Multidrug-resistant
MMD	Multi-month dispensing
NDOH	National Department of Health
NGOs	Non-governmental organisations
NCD	Non-communicable disease
OOP	Out of Pocket
PHC	Primary Healthcare
PEPFAR	United States President's Emergency Plan for AIDS Relief
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2

SSA	Sub-Saharan Africa
TB	Tuberculosis
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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CHAPTER 1: INTRODUCTION

1.1 Background

After the World Health Organization (WHO) declared COVID-19 a pandemic, its rapid spread from Asia to North America and Europe resulted in the need to implement several prevention measures. Various non-pharmaceutical prevention methods and restrictions were introduced, which included infection control measures, such as practising hand washing hygiene, procurement of Personal Protective Equipment (PPE) in health facilities, the wearing of face masks in communities, controlling borders by restricting air travel, and social distancing (CDC, 2021, To and Yuen, 2020). These pandemic restrictions placed health services under immense pressure globally, more so for countries that already had pre-existing inequities in health access and those with a high prevalence of chronic conditions, thus rendering more strain on already weak health systems (Heid et al., 2021).

Since the first cases of COVID-19 in many sub-Saharan African countries, including South Africa, governments have adopted similar non-pharmacological interventions to prevent the spread of SARS-CoV-2. In South Africa (SA), the restrictions included a total restriction of movement, which involved lockdowns, which were categorised as level 1 to level 5, as guided by policy (Cogta, 2020; Karim, 2020). Health services were declared as essential, to ensure that they remained accessible to citizens. However, access to health services for non-COVID-19-related health conditions were affected (Hofman and Madhi, 2020; Nyasulu and Pandya, 2020). For instance, during the series of lockdowns, there was a decline in health facility visitations, a resurgence of non-communicable diseases (NCDs), and reduced Tuberculosis (TB) testing (Madhi et al., 2020; Nyasulu and Pandya, 2020). Additional challenges that negatively impacted access to chronic care services included reduced health seeking-behaviour, depression, anxiety due to isolation of chronic patients, as well as shortages and diversion of the health workforce (Hofman and Madhi, 2020; Mboweni and Risenga, 2023).

Although in SA, there have been efforts to establish guidelines on chronic care management, an understanding of the extent to which the COVID-19 pandemic affected chronic care services remains limited. Therefore, the current study aims to address this gap. The pandemic has been reported to have disrupted the continuity of care for chronic disease patients, necessitating a deeper understanding of both barriers and facilitators to continued effective treatment.

1.2 Literature review

1.2.1 Chronic conditions and chronic care services

Chronic diseases are "life-long conditions requiring long-term medical interventions and adherence to medication and adjustments in life" (Van Olmen et al., 2011, p 2). There are variations on the conditions that are categorised as chronic diseases. Nonetheless, chronic care includes the management of patients diagnosed with NCDs and communicable diseases (CDs), as they share the common need for long-term care. CDs include conditions such as Human Immunodeficiency Virus (HIV), TB, and those with multiple drug-resistant (MDR TB). NCDs include conditions such as diabetes, hypertension, chronic obstructive pulmonary disease (COPD), asthma, cancer, epilepsy, musculoskeletal diseases such as arthritis, and other mental illnesses (Puoane, et al., 2012).

In SA, the Integrated Chronic Disease Model (ICDM) introduced in 2011 is the current approach followed in managing chronic diseases at Primary Healthcare (PHC) facilities (Mahomed and Asmall, 2015). The National Department of Health (NDOH) initiated this approach to strengthen the clinical management of NCDs, provide support for improving the quality of PHC services, empower individuals in taking responsibility for managing their conditions and increase awareness of chronic diseases at a population level (Mahomed and Asmall, 2015). According to the ICDM, chronic diseases include conditions such as hypertension, diabetes, asthma, cancer, epilepsy, musculoskeletal diseases, TB, HIV/AIDS, and Chronic obstructive pulmonary disease (COPD) (Mahomed and Asmall, 2015). This study collectively refers to these conditions as chronic diseases.

1.2.2 Chronic care services in low and middle-income countries (LMICs)

1.2.2.1 The Burden of chronic diseases

In Low and Middle-Income Countries (LMICs), there is a high burden of chronic diseases (Hajat and Stein, 2018). This high burden of disease is attributed to multiple factors, such as poverty, poor lifestyle practices, weak health systems and a high burden of HIV/AIDs (Aikins, 2010; Hajat and Stein, 2018). Consequently, NCDs are the highest contributors to the chronic disease prevalence, which is indicative of poor lifestyle due to increased urbanisation in LMICs (Beaglehole et al., 2008). One of the most prevalent NCDs is hypertension, a risk factor for cardiovascular disease which accounts for high mortality in many sub-Saharan Africa (SSA) countries (Awuah et al., 2014; Chang

et al., 2019; Peer et al., 2020). Additionally, the increased prevalence of co-morbidities, such as diabetes and hypertension, worsens the burden of chronic diseases (de-Graft Aikins et al., 2012).

Moreover, there has been a notable rise in premature deaths in LMIC, which accounts for 77% of all NCD deaths. This is largely due to inadequate prevention and management of these chronic diseases (Beaglehole et al., 2008), particularly NCDs (Peer et al., 2020). In SSA prevalence of hypertension is a leading chronic condition that is attributed to a high number of deaths that are linked to urbanisation (van der Linden et al., 2020). Such mismanagement is reported to be due to several factors related to both the health system and patients (Ensor and Cooper, 2004).

1.2.2.2 Access to chronic care in LMICs

In the LMICs, access to chronic care remains a challenge, hence there is an increasing recognition of several health system and patient related factors contributing to these challenges. These factors are discussed further in the sections below.

Health system–related factors to accessing chronic care services

Shortage of resources

Chronic care services in LMICs face systemic resource shortages that hinder service delivery. These include deficits in human resources, essential drugs, diagnostic equipment, infrastructure, and access to transportation compounded by poor quality of care (Epping-Jordan et al., 2005; Gaziano and Pagidipati, 2013; Levesque et al., 2013).

Availability of resources determines if there is access to healthcare services, including health facilities infrastructure, healthcare professionals, and essential resources such as drug supply (Levesque et al., 2013; McIntyre et al., 2009). Limited availability occurs when healthcare services are unevenly spread, difficult to reach, or when specialised care is prioritised over primary care (Levesque et al., 2013). Consequently, at the onset of the COVID-19 pandemic, shortages of medications for managing chronic diseases were noted, attributable to worldwide supply chain disruptions (Jifar et al., 2022).

Human resource challenges

Regarding human resources, LMICs experience shortages of healthcare providers, affecting access for chronic care patients, compared to high-income countries (Scheffler and WHO, 2011). For example, in Uganda healthcare providers expressed the burden of high workload demand of emergency services while having to manage patients with hypertension and diabetes mellitus (Chang et al., 2019). In addition, evidence suggests that more healthcare professionals are leaving low-income countries for developed countries (Beaglehole et al., 2008; Peer et al., 2020). This migration leads to heavy workloads for the remaining healthcare professionals in those poor countries. This results in long waiting times and poor access to care (Beaglehole et al., 2008; Peer et al., 2020).

A shortage of skilled healthcare professionals is another key factor contributing to human resource shortages in chronic care services. For example, a human resource observer report by Scheffler and WHO (2011) highlights the lack of well-supervised service providers for mental health chronic conditions. Even though organisations such as the United Nations Children's Fund (UNICEF) have intensified training initiatives to improve healthcare workers' performance, evidence on their effectiveness in LMICs remains limited (Rowe et al., 2018). Barriers such as weak mentorship, staff turnover, and insufficient facility readiness undermine these efforts (Rowe et al., 2018).

In response to staff shortages, the WHO has recommended task shifting in PHC (Campbell and Scott, 2011), which involves the redistribution of healthcare responsibilities from highly qualified professionals to those with fewer qualifications, thereby optimising resource use and improving service delivery, particularly in mental health and chronic disease management during the COVID-19 pandemic. In several LMICs this has led to the use of community health workers (CHWs) to facilitate treatment adherence and provide health education to chronic care patients (Barnett et al., 2018; Heller et al., 2019). Although this has led to some improvements (Barnett et al., 2018), there are still several challenges constraining the full implementation of CHW programmes (Beaglehole et al., 2008; Gatuguta et al., 2017), which undermines their effectiveness in providing chronic care services.

Drug supply deficiencies

Despite the emphasis made at the Alma-Ata conference in 1978 for governments to formulate policies to ensure continuous supply of drugs in LMICs, access to some essential drugs remains poor

(Dowling and Yap, 2014). Consequently, the drug shortages exacerbate non-adherence to medication (Gaziano and Pagidipati, 2013). Although there has been an improvement in removing fees for services, drug shortages put pressure on patients' household expenditure, demonstrated by constraints often caused by frequent visits to the clinic resulting in increased indirect cost to the health system (Devoid et al., 2022). The shortages are also often linked to delays in procurement and a reliance on a manual inventory management system, observed in health facilities in Nepal (Adhikari et al., 2024). Further evidence from providers in Tunisia illustrates how shortages created disruptions and affected adherence to chronic management. Such disruptions included the inconsistent intake of medication by patients, while the trust between health providers and patients was affected due to the inability to provide drugs at the point of care (Lall et al., 2018).

Quality of chronic care services

Poor quality of consultation has been characterised by negative attitudes of health professionals, poor clinical decision making, lack of communication amongst healthcare providers, lack of utilisation of decisions and recommendations made during previous consultations, leading to failure of patients to continue with care (Peer et al., 2020). Clinical management was also often reportedly compromised when patients needed a referral to a doctor (Peer et al., 2020). In a study conducted in Uganda healthcare providers confirmed patients' fears when consulting at hospitals after being referred by PHC providers (Chang, 2019). This problem is linked to the negative attitudes that chronic care patients had received (Chang, 2019), thus, these patients do not receive optimal care. Furthermore, the lack of communication from doctors led to patients' discomfort and uncertainties (Peer et al., 2020). This is further echoed by Tiwari, et al., (2019) who illustrated how poor communication by health care professionals led to poor health outcomes.

Patient-related factors in accessing chronic care services

Previous studies demonstrate that there is an overlap between patient and health system factors that impact access to chronic care services. But the more specific patient-related factors include, health-seeking behaviours, availability of information on healthcare choice, waiting times, and access to transport.

Health-seeking behaviours

People with a chronic illness already experience stigma, loss of self-identity, and social isolation. These challenges may discredit their social network, and burden their families (Sirri and Grandi, 2012). A recent review of studies on chronic diseases of cardiovascular-related conditions found that societal norms, including the negative connotations, are a result of the associated disability. This inherently contributes to the stigma felt by these patients, which often disables them from consistently seeking care (Peer et al., 2020; Rai et al., 2020). In addition, some of those diagnosed with HIV may feel ashamed and embarrassed by their condition, because HIV remains stigmatised (Peer et al., 2020).

Other factors contributing to the lack of interest in seeking care were missed appointments and lack of financial resources to connect with healthcare providers (Goodridge et al., 2019). Although there are available PHC services for patients to obtain chronic care services, the distance between their homes and the facilities tend to be a barrier to access as it causes financial burdens for patients who have to travel. In India, diabetic patients indicated that long distances resulted in high transport costs, which hindered the prescribed follow up visits (Lall et al., 2018).

The affordability of health services plays a crucial role in accessing care and many poor patients in LMIC cannot afford chronic care services (Chang et al., 2019; Zavras, 2020). This is demonstrated by COPD patients, who often missed their scheduled appointments and were embarrassed to disclose to healthcare workers that the reasons for not adhering to treatment was due to financial difficulties (Goodridge et al., 2019). Another layer that contributes to the extent of affordability of, and therefore, impedes access to healthcare for some patients with chronic diseases, is poverty. Poverty contributes to poor health outcomes in NCD patients because of the greater risk they are exposed to, including poor diet and financial factors (Allen, et al., 2017). This is highlighted in Ghana, where poor communities suffer the most from NCDs, which is made worse by the catastrophic costs of treatment (de-Graft Aikins et al., 2012).

However, there are also coping strategies observed in chronic disease patients in LMICs who experience high household expenditure. As part of austerity measures, the financial strategies include taking children out of school and stopping treatment (Kyriopoulos et al., 2014; Lall et al., 2018; Murphy et al., 2019).

Availability of information on healthcare choices

There is an emerging body of knowledge on the involvement of patients in their own care, including an emphasis on communication that empowers patients regarding their health conditions and healthcare choices (Goodridge et al., 2019; Hearn et al., 2019). In LMICs, there are policies that underscore the importance of making healthcare information available for the patients. The 1986 Ottawa Charter for Health Promotion focusses on principles such as enabling people's control over their health by for instance, providing skills and knowledge so that individuals can make better decisions about their own well-being (WHO, 1986). Despite existing interventions, there is evidence of several barriers related to lack of information or being misinformed. These include inadequate patient-provider communication, and low levels of education (Chang et al., 2019; Jayathilaka et al., 2020).

Access to chronic care services is further exacerbated by poor awareness and knowledge of the chronic condition's disease profile (Awuah et al., 2014). de-Graft Aikins et al. (2012) highlight significant data of patients who reported symptoms late. Late diagnosis of chronic conditions, such as hypertension, diabetes, stroke, and cancer, was reported in Cameroon, Ghana, and Tanzania. Late diagnosis often leads to advanced disease stages, resulting in higher mortality rates and severe complications. For example, undiagnosed diabetes increases the risk of comorbidities like TB and worsens TB treatment outcomes (de-Graft Aikins et al., 2012). Peer et al.'s (2020) study further indicates that 25% of patients in their study did not know the values for normal or high blood pressure when assessed on knowledge of their conditions.

Health literacy, education and cultural norms

Low education levels reportedly impede access to health services in most LMICs (Dawkins et al., 2021; Kyriopoulos et al., 2014). In Devi et al.'s (2020) study, patients with social networks had easier access to chronic care than those who did not, which was found to be influenced by their levels of education. These patients seem to find a way to navigate information regarding their condition; therefore, can better manage their chronic conditions (Goodridge et al., 2019; Hearn, et al., 2019; Lall et al., 2018). Dawkins et al.'s (2021) study found that people with low education status are most likely to default treatment, yet according to Jayathilaka et al. (2020), those who are highly educated tend to be more autonomous, hence more likely adhere to treatment.

Existing research suggests that inadequate communication, as a barrier between health providers and chronic care patients, is attributed to low health literacy (Yadav et al., 2018). Consequently, low levels of health literacy have a significant impact on individual decisions, actions, and lifestyle behaviours, which play a central role in the prevention and management of chronic diseases. For instance, improving health literacy in the self-management of COPD is noted as significant intervention, which empowers patients to act in improving the behaviour of patients in managing the chronic disease (Yadav et al., 2018). These strategies empower patients by enhancing their understanding of COPD symptoms, recognition and treatment adherence, thus fostering confidence in self-care. In turn, improved health literacy empowers patients to adopt proactive behaviours, such as regular physical exercise, smoking cessation, and adherence to dietary plans (Yadav et al., 2018).

Cultural norms and stereotypes also lead to non-adherence to chronic medicines (Chang et al., 2019). In Uganda, healthcare providers have raised a concern that herbal medicines take precedence, hence, patients alter dosages or take it concurrently with their chronic medicine and even stop treatment which is provided by healthcare providers (Chang et al., 2019).

Long queues and waiting times

Waiting times have been noted as a constraint to access, as there are often long queues at clinics, leading to fewer patients being attended to by healthcare providers, which affects patients' frequency to sought healthcare at health facilities (Geleto et al., 2018; Peer et al., 2020). Developed countries are now developing self-monitoring devices and using telemedicine services for patients with chronic diseases (Devi et al., 2020). However, in developing countries, the efforts to ensure that patients with chronic diseases have access to digital technologies that integrate into health information systems and telemedicine, to ensure that long queues at health facilities are avoided, have not been taken up (Devi et al., 2020).

1.2.3 Chronic care services in South Africa

1.2.3.1 The burden of chronic diseases in South Africa

In South Africa, there is high mortality due to high prevalence of chronic diseases (CDC, 2021). NCDs account for 57% of mortality, 65% of these being females, including adults living in urban and peri-urban local communities (Magobe et al., 2017; Statistics South Africa, 2020). Noteworthy, more

patients are presenting with co-existing chronic conditions, which further increases the mortality rate (Puoane, et al., 2012; Sineke et al., 2022). Moreover, a rise in comorbidities is noted in rural and peri-urban areas (Murphy et al., 2020; Oni et al., 2015). A study in Cape Town indicates that the prevalence of multi-morbidities is approximately 23%, while chronic diseases account for 45% of all PHC visits (Oni et al., 2015). These comorbidities are a result of socioeconomic inequalities (Siedner et al., 2020) and consequently, the service delivery of these chronic conditions has become complex, leading to numerous barriers to access (Madhi et al., 2020).

1.2.3.2 Access to chronic care services

Health-system related factors

In terms of access, South African healthcare services face unique challenges. These challenges are shaped by political and the socioeconomic history, which results in a healthcare system that is organised by spatial hierarchy (Burger and Christian, 2020; Neely and Ponshunmugam, 2019). That is, historical segregation, where those who resided in suburbs were economically advantaged and able to access healthcare in private and public health services. The health facilities in suburbs would receive attention from the government, compared to those in rural and township areas, with limited resources, potentially disadvantaging access to high quality healthcare (Burger and Christian, 2020; Gaede and Versteeg, 2011).

Many national studies have assessed the barriers to chronic healthcare in SA (Goudge et al., 2009; Neely and Ponshunmugam, 2019). These studies have found constraints such as: inadequate provision of ambulances, drug supply, and skilled health providers, as well as poor quality of services, as major health system-related barriers negatively affecting patients of chronic diseases' access to care (Burger and Christian, 2020; Goudge et al., 2009).

Quality of chronic care services

Regarding transport, in SA there is reportedly inadequate number of ambulances to transport chronic patients from PHCs to bigger facilities such as community health centres (CHCs), for specialised care. This has been a long-standing challenge in South Africa's rural areas (Gaede and Versteeg, 2011). A study in the KwaZulu-Natal province highlights that historical racial segregation still exists and impedes access to transportation in rural areas (Neely and Ponshunmugam, 2019).

The patient-provider interaction is important for the care of chronic patients and has previously been highlighted as a gap (Goudge et al., 2009). This relates to the poor attitudes from healthcare workers that often affects how these two groups relate to each other. For example, patients in Dikgale village, in Limpopo Province, highlighted the difficulty of expressing their concerns to nurses, as they avoided jeopardising their relationship with them (Maimela et al., 2015*)*. This poor relationship limits patients' access to chronic care (Puoane et al., 2017).

Shortage of healthcare providers

Insufficient healthcare providers in semi-urban and rural areas limits access to chronic care services (Gaede and Versteeg, 2011; Neely and Ponshunmugam, 2019). This is often due to various factors such as low economic activities and poor working conditions (Neely and Ponshunmugam, 2019). For instance, in the Eastern Cape, poor conditions, such as infrastructure, water and electricity, shortages of equipment and low standards of those that are available, are prevalent and limit patients from accessing chronic care services (Gaede and Versteeg, 2011; Gumede et al., 2021; Neely and Ponshunmugam, 2019).

The poor quality of services accessible to rural patients is linked to inadequately trained healthcare providers at the clinics for specialised care, such as mental healthcare services (Strümpher et al., 2014). This lack of specialised care means that primary healthcare providers are providing inadequate attention to mental health problems such as poor integration of mental health care into PHC (Maimela et al., 2015; Mash et al., 2012).

Access to drugs for chronic care

Factors related to accessing drugs are associated with the interruptions of drug supplies and highly congested health facilities (Gray, 2014; Hwang et al., 2019). Historical interruption of drug supplies is the result of stock shortages in the health facilities and has been consistently associated with inhibiting access to chronic care services (Goudge et al., 2009). Drug shortages due to flawed procurement processes in the SA public sector still prevails (Modisakeng et al., 2020). A 2020 study by Modisakeng et al. (2020) highlights that non-payment of suppliers and poor supplier performance are the main reasons pharmacists struggle to receive patients' medicines.

To improve access to drug supply at facilities, the NDOH has introduced the Central Chronic Medicines Dispensing and Distribution (CCMD) programme. The CCMD programme entails the creation of chronic medication pick up points located at pharmacies closer to communities (Du Toit, 2017; Puoane et al., 2017). The programme facilitates access to medicines for stable, controlled patients, encourages patients to comply with their treatment so that they can be exempt from attending facilities to collect medications, and curbs long queues at the PHC facilities for medication collection. However, there are emerging challenges of shortages for human resources at community pharmacies that need attention (Du Toit, 2017; Neely and Ponshunmugam, 2019).

Waiting times for healthcare services

Long waiting times have been a historical challenge affecting the health system performance and limiting access due to vertical services (Goudge et al., 2009). This is often created by the rise in co-morbidities that require simultaneous management (Peer et al., 2020). Accordingly, the NDOH established integrated chronic care through the ICDM programme to address this (Peer et al., 2020). This model was a breakthrough, as a single health provider treats patients for all their conditions in a single session, rather than treating one particular condition. This programme is cost-effective for the health system and reduces both direct and indirect costs for chronic care patients (Lebina et al., 2020). However, there are still vertical services in chronic care services, for instance the use of antiretroviral (ARV) clinics, which are an indication of a reverse in progress (Peer et al., 2020).

Patient-related factors

A lack of knowledge about their condition has been a persistent challenge for patients with chronic disease (Goudge et al., 2009), thus, limiting participation in interventions addressing the self-management of such (Goudge et al., 2009; Maimela et al., 2015). This is demonstrated by patients with hypertension, who do not understand their blood pressure readings, which is provided by nurses (Peer et al., 2020). Research has found that patients diagnosed with co-morbidities had difficulty in accepting their chronic condition, resulting in increased stress levels, which further exacerbate their condition (Peer et al., 2020). Resultantly, patients did not adhere to drug-management (treatment) or non-drug management (that is, diet, physical activity, smoking, and alcohol abuse), leading to a common deterrent for most chronic care patients (MacLean and Wetherall, 2021; Peer et al., 2020).

A study in Cape Town found that patients' stress levels were exacerbated by the high pill burden, and the burden of managing their health (Peer et al., 2020). Chronic disease management and associated stigma led to multiple forms of psychological distress. For instance, those living with HIV feeling embarrassed can result in depressive symptoms (MacLean and Wetherall, 2021) Stigma, which Pantelic et al. refer to as 'internalised stigma' has also limited access to chronic care, especially amongst those diagnosed with HIV compared to other chronic conditions amongst adolescents and adults (Pantelic et al., 2020). Subsequently, patients do not collect their medicine at the health facilities. This study in the Eastern Cape demonstrates that adolescents still struggle with the acceptance of their conditions, and experience stigma due to their HIV diagnosis (Pantelic et al., 2020).

Health-seeking behaviours

Sociocultural factors cause delays in accessing chronic services (Strümpher et al., 2014). Such cultural practices are noted when chronic patients seek care first through traditional healers (Goudge et al., 2009; Maimela et al., 2015). This is habitually caused by the belief that diseases are caused by a phenomenon of witchcraft (Strümpher et al., 2014). This delay in care is often perceived as a failure of the health system, when there is a poor prognosis of the patient, which is avoidable (Goudge et al., 2009).

The inability of households to pay for the cost of care affects health-seeking behaviour, as patients seek care only when there are available funds (Burger and Christian, 2020; Miller et al., 2010). Another constraint that limits access was the unaffordable cost of transport to health facilities due to frequent visits (Burger and Christian, 2020). Although the policy of ensuring that health facilities are within five kilometres of the target population is a step in the right direction (CSIR, 2012), there is still a significant effect on the cost of travelling long distance to the clinic and transport to and from these health facility (Kredo et al., 2020). Moreover, this policy has only proven to be effective in urban settings because in rural areas, distance remains a challenge (Burger and Christian, 2020).

1.2.4 Chronic care services during COVID-19

In LMICs, the COVID-19 pandemic has exacerbated the pre-existing challenges negatively affecting access to care (Bullen et al., 2021; WHO, 2020). The emergence of the pandemic compromised chronic care services due to how resources are prioritised and allocated (Nyasulu and Pandya, 2020).

Globally, there have been various systematic challenges that affected chronic care services (Hajek et al., 2021; Nshimyiryo et al., 2021; WHO, 2020). OECD/WHO's (2022) TB report highlights the reduction in the number of people provided with TB treatment in the year 2020. Such findings raise concerns regarding how the COVID-19 pandemic reversed years of progress in delivering essential TB services and reducing the disease burden (OECD/WHO, 2022). Consequently, there was an urgent need to prioritise the restoration of access to chronic care services including TB and HIV case detection, treatment, and management particularly in countries most affected by these systemic disruptions (OECD/WHO, 2022).

The COVID-19 pandemic placed immense strain on LMIC healthcare systems, exacerbating pre-existing structural weaknesses. Many LMICs already faced significant barriers to delivering high-quality, affordable, and universally accessible care due to limited financial resources, workforce shortages, and inadequate medical supplies (Kendzerska et al., 2021). The pandemic further exposed these vulnerabilities, overwhelming health infrastructures that were uncoordinated and under-resourced.

A major challenge during the pandemic was the shortage of healthcare providers in many LMICs, which constrained the ability to effectively respond to the rising demand for medical care. Additionally, disruptions in global supply chains led to severe medication shortages, particularly for chronic disease management (Kendzerska et al., 2021). Patients with long-term conditions such as diabetes, hypertension, and cardiovascular diseases faced difficulties accessing essential medications, which worsened health outcomes and increased the burden on fragile healthcare systems. The lack of integrated and well-coordinated health systems in many LMICs further delayed response efforts, limiting the ability to implement widespread disease prevention, treatment, and vaccination programmes (Fekadu et al., 2021).

1.2.4.1 Shifts in Health System Priorities during the COVID-19 Pandemic

The emergence of COVID-19 necessitated a reallocation of healthcare resources, with health systems prioritising efforts to minimise transmission and prevent mortality. Resultantly, non-emergency and chronic care services were deprioritised, leading to insufficient ongoing care for chronic conditions in many countries (Kendzerska et al., 2021), including Singapore, where routine outpatient visits were rescheduled to accommodate the heightened demand for infectious disease management (Yoon et al., 2022). Among the disrupted healthcare services, key areas that experienced reduced attention and

resource allocation included: community health awareness and health promotion programmes, which are essential for chronic disease prevention and management (Stachteas et al., 2022), referral services, leading to delays in specialist care and treatment for chronic patients, and laboratory services for specialised care, impacting timely diagnostics and disease monitoring (Fekadu et al., 2021).

Although there were reports that some patients had to reschedule their appointments, in some middle-income countries the use of videos and teleconferencing platforms managed this appointment rescheduling to ensure that patients maintained their appointments (Ftouni, et a., 2022; Nouri et al., 2020) However, while the COVID-19 pandemic accelerated the adoption of telehealth as a critical alternative to in-person healthcare delivery, this transition introduced significant challenges, particularly in managing complex chronic conditions and specialised care. A key issue was the disruption of interdisciplinary communication among HCPs, as specialists were frequently redeployed to COVID-19 response units, fragmenting continuity of care (Yoon et al., 2022). This reallocation of personnel led to inefficient patient care, as certain cases could not be resolved solely through virtual consultations. For instance, conditions like heart failure or diabetes, which rely on in-person assessments, faced heightened risks of delayed or inaccurate diagnoses, (Ftouni et al., 2022; Nouri et al., 2020). Consequently, telehealth's limitations underscore the enduring necessity of hybrid care models to balance remote accessibility with essential in-person interventions. Despite its challenges, telehealth proved to be an effective tool for ensuring the continuity of care. It enabled ongoing interactions between patients and healthcare providers as well as simplified medication refills (Flaherty et al., 2020; Lapão et al., 2021; Solomon et al., 2021).

SA's health systems was not immune to the impact of COVID-19. The disruptions had a negative impact on chronic care services, similar to the experiences in other contexts. As such, different South Africa's provincial Departments of Health attempted innovative interventions such as home delivered medicine (Gaede and Versteeg, 2011). However, the COVID-19 pandemic still posed numerous challenges in chronic care, where patients experienced poor healthcare services (Hofman and Madhi, 2020). They encountered inadequate healthcare services, particularly during the level 5 and 4 lockdown regulations. This resulted in various barriers to accessing healthcare, including medicine shortages, the closure of health facilities, prolonged waiting times, and issues related to staff attitudes (Mboweni and Risenga, 2023). Many patients encountered obstacles in obtaining medical care due to the suspension of public transport and the necessity of traveling long distances to reach healthcare facilities. This was further complicated by the limited number of patients that medical staff could

attend to per day, resulting from staff shortages and the implementation of social distancing protocols (Hofman and Madhi, 2020; Mckinney, et al., 2021).

In the backdrop of all pre-existed challenges, including those caused by the COVID-19 pandemic, it is crucial to explore the experiences of patients. The highly restrictive regulations globally, employed to maintain virus transmission and in some cases for case findings (To and Yuen, 2020), had a major impact. Therefore, more studies are necessary to explore the extent such regulations had on chronic care patients with pre-existing limitations in resources, especially in LMICs.

Impact of COVID-19 on mental health

The COVID-19 pandemic significantly exacerbated mental health challenges for individuals with chronic illnesses, particularly those with pre-existing mental health conditions (Flaherty et al., 2020; Sayeed et al., 2020). The suspension of non-emergency care in hospitals worldwide disrupted access to essential outpatient services, making it difficult for patients to attend routine appointments (Flaherty et al., 2020). Lockdown regulations and social distancing measures further contributed to social isolation, anxiety, and emotional distress, particularly for those already vulnerable due to their health conditions (Flaherty et al., 2020). Moreover, patients with chronic illnesses faced severe disruptions in healthcare access, with many experiencing interrupted treatment and reduced face-to-face consultations. The lack of access to healthcare professionals and support networks increased loneliness, stress, and uncertainty (Flaherty et al., 2020). Additionally, the fear of infection, financial hardships, and restricted mobility intensified these psychological burdens, leaving many patients without the resources needed to effectively manage their mental and physical health (Gruiskens et al., 2024).

Evidence suggests a strong correlation between chronic diseases and increased susceptibility to mental health disorders. A study found that individuals with asthma, diabetes, and cardiovascular diseases had significantly higher odds of experiencing stress, anxiety, and depression than healthy individuals (Flaherty et al., 2020). The pandemic not only amplified pre-existing mental health conditions but also created new psychological stressors for those managing long-term illnesses (Heid et al., 2021; Sell et al., 2015). The inability to receive routine medical care, combined with prolonged isolation, resulted in worsened mental health outcomes, particularly among older individuals and those with limited social support (Heid et al., 2021; Sell et al., 2015)

1.2.5 Conceptual Framework

Access to chronic care remains crucial in addressing the high burden of NCDs and CDs in LMICs. In light of the factors that constrain and/or facilitate access to chronic care discussed in the literature review and the primary aim of this study, it was pertinent to apply the Access Framework in the current study. Considering that access is defined as the 'degree of fit' between patients and healthcare services provided (Penchansky and Thomas, 1981), the Access Framework includes four dimensions that helped in the exploration and analysis of the factors that affect access to chronic care services in the South African context during COVID-19. The Access Framework has four dimensions, namely: geographic accessibility, availability, affordability, and acceptability, which the authors assert to relate to factors of the supply and demand sides of the health system. Therefore, the framework accommodates the notion that access to care is influenced by both health system-related and user-related factors. Table 1, below, provides a description of each dimension (Penchansky and Thomas, 1981)

Table 1: Access Framework

DIMENSION	DESCRIPTION
Geographic accessibility	Travel time, location of health facility and/or patient
Availability	Resources such as facilities, providers and materials are adequate
Affordability	Costs of seeking care; ability to pay and income of patient
Acceptability	The fit between health provider and patient cultural and social attributes

(Penchansky and Thomas, 1981)

1.3 Problem statement

It is known that there is high prevalence of both NCDs and CDs in SA, thus increasing the mortality and morbidity rates (Magobe et al., 2017; Statistics South Africa, 2020). The South African government has implemented interventions to reduce this burden, thus, addressing some of the

historical barriers to accessing chronic healthcare services. This includes prevention and health promotion as well as health system strategies, such as sugar tax, physical activity, condom distribution, introduction of the school health policy, introduction of ICDM and CCMD programmes for medicine distribution (Puoane et al., 2017). Nonetheless, there are still notable barriers to accessing health for chronic care patients (Neely and Ponshunmugam, 2019; Strümpher et al., 2014). These barriers are associated with both health-system related factors, such as shortages of drugs in health facilities, and patient-related factors, such as health-seeking culture (Goudge et al., 2009). Additionally, the emergence of COVID-19 has exacerbated these challenges (Hofman and Madhi, 2020).

Due to the lockdown restrictions introduced to curb the spread of COVID-19, there were various public services that were disrupted, including healthcare (Siedner et al., 2020). Considered essential, health services were available, but the restrictions affected large numbers of patients who relied on the health system, raising concerns about the provision of chronic care among adults (Sayeed et al., 2020). For instance, at the early stage of the restrictions, there was a decline in the utilisation of chronic services such as for TB, including the diagnoses of new positive cases (Madhi et al., 2020). Some health facilities shut down to prevent or minimise infections among health workers, whereas others focused on COVID-related services (Hofman and Madhi, 2020; Madhi et al., 2020; Nyasulu and Pandya, 2020), therefore adversely affecting access to chronic care services.

1.4 Study justification

Although there has been evidence regarding the effects of COVID-19 restrictions on the health systems, limited studies have tried to understand the experiences of chronic patients in accessing chronic care services during the pandemic. In addition, available studies only focused on the views of the healthcare providers, with specific attention to the utilisation rates instead of experiences (Burger and Christian, 2020). Moreover, most studies focused on rural settings, while fewer studies were conducted in peri-urban settings with unique barriers (Siedner et al., 2020). A better understanding of patients' experiences in peri-urban settings, such as in Ekurhuleni district, is necessary, as this will inform policy decisions regarding the continuation of chronic care services in future pandemics and shocks to the health system.

1.5 Study aim

The aim of this study was to explore patients' experiences accessing chronic care services during the COVID-9 pandemic in Ekurhuleni district, in the Gauteng Province.

1.6 Study objectives

i. To explore patients' experiences in accessing chronic care services during COVID 19 in Ekurhuleni district, Gauteng province
ii. To examine patients' perceptions of barriers to accessing chronic care services during COVID 19 in Ekurhuleni district, Gauteng province
iii. To assess patients' perceptions of enablers in accessing chronic care services during COVID 19 in Ekurhuleni district, Gauteng province

CHAPTER 2: METHODOLOGY

2.1 Introduction

This chapter outlines the research methods that were employed to achieve the research aims and objectives. It first describes the study design, followed by the study setting. This is followed by a detailed description of the study population, followed by the sampling methods that were employed to select the study participants. The chapter then describes the data collection methods including the piloting processes. Furthermore, data management, data analysis, the extent to which research rigor was ensured are discussed. In relation to reflexivity, the chapter describes the researcher's positionality and then finally, ends on the discussion of the ethical principles that were followed while conducting research.

2.2 Study design

An exploratory qualitative study design was employed for this study. This design is particularly advantageous for exploring a poorly understood phenomenon, enabling an in-depth investigation without imposing preconceived ideas on the studied subjects. Hunter et al. (2019) suggest that a qualitative exploratory design allows researchers to delve into topics with limited coverage in existing literature. Moreover, it empowers participants to actively contribute to the development of new insights and understanding of the studied phenomenon (Hunter et al., 2019). The study used qualitative methods in the form of in-depth interviews. Qualitative interviews allow the researcher to explore the experiences of participants, affording them the opportunity to reflect on and provide views on their lived experience (McGrath et al., 2019). This study design was chosen because it was well-suited for understanding the experiences of participants in accessing chronic care services during the COVID-19 pandemic in an in-depth manner.

2.3 Study setting

The study was conducted in Ekurhuleni district, Gauteng Province within the South sub-district. Ekurhuleni is a metro municipality in the east of Gauteng Province and has three subdistricts, namely East, South, and North (figure 1). The district is predominantly an urban setting with a mixture of peri-urban areas (City of Ekurhuleni, 2017). One of the sub-districts, the South, was purposively

selected based on geographical proximity, including the researcher's budgetary considerations. A clinic from this sub-district, “Clinic A” was purposively selected. This is a Community Health Centre (CHC) that serves a population of approximately 105 827 people in Thokoza township, which has a high number of informal settlements and is classified as a peri-urban area (City of Ekurhuleni, 2016; City of Ekurhuleni, 2017).

Ekurhuleni district is one of the most densely populated regions of the Gauteng Province, with Tokoza being one of the most populated in the district (City of Ekurhuleni, 2024). Its regional economy is robust and diverse, contributing approximately 25% to Gauteng's economy (City of Ekurhuleni, 2016). The district hosts numerous manufacturing companies that produce a wide range of goods and commodities (City of Ekurhuleni, 2016). Despite this economic strength, the region faces significant challenges, including a 36.4% unemployment rate in 2023/2024 and the presence of 131 informal settlements (City of Ekurhuleni, 2024). Another economic activity in this region is agricultural farm holdings and due to the socioeconomic challenges faced by the community, some residents often participate in community gardening projects and have access to these farms to harvest vegetables (City of Ekurhuleni, 2017, 2016). The economic challenges faced in this district is that several households have low income, with 27% of individuals living below the food poverty line (City of Ekurhuleni, 2024).

The selected clinic has a high patient intake as it offers multiple services, including that it serves as a referral point from surrounding PHC clinics. It also provides a comprehensive package of services, including maternal and child health, chronic care such as HIV/AIDS, TB, reproductive health as well as mental health care.

Figure 1: SCM - City of Ekurhuleni[1]

2.4 Study population

The study population is adult patients diagnosed with various chronic conditions prior to the onset of the COVID-19 pandemic in March 2020. Participants were selected from this population based on their specific characteristics that provided relevant and insightful information regarding their experiences with chronic care services during the COVID-19 pandemic. These characteristics captured a diverse range of chronic conditions such as diabetes, hypertension, arthritis, and HIV/AIDS, including those with co-morbidities.

2.5 Study sample

A purposive sampling technique was used to select study participants in Clinic A. It is a useful sampling technique as it enables the researcher to select participants based on specific requirements that represent the research population (Stratton, 2024). This approach is useful as it enables a

[1] Source: https://supplier.ekurhuleni.gov.za/Scm/Account/Register

researcher to include individuals who are well-informed, well-experienced, and willing to participate, to provide more insights to answer the research question (Etikan, 2016). In the current study, chronic patients were selected to provide rich, relevant information on their lived experience of accessing chronic care services during the COVID-19 pandemic. To ensure the diversity of experiences, the researcher selected participants with different chronic conditions, which included two participants with hypertension, seven with HIV, four with HIV and hypertension as well as one with a combination of HIV, hypertension and diabetes. The participants were males and females of different age groups, to identify different experiences of accessing services. The sample size was 15 purposively selected participants, which was ultimately determined when data saturation was reached (table 2). The following is the inclusion, exclusion criteria that was used to purposively select the participants:

Inclusion criteria:

- All adults 18 years of age and older
- Patients who commenced chronic treatment prior to the onset of the COVID-19 pandemic in March 2020

Exclusion criteria:

Chronic care patients that were diagnosed with a chronic condition/s post-COVID-19 restrictions as they would not have accessed chronic care services during the pandemic.

Table 2: Study participants

Study participants N=15	Number of participants
Age range	
18-19	0
20-39	3
40-59	9
>60	3
Employment status	
Employed	5
Unemployed	9
Retired	1
Gender	
Female	12
Male	3
Chronic conditions	
Hypertension	2
Hypertension & Diabetes	1
HIV	7
Hypertension & HIV/AIDS	4
Hypertension, HIV & Diabetes	1

2.6 Data collection

Data collection was conducted from January to February 2024. Prior to commencing data collection, the researcher had a meeting with the facility manager to introduce and explain the purpose of the study. Thereafter, the researcher was introduced to a PHC-trained nurse, working with chronic patients who then was made aware of her visit. The setup of the clinic was such that all chronic care patients were in one area specifically allocated to them, hence they were easily accessible. The researcher approached the chronic patients individually, to explain the purpose of the study and asked if they were interested in participating in an interview. Participants were invited for interviews after

their clinic consultations, when they had relaxed, so that they could provide comprehensive information without feeling rushed, had they needed to return to the clinic queue.

After verbally consenting to be interviewed, the study was further explained using an information sheet (Appendix F). Thereafter, written informed consent was obtained from the participants, one for consent to be interviewed (Appendix D) and another for consent to audio record the interview (Appendix E). Using a semi-structured interview guide (Annexure C), face-to-face in-depth interviews were conducted. The interview guide was used to explore patients' experiences of accessing chronic services during the COVID-19 pandemic. The interviews were conducted in the participants' preferred languages, which was either isiZulu or Sesotho, as the researcher is proficient in both languages, and interviews were 45-60 minutes long. Field notes or memos were documented to capture verbal and non-verbal communication, behaviour, and contextual factors. This included the researcher's thoughts ad impressions during and after the interviews (Flick, 2014). This is deemed to have added to the richness of the data. The interviews took place in a quiet setting to avoid environmental distractions during the interview. A gazebo was arranged next to the chronic care service in the facility to ensure confidentiality and privacy for the participants.

2.7 Pilot study

A pilot study was conducted a month prior to data collection at a clinic in Ekurhuleni district that was not part of the primary study but had similar characteristics as the study clinic. Three patients from the selected health facility were interviewed. The patients were recruited in a similar manner as noted in Section 2.6 of this dissertation. They were approached in the chronic patients' area of the clinic, and the study was explained accordingly, and they were requested to participate. Consent was obtained from the participants, and interviews were conducted using a semi-structured interview guide. None of the participants were included in the sample of the study. The pilot enabled the researcher to test the data collection tool for its feasibility and clarity. The findings assisted the researcher to revise the interview guide based on the lessons from the pilot study.

2.7 Data management and quality assurance

All audio-recorded interviews were transcribed verbatim. For quality assurance, the transcripts were read line by line to identify and correct any errors, while maintaining the meaning to enhance

readability, coherence of content as well as to maintain confidentiality. The researcher checked the accuracy of the content of the transcripts by listening to the audio files while reading the transcripts. The transcripts and field notes were de-identified by marking them with specific participant codes for the purpose of anonymity. Audio recordings, field notes and transcripts were saved on a password-protected laptop and stored on a hard drive and Google Drive as backup. Only the researcher and her supervisors had access to these password-protected files. All consent forms and fieldnotes were stored securely in a safe and locked cupboard accessible only to the researcher and her supervisors. The audio recordings will be kept for five years and will be destroyed if no publications emerge from it after this period.

2.8 Data Analysis

A thematic data analysis method was used to analyse the data (Braun and Clarke, 2006). Thematic analysis is a systematic method of identifying and organising patterns of themes, which allows better description of the data set (Braun and Clarke, 2006). To familiarise herself with the data, the researcher read all transcripts line by line. The researcher took notes while going through the transcripts and interacting with the data. Both the deductive and inductive data analysis approaches were used. The deductive codes were derived from the theoretic framework that was part of the study – the Access Framework (Penchansky and Thomas, 1981) while the inductive codes were derived from the emerging themes as participants raised issues outside of the framework (Bingham, 2023).

Codes were initially generated through the identified patterns that were emerging while reading through the transcripts. Coding of the first three transcripts was submitted to the supervisors to identify and discuss any coding discrepancies that may arise, to ensure consistency and dependability of the findings, as well as inter-code agreement. The researcher developed the final codebook, which explained each code. Thereafter themes and sub-themes were identified and generated from the created codes. Any emergent themes were read against the data to identify discrepancies to ensure trustworthiness. The overall themes were then grouped as narratives and presented as the findings of the study.

2.9 Rigour in research

Ensuring rigour in qualitative research is crucial, as it guarantees the integrity of the findings. This can be accomplished by ensuring that the research findings are trustworthy. Trustworthiness is accomplished by guaranteeing that the research findings are credible, dependable, confirmable, and transferable (Graneheim and Lundman, 2004). To establish the trustworthiness of the research, the following principles were considered:

Credibility was ensured by collaborating with my supervisors. This involved engagement with the data and an iterative process to ensure that the codes and themes accurately reflected the findings and to reduce individual bias. The regular and constant engagement with the data ensured that I, supported by my supervisors, generated a comprehensive and balanced analysis to produce in-depth insights of the final themes.

Dependability and confirmability requires documenting the steps followed throughout the research process to make the research auditable (Flick, 2014). I ensured this by carefully documenting the steps followed throughout the research process. Furthermore, to ensure confirmability, I kept an audit trail of the audio-recorded interviews and carefully documented field notes. I also kept a range of detailed notes on the discussions that took place in meetings with my supervisors, so as to ensure the transparency, and note changes of the research process over time (Graneheim and Lundman, 2004).

Transferability deals with the extent to which the findings of a study can be applied to other situations (Graneheim and Lundman, 2004)). To facilitate this, I provided rich and sufficient contextual details about the fieldwork. I further provided details on the selection of the participants, including their characteristics, the data collection and analysis process. Finally, I presented the study findings through illustrative quotations that spoke to the overall aims of the study.

2.10 Researcher's Reflexivity

I have experience of working in public health facilities and conducting site visits as a public health laboratory specialist. These experiences could have affected my beliefs about how chronic care patients experience accessibility to these services. In addition, my cultural beliefs, based on religion, may have resulted in subjective assumptions about chronic illnesses, potentially creating bias and could have affected the interpretation of the findings. To mitigate this, I made an effort to ensure self-

awareness of these assumptions throughout the research process. This included a constant iterative process of analysis with my supervisors by continuously reflecting on these assumptions, especially those connected to my biases and beliefs. Regular discussions and iterative exchanges of drafts of the data analysis with my supervisors allowed me to keep track of any potential misinterpretations.

2.10 Ethical considerations

Prior to conducting data collection, the researcher sought ethical approval from the University of the Witwatersrand's Human Research Ethics Committee (Medical) (Clearance Certificate – M230104 MED22-12-007) (Appendix A). Further approval was obtained from the Gauteng Department of Health and the Ekurhuleni District (Appendix G) by applying to the National Health Research Database (NHRD). Informed consent was obtained from the study participants to conduct interviews and audio-record them (Appendix D & E). An information sheet (Appendix F) with additional information about the study was provided to the participants.

The researcher explained that participation in the study was voluntary and that participants could withdraw at any moment without facing any consequences or discrimination. Confidentiality was ensured for both the facility name and the participants by using pseudonyms in the final report. For instance, the facility was named 'Clinic A,' and the participants were labelled using codes as: 'Participant 1,' and 'Participant 2'. All data and transcripts were kept in a password-protected computer.

CHAPTER 3: FINDINGS

3.1 Introduction

This chapter presents the findings on the experiences of patients in accessing chronic care services during the COVID-19 pandemic in the Ekurhuleni District. The chapter firstly describes the characteristics of the participants. It then presents the broad themes, with several related sub-themes, summarised in table 3, below. These include the availability of chronic care services, acceptability of chronic care services, affordability of chronic care, the enabling and constraining factors. Concluding with an emergent theme; mental and emotional well-being.

Table 3 :Summary of themes and sub-themes

Main Themes	Subthemes
Availability of chronic services	➢ Availability of medication ➢ Availability of staff during COVID-19 restrictions
Acceptability of chronic care services during COVID-19	➢ Perceptions of the quality of care during COVID-19 ➢ Levels of dissatisfaction with chronic care services during COVID-19
Affordability of chronic care during COVID - 19	➢ Financial constraints and financial support systems ➢ Food security and medication adherence
Enabling factors to accessing chronic care services during COVID-19	➢ Extent of acceptance of chronic conditions as a facilitator ➢ Family and community support ➢ Living and coping mechanisms during COVID-19 ➢ Use technology and innovations as enablers to accessing chronic care services
Mental and emotional well-being	➢ Fear and Anxiety ➢ Grief and loss during COVID-19

3.2 Participant characteristics

In this study 15 participants were interviewed from January to February 2024. The age of the participants ranged from 26 to 63 years, with the majority being between 40 and 59 years and the oldest being 63 years. Of the 15 participants, 12 were female, and three were male. Most, which is, 13, out of 15 participants were unemployed, with only one participant having had retired. Participants reported a range of chronic conditions, with two having High Blood pressure (HBP), seven with HIV/AIDS, and four had comorbidities.

3.3Availability of chronic services

3.3.1 Availability of medication

Most participants indicated that medication remained generally consistent throughout the COVID-19 lockdown period. In addition to contactless pick-ups, several participants noted that there was a reliable supply of pre-packaged medication intended for extended use, ensuring that patients consistently had sufficient medication until their next scheduled visit. One patient explained this as follows:

> *"…they always have my medication ready. There has never been a day I went without getting my treatment". (*Participant 3)

They further added that:

> *"I always received enough medication to last until my next visit." (*Participant 3)

Some participants added that the facility prepared the medication in advance, thus having it ready for collection by patients. One participant mentioned the following:

> *"They would prepare our medication in advance, and once we got to the clinic, we just had to collect it*." (Participant 6)

A few of the participants added that the clinic provided them with medication that could last for up to 3 months. One participant indicated that she received enough stock to last her such that she did not have to come to clinic frequently. She noted as follows*:*

"During that time, they gave me treatment for 3 months…" (Participant 9).

More sentiments were shared by most participants which even highlighted that having enough medication to last for a month assisted them with adhering to treatment as one participant said:

> *"During COVID, I would get enough medication to last several months, so I never missed a dose"* (Participant 5).

Despite the general consistency in medication availability for those diagnosed with HIV, there were exceptions for individuals with comorbidities who needed medication for other chronic conditions. One participant, who received medication for multiple chronic conditions, including HIV, highlighted that they sometimes experienced shortages of specific medications related to their other conditions. She reported this as follows:

> "*There was never a shortage of ARVs, but today I got only two packs of BP medication due to a shortage" (*Participant 15).

3.3.2 Availability of staff during COVID-19 restrictions

The availability of healthcare providers and continuous access to nursing care was evident during the study. Most participants reported a consistent presence of healthcare staff, even amidst the challenges posed by the COVID-19 pandemic. This presence of healthcare workers was particularly notable given the increased demands and restrictions during this period, as described below:

*"Every time I went to the clinic, I always found the nurses" (*Participant 14).

Although the clinics reportedly managed to maintain a consistent staff presence, several participants noted that there were queues due to COVID-19 restrictions. However, they noted that despite this circumstance, the health care professionals ensured that services continued. One participant noted the hard work of the healthcare staff in maintaining service continuity by saying:

"The sisters were working hard despite the queues" (Participant 8).

Despite the overall positive experience of the availability of staff, a few of the participants indicated how there were incidences of inconsistencies, where they observed shortages in nursing staff. One participant noted that:

> *"Nurses were always available, but sometimes there were not enough"* (Participant 9).

Further commenting on the inconsistencies of staff availability during the pandemic, one participant highlighted how they were affected by other health service dynamics unrelated to the COVID-19 pandemic. They recounted an incident where they went to collect their treatment, only to find that the nurses were on strike. The striking nurses informed the patients that they were not working and directed them to go to a nearby clinic to get their treatment. The participants described as follows:

> "*There was a time when I came to collect the treatment. I found the nurses were on strike during Covid, so they told us that they are not working, they said we must go to (name of another clinic) to get our treatment''* (Participant 3).

3.4 Acceptability of chronic care services during COVID-19

3.4.1 Perceptions of the quality of care during COVID-19

Several participants expressed satisfaction with the services that were provided during COVID-19. Most reflected on how healthcare workers effectively communicated and ensured access to medication while adhering to safety protocols. In reporting a positive perception of the quality of care, one participant noted the following:

> "*They were very good about explaining COVID protocols, and they always brought our medication outside"* (Participant 12).

While restrictive measures were inconvenient, several participants reported having adjusted to COVID-19 clinic protocols over time, appreciating controlled access in the clinic as a safety measure.

> *"I was okay with the controlled number of people allowed" (*Participant 7).

Resonating with the quality of care, some participants expressed gratitude for the additional support provided by healthcare workers during severe illness. Home visits by nurses were particularly

appreciated for their role in ensuring continuity of care and providing essential support. One participant recounted as follows:

> "*She would come every day, make sure I ate, and even bring me bread because I had no energy. She also ensured that I took my pills"* (Participant 5).

Participants also noted how the proximity of the services provided convenience of access. The majority of participants reported that they lived close to the clinic, allowing them to regularly walk, thus minimising transport-related barriers. This geographic proximity ensured their ability to access healthcare services. One of the participants highlighted this convenience as follows:

> *"I walk to the clinic, it's close"* (Participant 1).

Another participant affirmed this ease of access due to the proximity of their home to the clinic, by saying:

> *"No, there is no need for transport as it's close"* (Participant 3).

3.4.2 Dissatisfaction with chronic care services during COVID-19

Although there were positive experiences and perceptions of the quality of health in the clinic, there were a few participants who experienced the contrary. Some noted inadequate communication. One participant reflected on his dissatisfaction and negative perceptions of the quality of services during the pandemic. The participant expressed this by saying:

> "*Since [name of nurse] passed on, things have not been the same. They don't communicate much except to tell you to go get your (blood) pressure measured" (*Participant 13).

In addition, participants highlighted logistical barriers and discomfort in accessing healthcare services. A recurring theme amongst most participants was the long waiting times outside clinics, which underscored the challenges that patients faced due to the pandemic-induced restrictions. These precautionary measures, aimed at limiting the number of people inside the clinics, reportedly caused delays, thus, affecting timely access and inconvenience. This illustrated how the pandemic restrictions affected service delivery. One participant indicated the inconvenience of harsh weather conditions while waiting outside:

"During COVID-19, we stood in long queues, sometimes in the cold or rain" (Participant 5).

Furthermore, some participants noted how they experienced long queues because HCPs were afraid of being infected. In fact, one noted how this made them feel like they were bringing COVID-19 to the clinics:

> *"It was bad due to long queues because the sisters (nurses) were afraid of being infected with COVID, meaning it was us who was bringing COVID-19 to them"* (Participant 5).

The participant further indicated how they had to be managed by different health care workers that they were not familiar with, as the normal staff was at home due to the pandemic. However, according to them, these HCP seemed afraid to attend to them. One participant mentioned this as follows:

. *"Then again you find that there is no certain sister you know because they are at home due to COVID. So, it was common that sister so and so was not around today although they would still allocate another sister to attend to. It felt that they were afraid to meet us in person"* (Participant 5).

3.5 Affordability of chronic care during COVID-19

3.5.1 Financial constraints and financial support systems

The COVID-19 pandemic and its induced lockdowns appeared to have exacerbated financial hardships, particularly for patients with chronic illnesses who lost jobs or experienced reduced income. One participant expressed this sentiment as follows:

*"It was bad; I lost my job and relied on family support" (*Participant 1).

In response to these financial challenges, family support played a crucial role in helping patients maintain their health and financial stability. External financial support from family, was essential in sustaining patients' access to healthcare during financially challenging periods. Some participants expressed how they had to rely on family for support after losing their job during COVID-19:

*"My family would come bring a bit of food" (*Participant 9).

Another participant shared the same sentiments as follows:

*"My family would come and bring some food items for us" (*Participant 5).

Some of the participants highlighted disruptions in family support which were caused by the pandemic, where family members that they relied on also passed on. One had the following to say:

"My sister… that was on my side financially... passed on in 2022" (Participant 5).

Another participant also said:

"It was very hard, there was no money my child who was helping with finances, he lost his job during COVID-19, it was hard for him to help me financially" (Participant 14).

A few participants mentioned how they received support from government grants, which reportedly carried them through the pandemic. One participant said:

"Both my husband and I are not working, so we were sustained by grant money" (Participant 15).

3.5.2 Food security and medication adherence

The pandemic-induced economic dynamics also affected food security, which in turn affected medication adherence. Many medications require dietary support for efficacy, making it challenging for patients to maintain their treatment regimens during financial challenges. Financial constraints influenced how the participants took their treatment, as one participant noted:

"Not having food affects how I take treatment. High blood pressure needs a balanced intake" (Participant 5).

Although food insecurity emerged as a constraint for many patients, some benefited from community initiatives like food parcel distribution. One participant noted:

*"We received food parcels to support households affected by the pandemic" (*Participant 14).

Another participant highlighted how having access to farms helped them in getting essential foods:

"We used to go to some farm to get some vegetables and food'' (Participant 13).

3.6 Enabling factors to accessing chronic care services during COVID-19

3.6.1 Extent of acceptance of chronic conditions as a facilitator

Some participants demonstrated an acceptance of their chronic conditions. They mentioned how receiving counselling support enabled them to cope and live with their condition. One participant, who indicated how she accepted and better managed her condition due to counselling expressed this as follows:

> *"I have accepted it, and I am no longer stressed. It's because of counselling where they teach us how to manage" (*Participant 6).

Another participant emphasised the crucial role of initial counselling upon diagnosis as follows:

> *"The first time I came here and discovered that I am HIV positive, I got people who counselled me"* (Participant 9).

In addition to counselling, several participants highlighted the role of health education or information which contributed to their acceptance of living with a chronic condition. One participant mentioned that the following:

> *"I was taught to accept my condition and live normally"* (Participant 2).

For some participants, having to live with their chronic condition throughout their lifetime enabled them to grow accustomed to taking their medication and normalised the practice. One participant noted:

> *"I've grown up as a sick person, so taking medication feels normal"* (Participant 7).

Another participant echoed the same sentiment by saying:

> *"I told myself it's not the end of the world. I have to accept it and live with it"* (Participant 15).

3.6.2 Family and community support for chronic patients

Family was reported to have played a crucial role in emotional and practical support, including reminders for medication, which enhanced adherence, while community support varied depending on individuals' openness about their condition. Most participants indicated how disclosure to family increased their acceptance of their condition. They found strength in opening up about their condition, as one participant said:

> *"I talk to everyone about my status… it helps me"* (Participant 8).

Another participant shared a positive experience regarding family support, saying:

> *"My daughter reminds me to take my treatment"* (Participant 1).

Moreover, some participants emphasised the vital role of family in ensuring that they accessed healthcare during the pandemic:

> *"When I'm not feeling well, my kids bring me to the clinic" (*Participant 12).

Several participants emphasised the importance of social interactions, highlighting the crucial role of social support systems in managing chronic illnesses, particularly during the pandemic.

> *"Talking with neighbours helped take my mind off things"* (Participant 4).

On the contrary, some participants felt that they were not supported by the community and described a sense of isolation. This included a sense of betrayal by the community. One participant specifically noted the lack of support during COVID-19 lockdown restrictions by the church community where they used to practice their fellowship, and expressed challenges with coping alone: They illustrated this as follows:

> *"I decided not to (do) fellowship anymore during that time as they did not come to support me during my child's funeral... I felt betrayed"* (Participant 5).

One participant further indicated how they managed their illness on their own, to avoid being a burden to their family:

"I had to manage on my own because I didn't want to burden my family too much" (Participant 5).

3.6.3 Coping mechanisms during COVID-19

Regarding the various coping mechanisms employed by the participants on living with chronic conditions, some shared diverse strategies to manage their daily lives and health challenges during the pandemic. Some indicated how one of their strategies was to avoid thinking about the condition. They shared the following:

"I just put things behind me and continue to live normally, not thinking too much" (Participant 3).

While some of the participants had a way of coping with living with their chronic conditions, some acknowledged challenges in managing the fluctuations that comes with managing chronic illnesses, however, they expressed an ability to adapt and live with the conditions. One participant said:

"*Living through these diseases can be challenging sometimes; one day I am fine, and other days I am not, but I managed to live with them"* (Participant 12).

One participant further indicated how they had to deal with the difficulty of hearing messages that conveyed that people with chronic conditions were at a higher risk of being infected with COVID-19. They illustrated this by saying:

"*It was not easy; it was not easy at all especially us who lived with chronic condition. It was difficult (me in particular), they (sic) were things that did not sit well with me as we were told that those of us who are on chronic condition we are targets…victims. As they said (to) us who are on chronic, COVID can come easily. Otherwise, life continued as normal"* (Participants 6).

3.6.4 Use of technology and innovations as enablers to accessing chronic care services

The healthcare facilities demonstrated adaptability in the face of COVID-19-related challenges. This adaptability was evident through the diversification of distribution methods, such as the implementation of the "Pelebox system." This innovation facilitated contactless medication pick-ups,

a particularly efficient solution during the pandemic which reduced the need for patients to wait in long queues at the clinic. The integration of technology and innovative solutions was crucial in improving healthcare service delivery during the COVID-19 pandemic. For instance, one participant indicated how access to medications was enhanced by immediate communication through a telephonic call. They said the following:

> *When it's time to collect my treatment, they call me with the code for Pelebox"*(Participant 2).

Another participant reaffirmed this view by expressing that the following:

> "*Sometimes they will make me collect medication at Pelebox… It's a contactless way, and they send me a code to pick up my meds"* (Participant 1).

The same participant further articulated the convenience of this innovation, indicating how it reduced waiting times. They noted this by saying:

> "*I used the Pelebox and it was convenient. No more long waits at the clinic"* (Participant 1).

Participant 1 further highlighted how it reduced the frequency of visits to the clinic. They noted as follows:

> *"I come when they have sent me the message, I came here to do blood tests. I only come here after 4 or 5 months" (*Participant 1).

3.7 Mental and emotional well-being

3.7.1 Fear and anxiety

Some participants indicated how they experienced fear and anxiety during the COVID-19 pandemic, which was often exacerbated by public health messaging that highlighted their increased vulnerability. This fear frequently led to heightened anxiety, as described below:

> *"We were full of fear because we were scared, we could die. When you think of COVID-19, you think of death"* (Participant 6).

In addition, the rise in infections increased the anxiety of most of the participants, due to societal narratives regarding the effects of the pandemic on health care professionals. One of the participants noted that:

> "*I was so scared, and people were talking, saying those who have chronic diseases will die, so it made me scared to hear such. When COVID-19 started, it began by killing professional people, like nurses, teachers, and police officers. It made me more scared because we thought these people were trained about COVID-19"* (Participant 14).

Despite the fear that was created by the regulations, some participants indicated how they made sure that they collected their medication. One indicated as follows:

> *"I always complied with the regulations and came to collect my medication, even though I was scared*" (Participant 6).

Interestingly, while some participants were feeling overwhelmed by fear, some adopted a more relaxed approach, with one saying:

> "*Me, I was okay. I didn't even check for COVID at that time"* (Participant 5).

Several participants reported having experienced difficulties in coping due to excessive worry which affected the stability of their chronic condition. In addition, due to the nature of the prevention strategies during the pandemic, some expressed how they experienced their conditions alone. One participant expressed their difficulty in coping with their chronic condition by saying:

> "*I was always thinking too much, and my blood pressure stayed high" (*Participant 2).

3.7.2 Grief and loss during COVID-19

The emotional effects of losing loved ones during the pandemic created an additional burden for some participants, further complicating their ability to manage their chronic conditions. One participant recounted their experience of losing their son and father in the same period of the pandemic. They expressed their experience as follows:

"I lost my son during the looting, and then my father passed (on). It was just too much at once" (Participant 4).

Some participants indicated how loss and grief exacerbated the chronic conditions, as exemplified below:

*"I was admitted at the hospital for hypertension after I buried my son" (*Participant 5).

3.8 Conclusion

Despite the disruptions caused by the pandemic, most participants reported consistent availability of medication, facilitated by contactless pick-ups and extended supplies to reduce clinic visits. However, those with comorbidities occasionally faced shortages of specific medications. Healthcare staff were generally present, ensuring continuity of care, although staff shortages and strikes occasionally affected service delivery.

Participants expressed mixed perceptions of the acceptability of chronic care services. While some were satisfied with the quality of care, communication, and convenience of clinic proximity, others experienced dissatisfaction due to long waiting times, inadequate communication, and perceived reluctance from healthcare workers. Financial constraints emerged as a significant challenge, with many participants relying on family support, government grants, or food parcels to meet their healthcare and nutritional needs. Food insecurity negatively impacted medication adherence, particularly for conditions requiring dietary support.

Enabling factors such as acceptance of chronic conditions, family and community support, as well as innovative healthcare solutions such as the Pelebox, played a crucial role in maintaining access to care. However, social isolation and a lack of community support were reported by some participants, particularly regarding emotional well-being. Mental and emotional distress, including fear, anxiety, grief, and loss, were prevalent among participants. Public health messaging about the increased vulnerability of chronic care patients exacerbated these fears, highlighting the psychological impact of the pandemic.

CHAPTER 4: DISCUSSION

4.1 Introduction

This chapter integrates the key findings of the study within existing literature on patient experiences of accessing chronic care services. The broader literature captures settings in LMICs and/or similar settings. The chapter starts by engaging with the themes and sub-themes by discussing availability and acceptability of chronic services during COVID-19. It then engages with the affordability of chronic services during COVID-19, and then finally describes the enabling factors to accessing chronic care during COVID-19. The chapter concludes by highlighting some of the limitations of the study. Overall, the discussion examines how the study findings align with or contradict existing knowledge.

This study explored the experiences of patients accessing chronic care services during the COVID-19 pandemic in the Ekurhuleni District in the Gauteng Province. The key findings illustrate the extent to which a range of factors influenced access to care during the pandemic, which were evidently attributed to both health system-related and personal factors. Participants indicated how factors such as the consistent presence of healthcare providers even during the official restrictions provided a sense of comfort that someone would be available to provide care. Providing alternative mechanisms to access medication such as the innovative Pelebox ensured a consistent availability of medication, thus, facilitating a continuity of chronic care services. Participants highlighted that they had to queue outside at health facilities, as part of infection control measures. However, this exposed them to the harsh environmental conditions, while creating discomfort when visiting the health facilities.

Personal factors that constrained participants from accessing chronic care included the participants' socioeconomic circumstances. This involved the challenges of financial constraints where the loss of jobs during the pandemic resulted in several layers of limited support. This included the limited ability to ensure access to nutritional food to sustain adherence to treatment. There were evident effects of fear and anxiety that were fueled by messages of increased risk of mortality for people with chronic conditions in contracting the virus. This elicited fears of accessing health care facilities, fearing the risk of exposure. On a positive note, personal factors that facilitated access to chronic care services were support systems such as family and community support. The findings are discussed in detail based on the identified themes and sub-themes.

4.2 Availability and acceptability of chronic care services

The availability of healthcare services is one of the dimensions of access with a focus on staff, health facilities, medical professionals, and essential resources such as medication (Levesque et al., 2013). The findings in this study indicate two key factors that illustrate the nature of availability of chronic healthcare services. These were medication delivery and staff availability.

4.2.1 Availability of chronic medication

This study's findings suggest that medication was available to participants despite the restrictions and lockdowns, ensuring continuity of care. This contrasts with reports from Rwanda, where movement restrictions and healthcare service delivery were disrupted during the pandemic, negatively affecting timely access to chronic care medication (Nshimyiryo et al., 2021). In the current study, most participants had consistent access to medication, facilitated by pre-packaged extended prescriptions and contactless pickup options – an innovation called 'Pelebox'. This aligns with South Africa's government efforts to decentralise medication collection to reduce clinic visits (Bogart et al., 2022).

In this current study, some participants who were on long-term treatment plans reported having had supplies for at least three months. This pre-existing arrangement ensured they had access to treatment during the COVID-19 pandemic. A study in Rwanda illustrates a similar experience for those living with HIV and AIDS, where they collect their ARVs in alternative ways, hence unlikely to encounter shortages (Nshimyiryo et al., 2021).

However, in the current study, some participants with comorbidities experienced medication shortages, particularly for non-HIV chronic conditions. This aligns with global literature, which notes that the COVID-19 pandemic disrupted medication supply chains in LMICs due to international trade restrictions (Jifar et al., 2022).

It is clear from the current study's findings that the health system responded to patients' needs by developing processes in which patients can have continuous access to treatment, to ensure treatment adherence. This illustrates the positive contribution of the WHO's patient- centred differentiated models of care, particularly the Chronic Care Model (CCM) that has been adopted by many countries (WHO, 2022).

The current study's findings underscore the alignment of the health system's response with WHO's person-centred differentiated service delivery (DSD) frameworks, which prioritises continuity of care through decentralised models, tailored to patients' needs (Kredo et al., 2014; Mendoza-Graf et al., 2024; WHO, 2022). By implementing strategies such as multi-month dispensing (MMD) of medications, community-based pick-up points, and reduced clinic visit frequencies, the system ensured uninterrupted treatment access, consistent with the WHO's (2022) guidelines on integrating DSD into HIV and chronic care programmes. These approaches mirror WHO-recommended models, including facility adherence clubs and community drug distribution, which simplify service delivery while maintaining clinical oversight.

The success of pre-packaged prescriptions and decentralised collection systems, as noted by the current study's findings highlight the efficacy of DSD in enhancing retention and reducing health system burdens, as emphasised in WHO's (2022) minimum dataset for monitoring treatment outcomes. However, persistent gaps in addressing comorbidities, such as fragmented supply chains for non-HIV medications, reflect challenges noted in WHO guidance, including rigid eligibility criteria and infrastructure limitations. To fully realise the potential of DSD, the current study reinforces the need for adaptive policies, strengthened community-health facility linkages, and integrated monitoring systems, as outlined in WHO's (2022) call for scalable, patient-centred innovations to leave no one behind.

4.2.2 Availability of healthcare providers during COVID-19 restrictions

The findings of this study indicate a positive perception regarding the presence of staff during the pandemic, although inconsistencies and service disruptions were noted. Many participants acknowledged that despite the challenges posed by the pandemic, healthcare workers remained available at clinics, ensuring that essential services continued. This was particularly important for patients with chronic conditions who required regular medication refills and check-ups. However, what is consistent is the important role that the availability of healthcare providers played in patient's access to chronic care. The presence of nurses provided a sense of stability and reassurance. This finding underscores the resilience and commitment of healthcare staff in delivering essential care, even during a period of high demand and health system strain.

Nonetheless, the current study's findings are in contrast with those from SA's North-West Province that indicate that there were staff shortages during the COVID-19 restrictions (Mboweni and Risenga,

2023). Experiences similar to the North-West Province were reported in other settings, where the unavailability of staff was attributed to a high rate of morbidity and mortality of healthcare workers, due to the maldistribution and misalignment of healthcare workers as part of prioritising responses to the COVID-19 pandemic (Danhieux et al., 2020; Haileamlak, 2021; Mathew et al., 2024).

While the availability of staff was consistent in this study, COVID-19 restrictions led to long queues and waiting times, creating additional barriers for patients. However, some participants noted that although waiting periods increased, healthcare professionals remained dedicated to their duties, ensuring that patients received treatment. Such findings highlight healthcare workers' efforts in managing service delivery, despite overwhelming patient loads and pandemic-related restrictions. Contrary, a similar study in Iran highlighted the psychological impact that the pandemic had on health providers, where there was an overwhelming workload and many who felt helpless (Ardebili et al., 2021). However, the efficiency of these efforts varied across different healthcare facilities in SA (Mboweni and Risenga, 2023). Even in high-income countries such as Belgium, health practitioners were often placed on temporary unemployment when the private practitioners encountered loss in revenue due to a decline in consultations (Danhieux et al., 2020).

In the current study participants reported that nurses were primarily present. But some participants reported occasional staff shortages that contributed to longer waiting times and reduced quality of care. This indicates that while services remained functional, they were sometimes understaffed, which could have led to delays in patient care, overburdened staff, and increased patient frustration (Bullen et al., 2021b; Ardebili et al., 2021). Consequently, in other countries these shortages attributed to multiple factors, including burnout, staff illnesses, or the reallocation of healthcare personnel to COVID-19 response efforts (Bullen et al., 2021; Mathew et al., 2024).

Beyond COVID-19-related constraints, some participants in this study reported health service disruptions due to labour strikes. This further exacerbated access challenges, as patients had to seek care at alternative clinics, which may not have been geographically convenient. This highlights how external factors beyond COVID-19, such as labour disputes, also affected the continuity of care for chronic patients. Strikes within healthcare settings are often linked to access barriers. These disruptions affect geographic access and the quality patient care services (Kyriopoulos et al., 2014). Labour disputes can severely restrict access to care for chronic patients, as seen in SA, where strikes

prevented patients from obtaining essential medications, leading to potential permanent damage and exacerbating health conditions due to a lack of treatment (McQuoid-Mason, 2018).

4.2.3 Acceptability of chronic care services: perceptions on quality of care

The current study's findings also highlight the nature of the quality of care in health facilities during the pandemic. Many participants reported positive experiences in how they perceived the quality of care. This was more so from those who received home visits from nurses, a highly valued intervention. This reflects findings from Carta et al.'s (2022) study, which emphasised that patients reported receiving quality care and expressed satisfaction with the provided services. Notwithstanding, other participants experienced long waiting times, inadequate communication, perceived lack of organisation, limited indoor waiting areas, and discomfort with staff attitudes, which led to dissatisfaction. This is noted in a study in the Mpumalanga Province, conducted on public sector healthcare in SA before the COVID-19 pandemic (Goudge et al., 2009).

4.3 Affordability of chronic care during COVID-19

Affordability considers financial constraints, household income, and indirect costs associated with accessing healthcare (Levesque et al., 2013). The findings of the current study illustrate the experience of job losses during the COVID-19 pandemic. This involved financial hardships where the loss of income affected participants' ability to afford nutritious food. This remains one of the most important elements of managing chronic conditions, as what one consumes defines their health (WHO, 2003). Similar findings in a study that was conducted in India indicate that socioeconomic challenges caused anxiety during lockdowns because of the impact of job losses (Singh et al., 2021).

The findings of this study further reveal that during the financial hardships, government grants and family support were crucial coping mechanisms for participants. Similar findings were reported in the North-West Province of SA, where financial hardships extended to small businesses, including those selling vegetables, which resulted in many losing their income (Mboweni and Risenga, 2023). Literature confirms that economic downturns increase financial barriers to healthcare, particularly in low-income communities (Burger and Christian, 2020; Kendzerska et al., 2021). This underscores the critical role that institutional and familial support play in alleviating financial distress.

Some participants indicated that food insecurity hindered treatment adherence due to their financial circumstances. This supports existing evidence that poor nutrition exacerbates chronic disease outcomes (Flaherty et al., 2020). While food parcel programmes provided temporary relief, reliance on external aid underscores systemic vulnerabilities in LMIC health systems (Fekadu et al., 2021).

4.4 Enabling factors to accessing chronic care services during COVID-19

4.4.1 Extent of acceptance of chronic condition

The current study's findings illustrate how various factors contributed to how chronic care participants lived and coped with their condition. Accepting to live with this condition facilitated how most of the chronic participants managed it. This included eliminating any stigma attached to their chronic condition. This acceptance appeared to facilitate treatment adherence. Participants highlighted acceptance of their chronic conditions since diagnosis as a critical facilitator to living with and managing chronic conditions, often achieved through counselling and health education. Interestingly, this factor motivated them to access and utilise chronic care services, similar to other settings (Nshimyiryo et al., 2021). Accepting a chronic condition, such as an HIV-positive diagnosis, is a crucial step in overcoming barriers to accessing care and staying connected to the required services. Individuals' struggle to accept living with their chronic condition and denial, often delays or prevents them from seeking timely healthcare (Horter et al., 2017). Horter et al., (2017) found that those who accepted their condition early were more likely to start treatment quickly, adhere to it, and achieve better long-term health outcomes. Importantly, acceptance often leads to disclosure, which opens doors to support networks and clinical resources, further strengthening the connection to care (Horter et al., 2017). Acceptance, often supported by counselling and health education, can transform patients' resistance into action, motivating people to seek care and adhere to treatment. It was crucial that chronic patients found counselling even before the COVID-19 pandemic, so that during such a pandemic, where anxiety is heightened, they could cope better. The participants' reliance on counselling and peer support as a coping mechanism echoes a study in Rwanda where coping mechanisms identified during the pandemic were such as contacting a clinician via a telephone were noted (Nshimyiryo et al., 2021).

4.4.2 Psychological adaptation, coping and mental health during COVID -19

4.4.2.1 Fear and anxiety

It is generally not easy to live with a chronic condition. However, it is more difficult when there was constant COVID-19 messaging that emphasised that those with chronic conditions were susceptible to the coronavirus infection. As highlighted in this study's findings, this exacerbated the fear and anxiety amongst participants. To alleviate the fear, most participants developed various coping mechanisms such as not thinking about their condition daily. The psychosocial support was also crucial in minimising anxiety. In agreement with the current study's findings, a study in Bangladesh underscores the role of psychosocial support in mitigating distress among chronic disease patients, as limited access to care heightened anxiety (Sayeed et al., 2020).

The COVID-19 pandemic intensified fears of vulnerability, particularly among those with comorbidities. Some participants in the current study expressed distress over public health messaging, which alluded that those with chronic conditions were at higher risk of infection and even mortality. This mirrors findings from a study in Bangladesh, where individuals with chronic diseases reported significantly higher stress and anxiety due to perceived COVID-19 risks (Sayeed et al., 2020). A study in Iran further validated this, revealing that patients with COVID-19 experienced profound mental strain, including fear of death and isolation (Jesmi et al., 2021).

The fear of infection and death was a significant driver of anxiety, which aligns with findings from other studies that reported increased anxiety levels among chronic disease patients during the pandemic (Huang and Zhao, 2020; Jesmi et al., 2021). Furthermore, those who spent more time thinking about the COVID-19 outbreak were more susceptible to developing anxiety (Huang and Zhao, 2020).

However, while some participants in the current study were overwhelmed by fear, others adopted a more relaxed approach. This variation in responses highlights the heterogeneity in how individuals cope with fear and anxiety during a crisis. Some patients were able to compartmentalise their fears and continue with their daily routines, including collecting their medication. This resilience in the face of fear is consistent with findings from a study that suggests that some individuals can maintain a sense of normalcy despite the heightened anxiety that was caused by the pandemic (Coupet et al., 2021).

The excessive worry and anxiety experienced by some of the current study's participants were also due to loss of loved ones due to the COVID-19 pandemic, which also had a direct impact on their chronic condition. The emotional toll added a layer of complexity to the mental health challenges faced by chronic disease patients, as the compounded grief had a significant impact on their ability to manage their chronic condition. It was noted that even to control their blood pressure was a challenge, despite treatment adherence. This aligns with literature that suggests that stress and anxiety can exacerbate chronic conditions, particularly hypertension and cardiovascular diseases (Coupet et al., 2021; Sayeed et al., 2020). Coupet et al. (2021) further highlight that most of the stressors for chronic patients during the COVID-19 pandemic were grief and loss.

The personal experience of losing a loved one to COVID-19 also brought the abstract threat of the virus into stark reality for some participants. Some of the participants described how the death of a close friend made them realise the severity of the pandemic. This personalisation of the pandemic's impact is consistent with findings from studies that suggest that personal experiences of loss can significantly alter an individual's perception of risk and increase their anxiety levels (Huang and Zhao, 2020). Additionally, literature often highlights the role of public health messaging in exacerbating anxiety among vulnerable populations (Coupet et al., 2021). Participants' strategies to put things behind them and live normally reflect resilience but also highlight gaps in systemic mental health support, as recommended by Jesmi et al. (2021) and Nshimyiryo et al. (2021). Conversely, Sayeed et al.'s (2020) study in Bangladesh found elevated depression in chronic disease patients, underscoring the urgency of integrating mental health services into chronic care programmes.

4.4.3 Family and Community Support

This study's findings highlight the importance of family support during a pandemic. They illustrate how family support enabled chronic patients to manage emotional and physical challenges. Participants indicated that the support was in various forms, such as their families reminding them to take medication and taking them to the clinic when they fell ill. However, it has been shown that on the contrary, the COVID-19 pandemic's restrictions significantly altered the dynamics of family support, thus impacting patients' emotional well-being and healthcare experiences (Julià-Móra et al., 2025). Family involvement was essential in providing emotional stability, reducing anxiety, and facilitating better health outcomes for chronic patients during the pandemic (Jesmi et al., 2021). A study that was conducted in Indonesia, exploring family support for type 2 diabetes patients in PHC

during COVID-19 indicates that good family support significantly enhanced treatment adherence and emotional well-being, with 91.2% of respondents reporting positive family involvement (Sari et al., 2023).

The current study's participants indicated how, even during the restrictions, they still managed to debrief and got support from neighbours, which highlighted the importance of community support. Social support is considered a valuable coping resource that individuals can rely on during stressful times. It typically comes from family, friends, or coworkers and provides emotional, informational, or practical assistance (Thoits, 1995). The perception of having supportive relationships, that is, feeling cared for, understood and valued, has a greater impact on mental health than receiving support. This perceived emotional support plays a crucial role in enhancing resilience and well-being (Sari et al., 2023).

4.4.4 Use of technology and innovation as an enabler

While the COVID-19 pandemic necessitated rapid adaptations in healthcare delivery, particularly for chronic care services, the healthcare facilities demonstrated remarkable adaptability in the face of these challenges, leveraging technology and innovative solutions to ensure continuity of care. This adaptability was evident through the diversification of distribution methods, such as the use of the Pelebox system, which facilitated contactless medication pick-ups. This innovation proved to be a particularly efficient solution during the pandemic, reducing the need for patients to wait in long queues at clinics and minimising the risk of virus transmission. The use of the Pelebox system by some participants in the current study, where they were able to collect their medication at boxes outside the clinic, proved to be an enabling factor, which facilitated the continuity of care during the COVID-19 pandemic. Participants expressed the convenience and efficiency of these technological innovations.

The Pelebox system was implemented before the COVID-19 pandemic by SA's Department of Health, where 401 pick-up points were established by 2017 and had 1300,000 users (Du Toit, 2017). A similar innovation was designed in Taiwan, where a facility such as an outdoor medicine dispensing service was provided and facilitated continuity of treatment during the COVID-19 pandemic (Chuang et al., 2023). The authors highlighted that over 90% of patients were satisfied with this service. In contrast, a study that was conducted in the North-West Province, SA, indicated the inaccessibility of chronic medication (Mboweni and Risenga, 2023).

4.5 Limitations of the study

While this study explored the experiences of participants in accessing chronic care services during the COVID-19 pandemic through in-depth interviews, several limitations are acknowledged. Although the findings cannot be generalised as per the nature of qualitative research, they still provide insights into the experiences of chronic patients in similar settings. Additionally, not all chronic conditions were represented in the sample as it relied on people to volunteer. Therefore, this only captured those who were diagnosed with conditions such as HIV, hypertension, and diabetes. Certain chronic conditions, such as mental health disorders and arthritis were not represented, thus limiting a comprehensive range of experiences that may be determined by the unique nature of their condition.

Another limitation lay in the timing of interviews, which were conducted post the COVID-19 pandemic. This retrospective approach likely introduced recall bias, as participants had to rely on memories to accurately highlight their experiences during the middle of the pandemic. The passage of time may have influenced the way events were recounted. Furthermore, the study was conducted in a single clinic within a peri-urban setting. In this regard, the findings are specific to that context and may not reflect the experiences of those in other geographic areas such as rural contexts, where healthcare access and infrastructure differ remarkably. Despite these limitations, the study provides valuable insights into the lived experiences of chronic care patients during a global health crisis, contributing to the broader discourse on health system resilience and patient-centred care.

CHAPTER 5: CONCLUSION

5.1 Conclusion

During the COVID-19 pandemic there were barriers to access for chronic care patients globally. The current study identifies barriers to accessing chronic care services in Gauteng Province's Ekurhuleni District during the COVID-19 pandemic. These barriers included medication shortages, reduced clinic visits due to lockdowns, and a shortage of healthcare workers. Financial constraints, worsened by job losses, also impacted medication adherence. Aligning with previous studies (Adhikari et al., 2024; Danhieux et al., 2020), the current study found that anxiety further complicated disease management. Policymakers should address these barriers by improving stock monitoring in clinics, expanding community outreach programmes for chronic disease management, and providing transport or food assistance for low-income patients.

Despite the challenges that the study found, several enablers helped ensure continued access to care. Telemedicine, outdoor medicine dispensing, and extended prescriptions were key factors. Innovations like the Pelebox system and the CCMDD programme were particularly effective in reducing disruptions. These findings are consistent with decentralised medicine distribution strategies observed in Rwanda (Nshimyiryo et al., 2021) and other provinces of South Africa (Mendoza-Graf et al., 2024). Expanding the availability of systems like Pelebox, improving Short Message Service (SMS) reminders, and involving community health workers could further enhance access to care as suggested by Chuang et al. (2023). Global experiences reinforce the current study's findings. For instance, decentralised ARV programmes in Rwanda improved medication access (Danhieux et al., 2020; Nshimyiryo et al., 2021).

Similar to the current study's findings, financial strain and mental health challenges were observed in other countries (Fekadu et al., 2021; Sayeed et al., 2020). This highlights the need for mental health support within chronic care services. Strengthening decentralised service delivery, improving supply chain resilience, and adopting flexible tech solutions like SMS reminders and smart lockers can further optimise chronic care delivery, as recommended by Bogart et al. (2022).

Geographic accessibility was an enabling factor that was found in this study. This resonates with the policy of the South African government where it made effort to implement a 5km radius of a clinic

for those in urban areas (CSIR, 2012). Financial constraints, exacerbated by job losses, negatively impacted food security and medication adherence. Family support and government grants were critical coping mechanisms. Health systems in LMICs including SA, need to recognise the extent to which barriers and numerous stressors inhibit access to chronic health services particularly during the times of crises. Strategies to address these barriers call for innovations and mechanisms that are context specific. This study illuminates some of the barriers but also highlights ways in which healthcare users and the health system explored ways to circumvent the challenges.

5.2 Recommendations

5.2.1 Availability of chronic healthcare services

The study found that healthcare facilities faced severe shortages in staff, medical supplies, and essential services, leading to disruptions in chronic disease management. Therefore, policies should be implemented to enhance healthcare workforce resilience during crises and expand staff capacity such as task shifting. This will ensure the consistent availability of healthcare providers, especially during health crises such as a pandemic. Furthermore, mechanisms to improve stock monitoring and management to prevent medication shortages, particularly for non-HIV chronic conditions, should be explored.

5.2.2 Affordability and financial barriers

In the current study, many chronic patients struggled with financial constraints, exacerbated by job losses and economic downturns during the COVID-19 pandemic. Enhancing financial support mechanisms including subsidies and grants for vulnerable patients have the potential to alleviate these stressors. Food insecurity affects adherence to medication, as managing chronic disease is linked to nutritional dietary considerations. Addressing food security through partnerships with community initiatives such as distributing food parcels, can ensure that patients adhere to dietary requirements as recommended.

5.2.3. Innovative Solutions

The use of the Pelebox was found to be a facilitator to accessing chronic treatment. The scaling up of these programmes could improve efficient, contactless medication collection for all chronic care conditions. In addition, decentralised healthcare delivery and community-based care models should be expanded to reach patients in remote areas during crises. Moreover, it is important to increase awareness and integration of telemedicine services to reduce clinic visits without compromising care quality.

5.2.4 Adequacy of health information

A lack of clear and timely information regarding healthcare access and COVID-19 protocols created confusion and heightened anxiety among patients. Strengthening communication channels through multilingual health campaigns and digital platforms can improve patient awareness and enable the navigation of healthcare services.

5.2.5 Mental health integrations

Considering the anxiety caused by the loss of family members and chronic patients experiencing additional acute illness such as COVID-19, it is important to include psychosocial support services in chronic care programmes to address anxiety, grief, and other mental health challenges exacerbated by crises. Community health workers have a central role in linking households to mental health care services and psychosocial support. This role could be strengthened through their inclusion in multidisciplinary teams so that they are able to identify patients that require support from relevant health care providers.

5.2.6 Future Preparedness

Decision-makers should consider developing contingency plans to maintain chronic care services during pandemics, including decentralising services and leveraging technology. The health system must foster robust community-based support systems to ensure continuity of care and social connectedness.

5.3 Implications for Future Research

As it has been observed that pandemics such as COVID-19 have residual effects on chronic care services, future research should examine the prolonged effects of disrupted healthcare access on disease progression and patient outcomes. In countries where research found telemedicine as a facilitator of accessing chronic care, future research could employ innovative methodologies to examine the role of telehealth on chronic disease management, to provide in-depth insights into sustainable healthcare models.

The current study's findings highlight the unpreparedness of the health system for pandemics. Comparative studies analysing prior and current healthcare systems' preparedness and response to global health crises can be considered. This could inform efforts to improve pandemic preparedness policies, to management chronic care services.

This study was conducted in a peri-urban district. Therefore, further research should assess disparities in access among different socioeconomic and demographic groups across a diverse range of geographical areas. This can address equity in accessing chronic care services, to provide solutions that are responsive to context-specific needs of communities. Hence, research should be expanded to rural and diverse urban settings to compare experiences of barriers to accessing chronic care services. Further research needs to explore the mental health effects of healthcare access barriers on users due to pandemic disruptions. This can inform efforts to design holistic chronic patient support programmes that address long-term mental health effects of COVID-19.

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APPENDIX A: ETHICS CLEARANCE CERTIFICATE

M230104 MED22-12-007

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

R14/49 Mrs Mmakabea Moloi

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M230104 MED22-12-007

NAME: (Principal Investigator)	Mrs Mmakabea Moloi
DEPARTMENT:	Faculty of Health Sciences Ekurhuleni District
PROJECT TITLE:	Exploring patients' experiences in accessing chronic care services during the COVID-19 pandemic in a peri-urban area, between March 2020 and March 2021
DATE CONSIDERED:	27/01/2023
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Mrs Nonhlanhla Nxumalo
APPROVED BY:	Prof P Ruff, Chairperson, HREC (Medical)
DATE OF APPROVAL:	12/10/2023 **EXPIRY DATE:** 12/10/2028

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report** in January each year until study is closed. Failure to submit annual report will result in ethics clearance certificate suspension. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in January and will therefore be due in the month of January each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical). Email signed copy of this ethics clearance certificate prior to commencing with the study hrec-medical.researchoffice@wits.ac.za

MF Moloi
Principal Investigator Signature

14/10/2023
Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX B: PLAGIARISM DECLARATION

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

FACULTY OF HEALTH SCIENCES

PLAGIARISM DECLARATION TO BE SIGNED BY ALL HIGHER DEGREE STUDENTS

SENATE PLAGIARISM POLICY: APPENDIX ONE

I Mmakabea Felicity Moloi (Student number: 2374582) am a student registered for the degree of Master of Public health in the academic year 3rd.

I hereby declare the following:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.
- I have included as an appendix a report from "Turnitin" (or other approved plagiarism detection) software indicating the level of plagiarism in my research document.

Signature: _____ Date: 13 October 2025

APPENDIX C: INTERVIEW GUIDE

Exploring patients' experiences in accessing chronic care services during the COVID 19 pandemic in Ekurhuleni district in Gauteng Province.

Introduction

Hello. My name is Mmakabea Moloi. I am a Master of Public Health student at the University of Witwatersrand. Thank you for agreeing to be interviewed. I am going to ask you questions about your experiences of accessing the health services that you require in this clinic, particularly during the COVID-19 pandemic during March 2020 and March 2021. The interview should take about 45 to 60 minutes. Are you happy to start?

I am turning on the audio recorder to capture the interview.

Is that ok with you?

1. Yes
2. No

A. CHARACTERISTICS OF PARTICIPANTS

First, I just want to ask you some questions about yourself.

Sex	F M
Age	
Chronic condition	

1. Do you collect your medication at the clinic or at any pick-up point?

Yes ☐

No ☐

If yes, please mention the pick-up point:

2. Are you employed?

Yes ☐

No ☐

B. EXPERIENCES OF ACCESSING CHRONIC CARE SERVICES

I would like to understand your experience as someone who has a chronic condition.

1. Tell me how do you get to the clinic? Which mode of transport if any do you use?

2. How are your experiences in living with chronic condition?

Probes:

- Type of chronic condition, type of condition, type of treatment
- How have you been managing your condition?

3. Think back to the start of COVID 19 pandemic and when we went into lockdown in 2020, how was that for you and your family?

Probes:

- What was it like living with a chronic condition at that time?

Probes:

- How did lockdowns affect your clinic visits (if at all)?

4. How was your experience of taking care of your chronic condition during COVID-19 ?19?

Probes:

- Ways to manage ill health
- Financial constraints

- medication availability

5. Can you tell me what it was like to live in your community as someone who has a chronic condition during the COVID-19 pandemic?

- Interaction with community (support group/friends, church etc.?)

6. How is living with a chronic condition currently? Please explain

Probes:

- Who do you reach out to?
- cope with managing your chronic conditions
- Financial constraints?

C. BARRIERS TO ACCESSING CHRONIC CARE SERVICES

7. Can you share ways on how you managed to visit your health facility during COVID 19 from March 2020 to March 2021?

Probes:

- Any difficulties
- Transport access
- Existing programs such as the CCMD

8. Whenever you visited the clinic, how were your experiences in the health facility during COVID 19 pandemic between March 2020 and March 2021?

Probes:

- Waiting times
- Availability of nurses
- Queues
- Having to return on another day
- Opinion on services at local clinic if you went there

- Quality of services

9. Was there ever a time when you had a medical condition which you did not go to the clinic for during that period? If so, please explain the reason you did not go?

Probes:

- Stigma
- Beliefs (cultural/religious)
- Level of autonomy to choose to seek care
- Level of knowledge about health care options

10. Please explain how you received your chronic medication during the COVID-19 pandemic between March 2020 and March 2021?

Probes:

- What were available platforms or processes, if any?
- Any communication with regard to medicine collection during the COVID 19 pandemic lockdowns from the clinic or CCMD pick up points,

D. ENABLERS TO ACCESSING CHRONIC CARE

11. Please describe the ways that assisted you to cope with managing your chronic conditions during the pandemic

Probes:

- Family
- Community
- Support groups
- Finances
- Information

12. What changes would you have wanted to see at the clinic towards people with chronic conditions during the pandemic, if any?

Thank you for your time

APPENDIX D: CONSENT FORM FOR IN-DEPTH INTERVIEW

Title of study: Exploring patients' experiences with accessing chronic care services during the COVID 19 pandemic in Ekurhuleni district, Gauteng Province.

CONSENT FORM (for in-depth interview)

I have read the participant information sheet, and the researcher has explained the study to me prior to the interview. The study is about exploring patients' experiences in accessing chronic care services during COVID 19 pandemic in Ekurhuleni sub-district.

I understand that the researcher will be asking me questions related to the topic mentioned. I am aware that my responses will be written in a report which will be read in the future by those that are involved in the work of chronic care, such as PHC nurses, those in the Department of Health, patients who seek chronic care services and other agencies. My responses may be used as part of a publication or report that documents the experiences of chronic care services. The information gathered will not be used for commercial purposes.

I understand that the researcher/s involved in this study will make every effort to ensure confidentiality and that my name will not be used in the study reports, and that comments that I make will not be reported back to anybody else. I understand that participation in the study is voluntary and I can withdraw at any stage. There will be no negative consequences if I decide not to participate or withdraw. I also understand that I do not have to answer any questions that I am not comfortable with and I can stop the interview at any time. I have also been made aware that some questions in the interview may cause unintended stress.

□ **Yes (***please tick)* **I agree to be interviewed**

□ **No** *(please tick)* **I do not agree to be interviewed**

Signature: **Date**

Participant Name: **Time:**

(please print name)

I certify that S/he understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily

Signature: _____ **Date** _____

Designee/investigator's _____ **Time:** _____

(please print name)

APPENDIX E: CONSENT FORM (FOR AUDIO-RECORDING)

Title of study: Exploring patients' experiences with accessing chronic care services during the COVID 19 pandemic in a peri-urban area: Ekurhuleni district, Gauteng Province

CONSENT FORM (to be audio-recorded)

I have read the participant information sheet, and the researcher has explained the study to me prior to the interview. The study is about exploring patients' experiences in accessing chronic care services during COVID-19 pandemic in Ekurhuleni sub-district. I am consenting to be audio recorded in the in-depth interviews.

I understand that the researcher will be asking me questions related to the topic mentioned. I am aware that my responses will be written in a report which will be read in the future by those that are involved in the work of Chronic care, such as PHC nurses, those in the Department of Health, patients who seek chronic care services and other agencies. My responses may be used as part of a publication or report that documents the experiences of chronic care services. The information gathered will not be used for commercial purposes.

I understand that the interview will be audio-recorded, and the audio will be destroyed two years after the interview. The audio recording will only be accessed by the researcher and her supervisor. I am aware that the information gathered will be written in a report which will be read in the future by those that are involved in the work of Chronic care health services.

I understand that the researcher/s involved in this study will make every effort to ensure confidentiality and that my name will not be used in the study reports. I understand that the audio recording will be heard by the researcher and her supervisors. I understand that the participation in the study is voluntary and I can withdraw at any stage. There will be no negative consequences if I decide not to participate or withdraw. I also understand that I do not have to answer any questions that I am not comfortable with and I can stop the audio recording at any time. I understand that I can change my mind at any stage, and it will not affect me in any way. I have also been made aware that some questions in the interview may cause unintended stress.

□ Yes, *please tick* I agree to be audio recorded during the interview

□ No *please tick* I do not agree to be tape recorded during the interview

Signature: _____ Date: _____

Time: _____

I certify that S/he understood the nature and the purpose of the study and consented to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily

Signature: _____ Date: _____

Designee/investigator's name: _____ Time: _____ *(please print name)*

APPENDIX F: INFORMATION SHEET

Title of the study: Exploring patients' experiences in accessing chronic care services during the COVID-19 pandemic in a peri-urban area, Ekurhuleni district in Gauteng Province, between March 2020 and March 2021.

Good day. Thank you for giving me some of your time to listen to me. My name is Mmakabea Moloi. I am a Master of Public Health Student at the University of the Witwatersrand. I invite you to please participate in this study.

What is this research about?

I am conducting a study to explore patients' experiences when accessing chronic care services at the health facility during the COVID-19 pandemic between March 2020 and March 2021. Considering your experiences chronic care services in this clinic, I have approached you because I feel that you have the relevant information regarding these experiences.

If you agree, the interview discussion will be audio-recorded to ensure that the information that I write later accurately represents your views. No one will be identified by name on the audio recording.

Consent

Permission to carry out this project has been obtained from the Provincial Department of Health (Gauteng). Ethical approval for this study has been obtained from the University of the Witwatersrand Ethics Committee for Research on Human Subjects (Medical).

Will there be any harm from participating?

There is a likelihood that there will be some level of risk to you as a participant, it is likely that you may experience some distress during the interview. In the event of any discomfort that might be triggered due to some of the questions, the researcher will refer participants to an available clinical psychologist in the clinic from Ekurhuleni health district to provide free, appropriate support or psychological counselling services. Contact details are as follows: 0113851983-Phola Park clinic Thokoza Ext 5

During the interview you have the right to decline to answer any of the questions or stop the interview at any time. The fact that you have done this will not be reported to anybody, will not be recorded in the research report and will not have any negative consequences for you.

The Interview

The interview will take about 45 to 60 minutes each. It will be carried out in English unless you would prefer it to be in your own language. The interview will be carried out at a time and place that is convenient for you.

Voluntary Participation

As part of this study, I would like to invite you to take part in an interview and I will be using a questionnaire as a guide. Your participation is completely voluntary, and you may withdraw at any time or refrain from answering any question without any consequences.

Confidentiality

The information from the interviews will be used for research purposes. Anonymity will be protected by assigning codes to participants and data presentation will avoid specific individuals or groups of staff being identified. The knowledge gained from this research will be disseminated in summary form, without revealing the identities of the participants. I will therefore not disclose participants' identities or use names in any reports of this research. Audio recordings will be kept on a secure computer server or external drive, and participant codes will be kept in a locked filing cabinet under the care of the researcher, for the duration of the data collection and analysis and will be destroyed once analysis is complete. The data collected from this research project will be stored in computer file under a secure encrypted password to ensure confidentiality and will be kept for at least five years, thereafter information will be destroyed. No one other than myself and the study supervisor will be allowed to see the records of the interviews.

Anonymized data will be digitized and stored in the researcher's data archive for at least two years after publication of the findings and for six years if there is no publication.

Permission for audio recording of the interviews

To make the interview easier for us, I will also ask if I can audio record the interview. If you do not want the interview to be audio recorded, I will write your responses manually. If you give me permission to audio record the interview I will listen to the recording and write down everything. Your name will not be recorded to ensure confidentiality. I will keep the audio recordings under lock and key for two years, after which they will be destroyed.

Approval of and benefits of this work

There will be no personal costs to you if you participate in this project. You will not receive any direct benefits from participation however, there are indirect benefits in that the study will contribute new ideas and insights regarding how to ensure that people with chronic conditions are able to access the chronic care services they need without any difficulties. There are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. The study has been approved by the ethics committee of University of the Witwatersrand, and the Provincial Department of Health (Gauteng).

What if I have any questions?

If you have any questions during or afterwards about this research, feel free to contact the researchers by using the details below:

Mmakabea Moloi; Email adressaddress: 2374582@students.wits.ac.za Mobile number: 0781593364

Drs Nonhlanhla Nxumalo and Dr Olukemi Babalola (Supervisors): Nonhlanhla.Nxumalo@wits.ac.za , 011 717 3432; olukemi.babalola1@wits.ac.za , 011 717 3426

Contact details of Human Research Ethics Committee (Medical) (HREC) Administrator and Chair:

Please also find the contact details of the Human Research Ethics Committee (Medical) which oversees the ethical aspects of this study so that you may direct any queries and/ or complaints regarding research participation:

1. HREC Chair contact details:

   i. Professor Clement Penny
   ii. Telephone: +11-717-2301
   iii. Email: clement.penny@wits.ac.za

2. Administrative Officers' contact details:

   i. Ms Zanele Ndlovu/Mr Rhulani Mkasi/Ms Lebo Moeng
   ii. Telephone: +11-717-2700/2656/1234/1252

APPENDIX G: EKURHULENI HEALTH DISTRICT PERMISSION LETTER

City of Ekurhuleni

GAUTENG PROVINCE
REPUBLIC OF SOUTH AFRICA

EKURHULENI HEALTH DISTRICT RESEARCH PERMISSION

Research Project Title: Exploring patients' experiences in accessing chronic care services during the COVID-19 pandemic in Ekurhuleni district, Gauteng Province

NHRD No: GP_202307_087

Research Project Number: 02/08/2023/01

Name of Researcher(s): Ms Felicity Moloi

Division/Institution/Company: University of Witwatersrand

Date of review by the EHDRC: 16/08/2023

DECISION TAKEN BY THE EKURHULENI HEALTH DISTRICT RESEARCH COMMITTEE (EHDRC)

- This document certifies that the above research project has been reviewed by the EHDRC and permission is granted for the researcher(s) to commence with the intended research project.
- Facilities approved for the research: Phola park CHC
- Participants' rights and confidentiality must be maintained throughout the study period and when disseminating the findings.
- No resources (financial, material, and human resources) from the health facilities will be used for the study. Neither the district nor the health facilities will incur any additional cost for the study.
- The study will comply with Publicly Financed Research and Development Act 2008 (Act 51 of 2008) and its related regulations.

Title: Exploring patients' experiences in accessing chronic care services during the COVID-19 pandemic in Ekurhuleni district, Gauteng Province

- The EHDRC must be informed in writing before publication or presentation of research findings and a copy of the report/publications/presentation must be submitted to the EHDRC
- The district must be acknowledged in all the reports/publications generated from the research.
- The researcher will be expected to provide the EHDRC with
  - Six monthly progress updates including any adverse events
  - The final study report in electronic format
  - Present the final research findings at the annual Ekurhuleni research conference if possible.
- The EDHRC reserves the right to withdraw the approval, if any of the conditions mentioned above have being breached
- The research committee wishes the researcher(s) the best of success.

Thembani Masina

DEPUTY CHAIRPERSON: CITY OF EKURHULENI

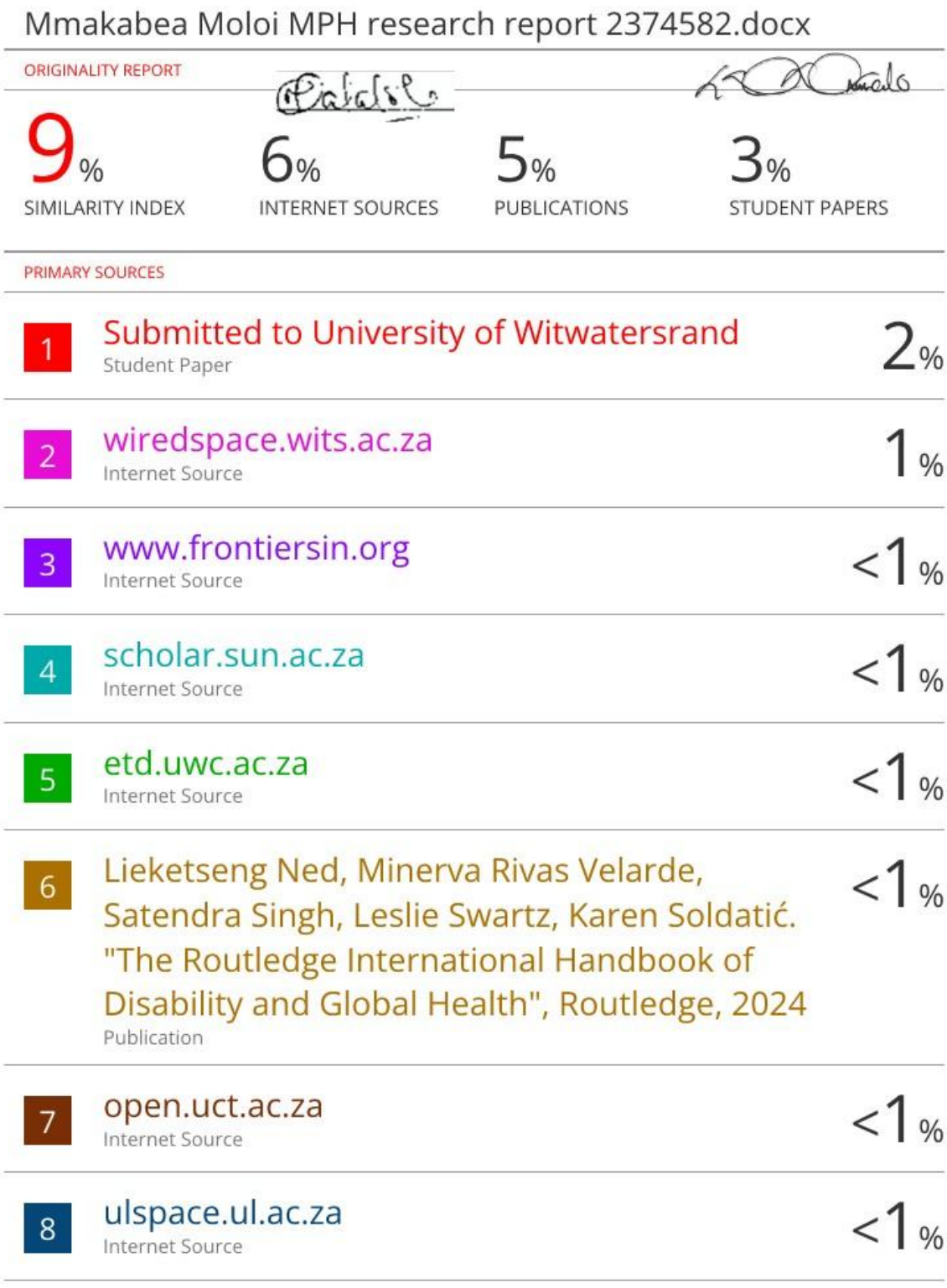
Dated: 10/08/2023

pp

CHAIRPERSON: GAUTENG DEPARTMENT OF HEALTH (EKURHULENI HEALTH DISTRICT)

Dated: 10/08/2023

APPENDIX H: TURNITIN REPORT



Mmakabea Moloi MPH research report 2374582.docx

ORIGINALITY REPORT

9%	6%	5%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of Witwatersrand Student Paper	2%
2	wiredspace.wits.ac.za Internet Source	1%
3	www.frontiersin.org Internet Source	<1%
4	scholar.sun.ac.za Internet Source	<1%
5	etd.uwc.ac.za Internet Source	<1%
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