

**EXPLORING PHARMACISTS' VIEWS AND PERCEPTIONS IN
STRENGTHENING HIV PREVENTION AND MANAGEMENT SERVICES WITHIN
COMMUNITY PHARMACIES IN CAPE TOWN, SOUTH AFRICA**

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KEYWORDS:

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Access



ABSTRACT:

Background: Increased access to antiretroviral therapy has proven to decrease HIV-related deaths and increase life expectancy. Pharmacists have been identified as one of the fundamental healthcare professionals that need to be mobilised and involved in HIV/AIDS prevention, care and treatment. The pharmacist role is still mainly embedded in dispensing of antiretroviral therapy, meaning that pharmacists are not sufficiently involved in managing HIV/AIDS in South Africa. The scope of practice of a pharmacist in South Africa to allow pharmacist initiated therapy (PIMART), was published in August 2021. Although the updated scope was published and would now allow pharmacist, who completed the supplementary course to initiate 1st line Antiretrovirals, PREP, PEP and initiation of Tuberculosis (TB) Preventative Therapy (TPT) in line with National Department of Health guidelines and the adjustment of these, pharmacist who completed the course are unable to offer these services due to the Section 22(A) 15 of the Medicines and Related Substances Act permit process being on hold.

Aim: This study aims to explore pharmacists' views and perceptions on strengthening HIV prevention and management services within Community Pharmacies in Cape Town, in the Western Cape Province.

Methods: A qualitative exploratory study design was used. Semi-structured interviews were conducted with 12 pharmacists, which included two key informants. The pharmacists interviewed worked for either chain or independent pharmacies. A purposive sampling method was utilised to identify people who will provide rich information on the topic. Coding was conducted manually by the researcher. Informed consent was obtained from all participants and confidentiality was maintained throughout the study. All COVID-19 protocols implemented by the South African government such as mask-wearing, sanitizing and social distancing were enforced and adhered to during the interview process. Where interviews could not be conducted face to face, online platforms or telephonic interviews were conducted. The researcher complied with the Protection of Personal Information Act (POPIA) throughout the collection and processing of personal information.

Results: The themes identified in this study were willingness to strengthen HIV prevention and

management services in community pharmacies, ease of access to pharmacists by the community, barriers which would impede the strengthening of HIV prevention and management services and opportunities that would promote and enhance these services in community pharmacies. These themes give an overall view of the pharmacist's perceptions regarding the strengthening of HIV prevention and management within their pharmacies. The pharmacists who participated in this study were positive that they were able to strengthen HIV prevention and management services. Their willingness stemmed mainly from their duty as healthcare professionals in reducing the HIV burden and their current involvement in HIV prevention and management services, which in most cases were limited, but there was a willingness to expand these services. Barriers identified during the interviews were a perceived unwillingness of patients to pay a consultation fee for pharmacist-provided HIV prevention and management services, especially people who did not have medical aid and needed to pay out-of-pocket. The pharmacists mentioned opportunities for collaboration with funders, such as the National Department of Health or non-profit organisation, so that HIV prevention and management services are available to all. This would allow people who would ordinarily need to pay out-of-pocket for these kinds of services, outside of a free public health clinic setting, to access it privately.

Conclusion: Community pharmacies are conveniently located and accessible to the community as an appointment-free environment to access healthcare services and advice. It should be noted that the pharmacists who participated in this study acknowledged their role as healthcare providers and were willing to strengthen their HIV prevention and management services within Cape Town.

Recommendations: The National Department of Health should consider the approval of permits that will allow pharmacists to prescribe ARVs. Allowing pharmacists to prescribe ARV's would ensure people have easy access to HIV prevention and management services. Standard processes must be developed and implemented across pharmacies to ensure HIV prevention and management services are rendered in

accordance with pharmacy practice guidelines and adhere to the standard HIV guidelines.




DECLARATION

I declare that this mini-thesis titled “Exploring Pharmacists views and perceptions in strengthening HIV prevention and management services within Community Pharmacies in Cape Town, South Africa is my own work. This work has not been submitted for any degree or examination in any other university, and all sources I have used or quoted have been indicated and acknowledged by complete references.

Full Name: Bronwyn Macauley

Date: 28 July 2022

Signed: 



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To my beautiful daughters Lily-Beth and Ella Jo. I know this journey was not easy for you but I hope that you will one day pursue a career that will be meaningful and make a positive difference in the lives of others.

My husband for your support and for making me laugh on my most serious days.

My parents and in-laws for your continued support during this time. I will always be grateful for all those babysitting days and your patience with me during this process.

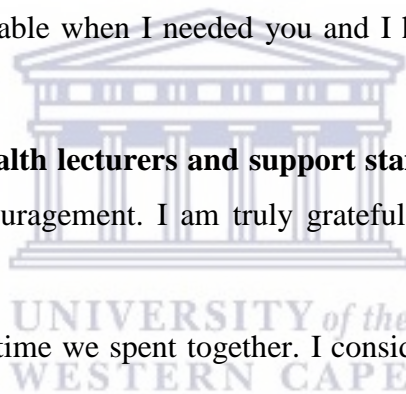
My inner circle of friends and mentors who encouraged me to stay on this path and never give up.

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ABBREVIATIONS:

AIDS	Acquired Immunodeficiency Syndrome
ART	Anti-retroviral therapy
ARV's	Antiretrovirals
CPD	Continuous Professional Development
DOH	Department of Health
GP	General Practitioner
HIV	Human Immunodeficiency Virus
NDoH	National Department of Health
PEP	Post Exposure Prophylaxis
PrEP	Pre-Exposure Prophylaxis
SAPC	South African Pharmacy Council
TB	Tuberculosis
UWC	University of the Western Cape

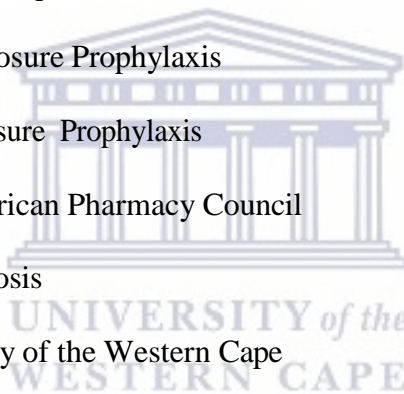


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CHAPTER 1: INTRODUCTION:

1.1 Background of the Public Health System:

HIV continues to be a major public health problem (WHO, 2020). In South Africa, approximately 7.8 million people are living with HIV, this constitutes roughly 13% of the total population (Diego and Munthree, 2020). HIV prevalence varies amongst provinces in South Africa, with the prevalence of HIV in the Western Cape Province being at 12.6% in 2018 (SANAC, 2018). An increase in access to antiretroviral therapy has proven to decrease HIV-related deaths and increase life expectancy (SANAC, 2018).

One of the methods identified by the World Health Organisation (WHO) to strengthen and expand the health workforce for the rapid increase in access to HIV and other health services is task shifting (WHO, 2007). Task shifting is defined as the redistribution of tasks amongst health workers and involves the movement of specific tasks from highly qualified health workers to other health workers with shorter training and fewer qualifications (WHO, 2007). Task shifting would ensure more efficient use of available human resources and recognise the shortage of healthcare workers, especially in sub-Saharan Africa (Callaghan., *et al* 2010, Lehmann *et al.*, 2009 cited in Crowley, 2015). Task Shifting was also identified as a method to meet the demands of initiating and managing more people on Antiretrovirals (ART), and was accepted globally for this purpose (Callaghan., *et al* 2010, Lehmann *et al.*, 2009 cited in Crowley, 2015).

Research has shown that some healthcare professionals might be, or are able to undertake a range of healthcare services (WHO, 2007). Pharmacists were identified as one of the cadres of healthcare professionals that can assist with HIV clinical services which have important implications for reducing the HIV burden of disease (WHO, 2007).

1.1 The role of the community pharmacist:

Pharmacists have been identified as one of the fundamental healthcare professionals that need to be mobilised and involved in HIV/AIDS prevention, care and treatment (Wiedenmayer, 2006). The pharmacist's knowledge and accessibility in nearly all community settings can be leveraged to expand HIV/AIDS services (Farmer, 2019). According to WHO, the knowledge, attitudes and behaviour of pharmacists influence how they provide HIV-related services such as care, treatment and prevention (Wiedenmayer, 2006). It would therefore be beneficial to understand the views and perceptions of community pharmacists towards strengthening HIV prevention, management and care.

1.2: Community Pharmacies offering healthcare services to reduce HIV burden:

Community pharmacies, also known as retail pharmacies, are regarded as “the most common sources of healthcare services throughout the world” (Malangu, 2014:226). Pharmacies are considered less stigmatised, when compared to visiting an HIV testing site, as visiting a pharmacy is considered socially innocuous compared to traditional settings where HIV testing and related services are offered (Weidle, 2014).

Retail Pharmacies boast convenience and short waiting times and therefore attract not only those who can afford private healthcare but also the remainder of the population (i.e. 80% of the population usually access free public healthcare) (Ward *et al.*, 2014). In South Africa, community pharmacies provide a full range of both medicine prescription and non- prescription related services and are either privately owned or form part of a pharmacy chain that predominately serves those insured through private medical aid schemes or who can afford out of pocket spend on medication or service (Gray, Riddin and Jugathpal, 2016).

A community pharmacy is often an appointment-free environment and that coupled with easy access and essentially being free from HIV-related stigma, makes it a setting of incredible

untapped potential for HIV prevention services (Myers *et al.*, 2019). Two-thirds of all pharmacies, both public and private, in South Africa that are registered with the South African Pharmacy Council are community pharmacies (Ward *et al.*, 2014). The Western Cape has approximately 490 community pharmacies (SAPC, 2021), thus providing an additional venue for people to engage with healthcare professionals on HIV.

1.3 Pharmacists initiated Management of Antiretroviral therapy (PIMART):

The scope of practice for pharmacists to provide pharmacist-initiated antiretroviral therapy, in South Africa, was published by the South African Pharmacy Council in August 2021 (SAPC, 2021). Pharmacists would, as part of their scope of practice and on successful completion of the PIMART supplementary training, be allowed to perform consultations in an approved healthcare setting or pharmacy (SAPC, 2021). These consultations would include the initiation of anti-retroviral treatment limited to Pre-Exposure Prophylaxis (PrEP), Post-Exposure Prophylaxis (PEP), first-line Antiretroviral therapy (ART) and initiation of Tuberculosis (TB) Preventative Therapy (TPT) in line with National Department of Health guidelines and the adjustment of these, where necessary if prescribed to a patient previously (SAPC, 2021). Previously the scope of practice of pharmacists did not allow for the initiation of first-line ART, PEP, PrEP and TB preventative treatment or the adjustment thereof. The community pharmacist was restricted to only the dispensing of these medications when presented with a prescription from a doctor or nurse. Currently, pharmacists would need to refer a patient who tests positive for HIV or require preventative medication in the form of PrEP to a doctor or nurse who can prescribe the medication (Tomlinson; 2021).

Although allowance was made through the pharmacy act for pharmacists to prescribe first-line ART, PEP, PrEP and TB preventative treatment or the adjustment thereof, a permit must be granted under Section 22(A) 15 of the Medicines and Related Substances Act. The granting of the permit is currently on hold (Tomlinson; 2021). As an interim measure, the HIV Clinicians

Society has doctors available, at no cost to the pharmacist or patients, via virtual platforms where PIMART qualified pharmacists can be involved in the prescribing of ART, PEP, PrEP and TB preventative while the permit process is on hold (Tomlinson; 2021).

1.5 Problem Statement:

HIV is a major public health issue. When one considers the burden of this disease globally and closer to home in South Africa, we must recognise that healthcare providers, and especially community pharmacists, need to be mobilised to combat HIV. Through understanding the views and perceptions of community pharmacists in strengthening HIV prevention, management and care, their skills could be leveraged to bolster HIV prevention and management services in South Africa.

The literature review will now provide more information on the necessity to explore opportunities to strengthen HIV prevention and management services in community pharmacies.



CHAPTER 2: LITERATURE REVIEW

2.1. Increasing access to HIV prevention and management services:

In South Africa, HIV services mainly rely on the public sector (Georgeu *et al.*, 2012; Bachmann & Booysen, 2003). Due to the shortage of physicians in low and middle-income countries, non-physicians were identified as healthcare providers for Antiretroviral (ART) programmes (Georgeu *et al.*, 2012). Nurses were identified to provide Nurse Initiated Management of Antiretroviral (NIMART) for enhanced access to treatment for people living with HIV (Georgeu *et al.*, 2012; Mboweni & Makhado., 2019; Crowley, T., Mokoka & Geyer., 2021). A qualitative study conducted by (Georgeu *et al.*, 2012) utilised various methods of interviews and observations and found that NIMART was highly acceptable amongst nurses, patients and physicians (Georgeu *et al.*, 2012). Nurses' confidence in providing NIMART however developed slowly and required a phased and well-supported approach which required further training (Georgeu *et al.*, 2012). The limitation of the above study is that it was only conducted within one province in South Africa and therefore the results cannot be generalised, however, the changes in tasks by nurses to provide ART programmes can be applied to other non-physicians to scale up ART provision (Georgeu *et al.*, 2012). The number of patients initiated on ART as result of NIMART has increased, although there is a need to assess the quality of care (Mboweni & Makhado., 2019). It is however important to note that the motive for introducing NIMART was to upscale nurses for the improvement of HIV programmes and increase access to HIV services (Mboweni & Makhado., 2019).

2.1.1 Task shifting to improve access to HIV management and prevention services:

Shifting tasks from doctors to nurses will increase access to HIV management and prevention services. In response to a large number of people living with HIV and requiring treatment in South Africa, the South African National Department of Health rolled out nurse-initiated management of ART, known as NIMART. (Crowley, Mokoka and Geyer, 2021). Nurse-

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initiated management of ART is recognised as a method of task shifting, which is the movement of specific tasks from highly qualified health workers to other health workers with shorter training and fewer qualifications (WHO, 2007). Task shifting comes with the benefits of improved health outcomes, improved quality of care, patient satisfaction and the additional benefit of decentralisation of health services (Kredo *et al.*, 2014. Emdin, Chong & Millson, 2014. Kredo T *et al.*, 2013 cited in Crowley, Mokoka and Geyer, 2021). Since the implementation of NIMART in 2010, there have been various enablers and barriers to its implementation. A non-systematic narrative synthesis of previously published literature was utilised as a method to provide evidence as a broad perspective of NIMART since implementation (Crowley, Mokoka and Geyer, 2021). Key enablers of NIMART implementation were training and mentorship, the provision of guidelines on HIV and TB Management, integration of services and monitoring and support (Crowley, Mokoka and Geyer, 2021). Training and support constructed confidence in nurses and health service restructuring (Crowley, Mokoka and Geyer, 2021). Nurses were required to undergo extensive training and only after successful completion would be certified to initiate NIMART (Crowley, Mokoka and Geyer, 2021). Impulsiveness and not allocating enough time for building capacity such as mentoring and system restructuring was identified as barriers to NIMART (Crowley, Mokoka and Geyer, 2021). The lack of standardised training and inadequate monitoring, restraints in human resources, health system challenges, lack of support and empowerment, policy, legislative and guidelines challenges as well as patient- related factors were also identified as barriers in the review of NIMART (Crowley, Mokoka and Geyer, 2021). Key role players in the National Department of Health (NDOH), the South African Nursing Council, training providers and researchers need to work together to provide standard training and evidence-based guidelines for enablers that exist and to overcome barriers (Crowley, Mokoka and Geyer, 2021).

2.3 Provision of HIV-related services by Pharmacists:

There are examples in the literature which demonstrate that pharmacists are well-placed to deliver HIV prevention and management services (Crawford *et al.*, 2019; Gilbert, 2016; Farmer, 2019; Wiedenmayer, 2006). In the case of South Africa, a study conducted by Gilbert (2016) revealed that the pharmacist's role in providing HIV/AIDS services was still deeply embedded in the dispensing of medication from a doctor's prescription, which forms part of the historical role of the pharmacist. Pharmacists are considered underutilized in providing HIV care and services (Ajagu *et al.*, 2017). A study conducted by Gilbert (2016), which utilised documentary analysis as well as telephonic interviews comparing responses from 2004 and 2010, it was found that more pharmacists were performing HIV testing, thereby expanding their involvement in HIV/AIDS services (Gilbert, 2016). However, the pharmacists in this study stated that counselling patients were time-consuming and they felt that government should provide nurses to provide these services in pharmacies (Gilbert, 2016). The results of this study cannot be generalised as it was only conducted in Johannesburg, however, the researcher proposes that it is safe to deduce that community pharmacists in South Africa were not contributing substantially to alleviating the shortage of health workers required for the management of ART (Gilbert, 2016). Gilbert (2016) concludes that pharmacists have not taken up the challenge and remain on the margins of those professionals managing HIV/AIDS in South Africa (Gilbert, 2016). A similar study conducted in Nigeria found that very few registered community pharmacists who were part of their study was involved in management of HIV patients, and the author concluded that it could be improved with regular updates and training of community pharmacists (Mgbahurike *et al.*, 2021). Although progress has been made, and the role of the pharmacist has expanded beyond only dispensing ARV's the progress has been slow (Crawford *et al.*, 2021).

2.4 Community Pharmacists' role in the COVID-19 Pandemic:

The accessibility of pharmacists as frontline health workers were recognised during the COVID-19 pandemic (Elbeddini *et al.*, 2020; Cadogan & Hughes, 2021; Hedima *et al.*, 2021). Pharmacists were able to provide patient care directly to patients amidst restrictions which were imposed due to the pandemic (Elbeddini *et al.*, 2020 Hedima *et al.*, 2021). This proved especially beneficial to patients as other healthcare workers were inaccessible and community pharmacists were able to reduce the healthcare burden through patient screening (Elbeddini *et al.*, 2020). Pharmacists also played various support roles in medication delivery, patient education on telehealth, patient consultation and other services required during the pandemic (Elbeddini *et al.*, 2020). Pharmacists proved to assist in maximising the healthcare system through patient triaging during a resource-limited period (Elbeddini *et al.*, 2020).

2.5 Attitudes and perceptions of community pharmacists on HIV differentiated care and services:

A cross-sectional survey was conducted with community pharmacists in Nigeria aiming to assess their attitudes and perceptions towards HIV differentiated care and services and showed an overall positive attitude and perception of community pharmacists to provide differentiated HIV care and service (Dapar *et al.*, 2019). The community pharmacists chosen for the study were taken from the list of registered community pharmacists in Jos metropolis in Nigeria from the Plateau State office of the pharmacists' council (Dapar *et al.*, 2019). The researchers distributed 110 questionnaires to 97 pharmacies for self-completion for all pharmacists who worked on the premises and this included the owners, part-time pharmacists and superintendents (Dapar *et al.*, 2019). Four sections needed to be answered and related to the demographic characteristics of the respondents, the competencies in HIV care and services, their views and attitudes regarding HIV differentiated care and services and their knowledge of HIV Pharmacotherapy (Dapar *et al.*, 2019). This study identified two major constructs which were

perceived benefits and perceived suitability as defining pharmacists' attitudes and perceptions in implementing differentiated care (Dapar *et al.*, 2019). The researcher declares the results of this study will catalyze HIV/AIDS policymaking in Nigeria. (Dapar *et al.*, 2019). A descriptive cross sectional survey was conducted in the South-East of Nigeria was used to assess the readiness and willingness of community pharmacists to expand their HIV care services (Ajagu *et al.*, 2017). Ajagu *et al* (2017), concluded that community pharmacists in their study displayed a high willingness and readiness to be involved in HIV care services.



CHAPTER 3: METHODOLOGY:

3.1 Introduction:

This study aims to explore pharmacists' views and perceptions on strengthening HIV prevention and management services within Community Pharmacies in Cape Town, in the Western Cape Province. These services are targeted to those at risk of acquiring HIV and for those People Living with HIV (PLWH) accessing HIV prevention and management services in Cape Town.

The information obtained from this study can provide insights into the views and perceptions of pharmacists to enhance HIV prevention and management services and their perceived barriers in their current HIV- related service offerings, and new, expected barriers if current HIV-related service offerings were expanded. This study can provide recommendations to further maximize community pharmacists' input in HIV prevention and management services.

The objectives of the study are among pharmacists working in community pharmacies in Cape Town, Western Cape, South Africa:

1. To explore community pharmacists' views and perceptions, in terms of their role and willingness (or not), to provide and strengthen HIV prevention and management services
2. To understand community pharmacists' current contribution to providing HIV prevention and management services; and
3. To explore barriers and facilitators that influence community pharmacists' decisions to enhance HIV prevention and management services, or not.

3.2 Study Design:

A qualitative exploratory study was conducted. A qualitative approach would provide insights

into the perspective of those experiencing the phenomenon (Mack *et al.*, 2005). An exploratory approach was used because the researcher sought to gather information about a phenomenon where little is known in the local setting (Robson & McCartan, 2016).

Data was collected using in-depth interviews. This type of interview style was chosen as it is well-suited to provide data (and provide descriptions) on pharmacists views, perceptions and experiences with HIV prevention and management services, including complex service-related and workload issues (SOPH, 2021; DeJonckheere and Vaughn, 2019).

3.2 Study Setting:

The study was conducted in Cape Town, situated in the Western Cape Province in South Africa. The population of the Western Cape is estimated at 6.8 million people (StatsSA, 2019). The HIV prevalence in the Western Cape is 450 000 (in 2018) and the incidence is approximately 4.7/1000 amongst those aged 15-49 (Davies *et al.*, 2019). Even though, the incidence of HIV in the Western Cape is the lowest amongst all the provinces, the rate of decline has been slower (Davies *et al.*, 2019).

The Western Cape has the second-highest number of community pharmacies registered in South Africa, with approximately 490 community pharmacies registered in the Western Cape (SAPC, 2021). This study was conducted in ten community pharmacies in Cape Town and with two key informants who also reside in Cape Town.

Choosing pharmacies in Cape Town has several advantages. Firstly, the researcher is based in Cape Town and works for a pharmacy retailer. Secondly, the high number of pharmacies in Cape Town makes it easier for the researcher to screen across various pharmacies for pharmacists who meet the eligibility criteria for purposive sampling.

Thirdly, HIV incidence is declining at a slower rate in the Province (Davies *et al.*, 2019) than previously, so this study can provide a basis for future intervention studies involving community pharmacists in HIV prevention and management services, and ultimately contribute to efforts to

decrease HIV incidence in the province.

3.3 Study population and Sampling:

The study population consisted of community pharmacists in Cape Town possessing the following inclusion criteria: proficiency in English and permanently employed in a community pharmacy for a period not less than two years. They must have completed Continuous Professional Development (CPD) activities related to HIV in the past 24 months. Community pharmacists in the City of Cape Town who were excluded from the study population were those who are not comfortable with the English language. Although translation services exist, there is no budget to employ a research assistant or translator to conduct interviews in a language other than English. Additionally, locum pharmacists, pharmacy assistants or those employed on a contractual basis, were excluded from the study as they may not be familiar with the daily pressures and workload of the permanent pharmacist employed in the pharmacy. Purposive sampling was used to select participants for this study. Purposive sampling is widely used in qualitative research for the identification and selection of information-rich cases related to the area of interest (Palinkas *et al.*, 2015).

The researcher obtained a list of all community pharmacies within the City of Cape Town from the South African Pharmacy Council by purchasing the register online, namely the list of pharmacies per row or line.

The researcher interviewed 12 pharmacists, two of which are senior managers for different pharmacy groups nationally, which ensured data sufficiency and data saturation. The key informants were purposively selected due to their extensive experience in managing multiple pharmacies across the City of Cape Town. Both key informants hold an advisory capacity with regards to pharmaceutical services provided within community pharmacies within their respective organisations as a result of their years of experience and understanding of the tasks that community pharmacists need to fulfil daily.

3.4 Data collection:

Individual face-to-face in-depth interviews were conducted, and where interviews could not be conducted face to face, virtual interviews were conducted. Six of the twelve interviews were face to face, four were via Zoom and two were telephonic. Individual in-depth interviews were preferred as the participants would be asked about their perceptions and views which may result in sensitive information being shared about the participants work environment and patient interactions. In-depth interviews is a technique often utilised in qualitative research consisting of penetrative individual interviews with a small number of participants, allowing the researcher to explore the participant's perspectives on a particular phenomenon (Boyce and Neale, 2006).

3.4.1 The Interview process:

The researcher contacted all pharmacists identified for the study via e-mail. The email sent to the pharmacies explained the purpose of the study and requested an interview at a date and time that was convenient to them. Once the participant agreed to be interviewed, the researcher confirmed the date and time and requested a suitable room or area where the interview could take place. The researcher also sent a reminder e-mail to the interviewee 2 days before the interview. On the day of the interview, the researcher met with the participant at the agreed location. In cases where face-to-face interviews were not possible the researcher provided log-in details for Zoom, a video meeting platform, or called the participant on an agreed telephone number for a telephonic interview. All participants agreed to their interviews being recorded. The interviews were recorded on the researcher's cellphone which is password protected and the password is only known to the researcher.

On the day of the interview, if the participant did not email the consent form to the researcher prior to the interview, the researcher would obtain written consent from the participant and

would allow the participant to ask questions regarding the interview. The participants were reassured of their anonymity before commencing with the interview. The researcher informed participants that the interview would take a maximum of one hour, however, the average time for interviews was 45 minutes.

The researcher used an interview guide to assist in guiding the conversation and to not lose sight of the purpose of the interview, however, the semi-structured nature of the interviews, also allowed for probing as the conversation unfolded (Appendix 1).

3.4.2 Data Analysis of interview materials:

The data analysis approach used in this research was thematic coding analysis. The information captured through audio recordings was listened to by the researcher and transcribed verbatim. The researcher went through each interview and highlighted relevant information (Braun and Clarke, 2006). Shorthand codes were assigned to the highlighted texts and texts that related to each other were highlighted in the same colour (Braun and Clarke, 2006). Different phrases were highlighted in different colours as they were identified. As new codes emerged they were assigned a colour based on how they relate to each other. The researcher then reviewed the codes created and identified patterns which then resulted in the development of themes. The themes were reviewed to ensure that they accurately represent the data (Braun and Clarke, 2006). Reviewing the themes is an important step to ensure the themes are clear and differences between them can be identified (Patton, 1990 cited in SOPH, 2021). The themes were then defined to best possible represent the data.

Thereafter, the researcher interpreted the analysed data and extracted explanations to develop an argument that responds to the research question.

3.5 Rigour:

A rigorous study design was undertaken to ensure that the researcher can demonstrate that the results obtained are valid (SOPH, 2021). In qualitative research, this is achieved through credibility, transferability, dependability and confirmability and ensuring this is implemented throughout all stages of the research (SOPH, 2021). The researcher ensured rigour was maintained through the following measures.

Credibility as a strategy to ensure rigour can be achieved by establishing whether the findings are true through the lens of the participants (Creswell & Miller, 2000). This strategy allowed participants to confirm whether the data collected by the researcher is correct (Lincoln and Guba, 1985). Once the researcher completed the initial analysis of data collection, the researcher selected three participants to share a summary of their data that was analysed to check for participant validation. This was done via email to those participants.

Dependability as a method is described by Lincoln and Guba (1985) as a display of whether the findings of the study are consistent and can be repeated. Dependability can be used to obtain rigour in qualitative research through external audits (Lincoln & Guba, 1985). The researcher asked her supervisor to review the study from a methodological perspective to assess rigour constructed on the quality of dependability.

Conformability as a strategy of rigour is achieved through the use of an audit trail by ensuring a transparent description and record-keeping of the research process and findings throughout the research period (Lincoln & Guba, 1985). The researcher kept a journal throughout the study documenting decisions made during the data collection and analysis process.

3.7: Ethical Considerations:

Research participants who agreed to participate in the study were provided with an information sheet and asked to sign a consent form. The information sheet described the data collection process and how

participant's anonymity would be maintained. Information will be stored and kept safe for 5 years and thereafter destroyed. To protect the identity and the nature of the participants involved in the research, the name of the participants was not used. Only the researcher knows the identity of the participants and instead of using participants names, the researcher used pseudonyms (in the form of numbers) consistently in the transcripts, analysis and reporting to conceal the identity of the participants.



CHAPTER 4: FINDINGS

4.1. Introduction:

This study sought to understand the views and perceptions of community pharmacists as to the strengthening of HIV prevention and management services within the City of Cape Town, for people living with HIV and those who are at risk of contracting HIV. The participants interviewed were located within different suburbs in Cape Town.

Currently, the role of the pharmacist is mainly embedded in the dispensing of medication from a doctor's prescription, which forms part of the historical role of the pharmacist (Gilbert, 2016).

Pharmacists possess a range of skills through their training that will allow them to provide additional services related to HIV prevention and management. Their training includes, but is not limited to physiology and anatomy, pathology and pharmacology and in conjunction with their in-depth knowledge of medicines, their formulations and uses, pharmaceutical care planning, communication and monitoring and evaluation skills (Moodley *et al.*, 2021).

Pharmacists are therefore well-positioned to expand their current service offering (Moodley *et al.*, 2021). Pharmacists are trusted healthcare professionals and provide a less stigmatised environment for HIV prevention and management services (Moodley *et al.*, 2021).

Opportunities exist for pharmacists to become more involved in HIV prevention and management by expanding their current service offerings to include HIV testing and counselling, and with supplementary training and change in regulation could enhance access to pre-exposure prophylaxis and ART (Moodley *et al.*, 2021).

4.2 Description of Participants:

Participants included in this study were pharmacists within the City of Cape Town working within a community pharmacy. Community pharmacies, also known as retail pharmacies, are regarded as “the most common sources of healthcare services throughout the world” (Malangu,

2014:226). These pharmacies are often located within communities but are also found in malls, supermarkets and in the heart of most rural villages and deprived communities (Ibrahim, 2018). A total of 12 pharmacists were interviewed. Ten participants work within a community pharmacy and the remaining two work in head office positions as chief operating officer and general manager of a pharmacy group respectively. A decision was made to include the two pharmacists holding head office positions after a preliminary analysis of the ten interviews, to provide further insight into the topic. The age categories of the participants varied between 25-30 years, 35-40 years, 45-50 years, 55-60 years and 60-65 years old. One pharmacist in the age category 25-30, three pharmacists between 35-40, three between 45-50, three between 55-60 and two participants in the age category between 60-65 years old. There were 4 females and 8 males who participated in this study. Table 1 provides a summary of participant demographics.

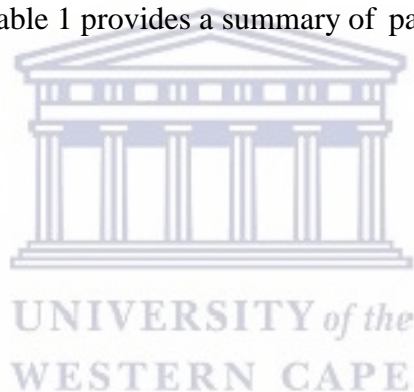
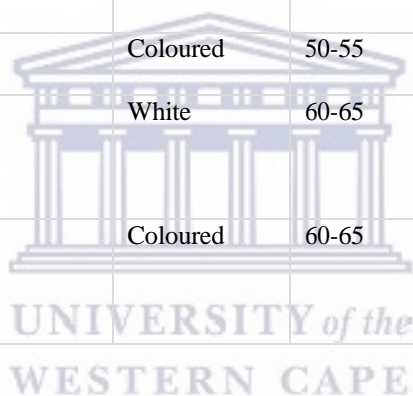


Table 1: Demographics of participants:

Participants	Gender	Ethnicity	The age range of participants	Cape Town Health District
Participant 1	Female	White	35-40	South Peninsula Health District
Participant 2	Male	Black	35-40	Blaauwberg Health District
Participant 3	Male	Coloured	50-55	South Peninsula Health District
Participant 4	Male	Coloured	25-30	South Peninsula Health District
Participant 5	Female	White	40-45	South Peninsula Health District
Participant 6	Male	Coloured	40-45	Central Health District
Participant 7	Female	Coloured	35-40	Northern Health District
Participant 8	Female	Coloured	30-35	Northern Health District
Participant 9	Male	Coloured	45-50	South Peninsula Health District
Participant 10	Male	Coloured	50-55	South Peninsula Health District
Participant 11	Male	White	60-65	Manage pharmacies across all districts
Participant 12	Male	Coloured	60-65	Manage pharmacies across all districts

**4.3. Prominent Themes:**

Prominent themes that emerged from the data collected were; willingness, access, barriers and opportunities. The themes that featured most prominently were willingness and opportunities. The pharmacists reiterated their willingness to enhance the HIV prevention and management services in their pharmacies. They made a point of reminding the researcher that although barriers exist, HIV prevention and management services are essential and that pharmacists need to get more involved. Another prominent theme was opportunities. The pharmacists spent time thinking about how they can remove barriers and possibly discover solutions to strengthen HIV prevention and management services in their current environment. Although staffing came up as a challenge, pharmacists were open to pharmacies employing additional staff to provide new

or extended HIV prevention and management services. The pharmacists went on to explain why they believed the additional staffing expense would be justified by the services rendered and the additional potential revenue that could be generated through the services. Infrastructure and setup were also mentioned in all the interviews, due to the limited space available in community pharmacies. However, community pharmacies often have a clinic and/or private consultation room that is used for counselling. Again, the pharmacists expressed how they would explore solutions in providing a suitable private space if they experienced any challenges in this regard.



Themes and subthemes which emerged during the semi-structured interviews are identified in the table below:

Table 2: Themes and Subthemes Identified during the interview process

Theme	Subtheme
Willingness	<ul style="list-style-type: none"> • Pharmacists acknowledge their role in reducing the HIV burden • Pharmacists' willingness to expand HIV prevention and management services • Pharmacists' current involvement in HIV prevention and management
Access	<ul style="list-style-type: none"> • Pharmacists are considered more accessible than other healthcare providers • Community pharmacies in both urban and rural areas to provide healthcare services
Barriers	<ul style="list-style-type: none"> • Pharmacists unable to prescribe ARVs • Limited time for patient-pharmacist interaction • Remuneration of pharmacists for HIV counselling services
Opportunities	<ul style="list-style-type: none"> • Collaboration opportunities with other healthcare providers • Marketing and campaigns for HIV prevention and management services • Possible funding of HIV prevention and management services for people who do not have medical aid or cannot afford out-of-pocket spending for healthcare services.

4.3.1: Theme: Willingness:

This theme deals with the pharmacists' desire (or lack thereof) to strengthen HIV prevention and management services. As described earlier, the role of the pharmacist has always been deeply embedded in the dispensing of prescriptions. Strengthening these services would require the pharmacist to perform additional duties to their current role.

Pharmacists acknowledge their role in reducing the HIV burden:

All the participants expressed a desire to be more involved in HIV prevention and management services. Although they shared deep concerns, which will be mentioned under the barriers

theme, there was a general notion that as healthcare professionals, pharmacists should be more involved in HIV prevention and management services. Most pharmacists referred to their role as healthcare providers and how it made sense for them to expand and enhance HIV-related services. Participant 6 mentioned that pharmacists are trained to offer health services and it is their undertaking to do so.

P6: “As a pharmacist, you want to offer health services, you want to take care of the population. That is your training that is your undertaking.”

When probed as to why pharmacists would want to provide HIV prevention and management services within a community pharmacy, participant 11 expressed that although motivations may differ from person to person, essentially pharmacists are healthcare professionals and it comes down to caring.

P11: “Motivation differs from person to person, for me it is largely being able to offer a service to people who have limited access to service. For others, there may be a financial incentive, and others are motivated by other reasons. I’m not sure what would motivate them. Just to be able to do something, because we are as pharmacists and healthcare professionals we are caring persons and it’s about caring. And when you are in your pharmacy and you come across a person who needs that level of care and needs that care we want to help that person.”

What motivates participant 1 and contributes to her willingness to strengthen HIV prevention and management services is the ability to counsel patients and reassure them that they could still lead a normal life if they tested positive for HIV.

P1: “A motivating factor would be testing patients and reassuring them it is not a death sentence and that treatment will allow them to live a normal life.”

Pharmacists’ willingness to expand HIV prevention and management services:

Several participants indicated that there are already patients presenting at the pharmacy with risk

factors for HIV transmission. These are the opportunities when pharmacists could intervene and offer HIV testing services and based on the HIV test result, provide further intervention.

Participant 7 said that although community pharmacists are already involved in HIV management services, it would be better suited for a community pharmacist to only focus on prescribing post-exposure prophylaxis and not necessarily on the management of HIV patients. This was brought on by her previous experience when she managed HIV patients in a hospital pharmacy setting.

P7: “Look I think it would be a good thing to actually be more involved. I take it from when I was working as an ARV pharmacist at a hospital pharmacy there was the additional, obviously keeping track of people’s CD4 count and their viral load obviously with their compliance to therapy. So there is a lot of follow-up involved.”

Pharmacists’ current involvement in HIV prevention and management:

Some participants explained how pharmacists are involved in identifying people at risk of contracting HIV. The sale of emergency contraceptives, which is used to prevent unwanted pregnancies after unprotected sexual intercourse, came up in several of the interviews. This interaction with patients was identified as a key opportunity to initiate a conversation regarding HIV screening and prevention.

P8: “It is something we can talk about. The first conversation is with the morning after pill, it would be easy to start the conversation there. It is not easy to start the conversation just anywhere”

Patients presenting with symptoms which could be linked to HIV were also discussed. Pharmacists may not always think about HIV at that moment when patients buy over-the-counter medication and those symptoms which could be related to HIV could be mistaken for any other condition. Participant 5 expressed that HIV is not always at top of her mind when a

patient presents with HIV-related symptoms, and those symptoms could easily be interpreted for another disease state.

P5: *“Thinking about it if someone comes in with a rash or a fungal infection pharmacists easily ask if the patient has diabetes but don’t ask if they have HIV as a contributing factor if the sore is not healing. It is not as front of mind for pharmacists either which can be a barrier because we are not focusing on it as an extenuating circumstance to whatever is going on with the patient. People don’t necessarily volunteer to ask a patient about HIV but naturally assume it could be diabetes.”*

4.3.2: Theme: Access

The theme of access relates to pharmacies being more easily accessible than other healthcare providers. Community pharmacies are located in both urban and rural settings and are located close to where people live and work. Community pharmacies are also an appointment-free setting for people seeking healthcare services.

Pharmacists are considered more accessible than other healthcare providers:

Several pharmacists spoke about the easy access that is provided by a community pharmacy.

P4: *“Pharmacies are easily accessible. People don’t need to take leave to come to a pharmacy. Pharmacists and nurses should do counselling and initiation of ARVs and not refer.”*

All pharmacists raised that community pharmacies are easily accessible. Some participants compared this to limited accessibility to a general practitioner, which, in most cases, works on an appointment system. In some cases, people would need to take leave from work to visit their GP and this is not the case with community pharmacies.

P2: *“Pharmacists will be helpful in providing HIV testing services as they are more accessible than GPs and pharmacists see the patients more regularly than a GP.”*

Community pharmacies in both urban and rural areas to provide healthcare services:

Participant 5 mentioned the aspect of access to medication in rural areas and how the pharmacy may be the only healthcare provider in rural areas providing HIV services. Rural areas are typically seen as areas where there is a lack of access to affordable quality and comprehensive healthcare, with factors that would prohibit access to healthcare services. This drives the notion that there are limited healthcare services available in rural areas and pharmacists located in these areas would be able to provide additional healthcare services to assist the rural communities.

P5: *“People on medical aid have more options for receiving their medication so maybe in rural areas it would make sense for a pharmacist to provide additional HIV services. Where patients can access treatment in a different way. In some areas, the pharmacy may be the only way for people to access healthcare easily.”*

4.3.3 Theme: Barriers

The theme on barriers deals with situations which pharmacists identified as impeding factors which would prohibit them from strengthening HIV prevention and management services within the community pharmacy setting. All participants agreed that there is a willingness to provide additional HIV prevention and management services and the importance thereof for this cadre of healthcare professionals to be more involved.

Pharmacists unable to prescribe ARVs:

Pharmacists cannot prescribe ARVs in their current role and scope of practice. Additional supplementary training and issuing of a permit by the Department of Health would enable pharmacists' limited scope in prescribing ARVs. Although supplementary training exists, the permit process that would allow pharmacists to prescribe ARVs is not available due to objections made by the Unity Forum of Family Practitioners (UFFP) (UFFP, 2021). These

objections were made after the proposed amendments were issued by the South African pharmacy council which would allow pharmacists to prescribe ARV's, if the pharmacists meet certain training requirements (UFFP, 2021). This limits the scope of practice of pharmacists as they are not able to prescribe ARVs to patients even when they identify the need.

P4: *“The nurse does the HIV testing and counselling. It is disheartening that community pharmacies have the resources but if a patient comes in and they know their partner is positive, there is an opportunity for the pharmacist to offer PEP or PrEP. However, they can't. The window period is so small and it needs to be initiated quickly.”*

Limited time for patient-pharmacist interaction:

There was an acknowledgement by the participants that the provision of HIV prevention and management services in community pharmacies is required. However, various factors may hinder the provision of these services by community pharmacists, such as; the time required for the pharmacists to counsel the patient, the current load of pharmacists in performing their daily duties, lack of adequate marketing of HIV-related services and reimbursement for HIV related services rendered.

P6: *“Time is a factor. A proper consultation area is a factor. If there is one and if it is regularly available. You must consider that pharmacy managers' time is heavily competed for whether it's dispensing, sorting out patients, complaints, or overseeing the dispensary. A 15 or 20 minutes away from the dispensary is a very long time. No doubt it is a required service, if it is marketed correctly and taking everything into consideration there will be a major uptake for it. But we must consider who is actually doing it, the time factor involved and considering that it is in a retail environment we must consider compensation for the time involved.*

Remuneration of pharmacists for HIV counselling services:

Charging a consultation fee was prominent in all interviews as a barrier to delivering HIV prevention and management services. Currently, pharmacists provide consultations without charging. A concern raised in providing HIV prevention and management services is the need for private consultations with individual patients, and the time required to provide those consultations. If pharmacists cannot charge a fee for patient consultation the pharmacist may revert to other services that would provide potential revenue generation.

Participant 1 also expressed the fear of losing patients if a pharmacist charged a consultation fee. The participant's view was that patients would not want to pay a consultation fee, but if it was funded by the Department of Health it would allow pharmacists to assist patients who would ordinarily make use of these services in the public sector.

P1: *"If pharmacist charged a consultation fee the pharmacy will lose a lot of patients. Depends on the demographic of the pharmacy where a consultation fee can be charged. Other professions can charge consultation fees. Pharmacy is the only healthcare professional that offers free consultation. If the consultation fee can be subsidised by the DOH then the pharmacist will be able to assist the public sector with HIV prevention and management."*

4.3.4 Theme: Opportunities:

The theme related to opportunities refers to favourable circumstances that would allow pharmacists to offer or expand their current HIV prevention and management services. Pharmacists have always worked together with other healthcare professionals. To achieve effective delivery of primary care healthcare services and optimisation of patient care, Kelly *et al* (2013) propose that the attitudes and barriers in the collaborative work between pharmacists and physicians need to be understood. The pharmacists' interaction with other practitioners is an important consideration and will greatly assist in the success of expanding

the pharmacist's role in HIV prevention and management.

Collaboration opportunities with other healthcare providers:

Several pharmacists said that improved collaboration between doctors and pharmacists will improve the management of patients living with HIV.

Participant 4 expressed that there are opportunities for discussion and agreement with physicians, in the form of the pharmacists applying their knowledge and skills if a patient is not on the correct regimen and the opportunity to change this without an additional prescription from a doctor. Thereby giving pharmacists the freedom to intervene in a manner that benefits the patient and contributes to positive health outcomes.

P4: *"Patient's regimens aren't being updated to the new guidelines and still on old regimens. The pharmacist has the opportunity to intervene and inform patients of fixed-dose combinations esp. for people on old regimens but the patient would want the prescription from the doctor."*

Participant 10 referred to a pharmacist as being a 'cog' in the management of people with HIV, especially during the COVID-19 pandemic when the main focus was on COVID-19 vaccinations and provision of care for these patients. Community pharmacies continued to trade to ensure people have access to all healthcare services including HIV prevention and management. Pharmacists are part of the healthcare team required to work together to manage patients. Some of the participants mentioned that as part of the team managing HIV, the provision of additional services, such as HIV testing, pre and post-test counselling, pathology and the prescribing of medication would allow the pharmacist to manage the patient end-to-end where required. The pharmacist would then not only be involved in the dispensing of ARVs but in each element of the patient journey from testing for HIV and management thereof.

P10: *“In terms of the management of HIV. The volume of information and guidelines, adult, paediatric, perinatal, and others, so much out there and with COVID you need to keep up to date with what is going on. And also because of COVID HIV treatment has fallen behind. We need to be aware of it when we treat HIV. We are part of the cog in managing HIV in a COVID environment. Even with societal reservations about HIV we also need to be careful about how we manage it.”*

Marketing and campaigns of HIV prevention and management services:

When asked about the marketing of HIV prevention and management services, Participant 12 expressed the requirement for careful collaboration with general practitioners (GPs) within the communities where pharmacists work. Careful consideration relates to pharmacists and other healthcare professionals caring for the patient within their scope of practice and understanding the expertise of each of these healthcare professionals. This is especially where there is a doctor and a pharmacist within the same community, providing similar services.

The perception of participant 12 is that community pharmacists depend on prescriptions from the GP within their community and fear may exist that the GP would no longer refer patients to the pharmacy if there is not a clear understanding of the role that each one plays in providing healthcare services within that community.

P12: *“It is a bit of a catch 22, pharmacists, depending on where the pharmacy is located, it is a very sensitive issue as doctors are challenging Pimart now, and so you need to tread very carefully in that space as to not alienate yourself from a GP or several GP practices in that will go against the pharmacy, so one must be very careful and have collaboration between the pharmacy and the GP in order to promote the service. The GP shouldn't be threatened because where there is a need there will be a referral to the GP for higher levels of care where needed, where a patient may be failing on 1st line and requiring a second line and the patient goes off to the doctor.”*

Marketing of pharmaceutical services is important so that the community is aware of the services offered by pharmacies and encourages people to purchase products, which could be HIV-related products, and make use of the services offered in the pharmacy. Community pharmacies often market their services through posters in the front of the pharmacy to attract people as they walk by, posters and shelf talkers in the pharmacy to urge people towards products or services as they shop, and marketing in newspapers, social media and community radio stations to draw people to their pharmacies. Larger pharmacy chains market their products and services on television and various online platforms. All participants mentioned that improved marketing of HIV prevention and management services offered in the pharmacy would drive more people to come to the pharmacy. Participant 8 also noted that the marketing of HIV prevention and management services would also remind the pharmacy team to promote these services as it competes with many other services that the pharmacy and clinic offers. With COVID-19 vaccine marketing, they saw the benefit of promoting vaccination services.

P8: *“Marketing would help to drive more people for HIV testing. We have seen other services that are well marketed that the people would ask for those services. The subtle advertising also reminds the pharmacy teams to promote these services. There are 100s of services that the pharmacy and clinic offer and also with vaccines, vaccines went to the forefront.”*

Possible funding of HIV prevention and management services for people who do not have medical aid or cannot afford out-of-pocket spending for healthcare services:

Funding of services for patients without medical aid was mentioned in most of the interviews. The South African healthcare system consists of two tiers where the public sector services the majority of the population, approximately 71% and the private sector, which is mainly funded from individual contributions, medical schemes or health insurance serves around 27% of the population (Lin, 2020). If pharmacists provide these additional services and need to charge a

consultation fee, it may only be accessible to people who have medical aid or can afford to pay out-of-pocket, but it will not be available to people who cannot afford the services.

Several participants mentioned some sort of funding must be available so that HIV prevention and management services can be offered to all patients irrespective of their ability to pay for the service or not.

Participant 1 raised the issue of pharmacists not charging a consultation fee when providing private consultation and offered a solution through the funding of consultation services by the Department of Health (DOH). Community pharmacies often provide services in collaboration with the DOH to decongest public health facilities and provide easier access to services for patients who do not live close to a public sector community health care centre.

P1: "If pharmacist charged a consultation fee the pharmacy will lose a lot of patients. It depends on the demographic of the pharmacy where a consultation fee can be charged. Other professions can charge consultation fees. Pharmacy is the only healthcare profession that offers free consultation. If the consultation fee can be subsidised by the DOH then the pharmacist will be able to assist the public sector for HIV prevention and management."

Several participants mentioned that community pharmacies are easily accessible but often people cannot access services because they cannot pay for them. Accessibility can be enhanced by forming partnerships with the DOH and/or other non-profit organisations, such as international non-profit organisations, who are willing to provide funding for HIV-related services in our country, this would make HIV prevention and management services accessible to everyone, irrespective of whether they can pay for the service or not.

P6: "I believe corporate pharmacy is in an ideal situation to reach mass population because of accessibility. I do believe they are in that position. There is a lot of logistics and understanding to work out. There are possible partnerships that can come on board to help."

It is not only a community pharmacy problem and not only a South African problem, not only an African problem but a whole world problem. And there is international role players who are able to assist in this venture as well.”

4.4 Conclusion:

There was an overall sense of positivity from all pharmacists in this study during the interview process. The themes (willingness, access, barriers and opportunities) give an overall view of the pharmacist's perceptions regarding the strengthening of HIV prevention and management within their pharmacies. The ease of accessibility of pharmacists was mentioned in all the interviews. The day-to-day competing responsibilities of pharmacists; such as dispensing, compounding and direct supervision of staff were identified as barriers but the participants were positive that pharmacists could work around these. Remuneration of services, such as private counselling by the pharmacist, was seen as a barrier to access for people who are not on medical aid or who cannot afford to pay out-of-pocket. Although remuneration can be seen as a barrier, it can also be seen as an enabling factor where pharmacists would be paid to provide counselling services and they could then possibly increase their staffing complement to tend to other duties in the pharmacy and free up the pharmacists for HIV counselling. The pharmacists mentioned opportunities for collaboration with funders, such as DOH or non-profit organisations, so that HIV prevention and management services are available and easily accessible to all.

CHAPTER 5: DISCUSSION:

5.1 Introduction:

The objectives of this study were to explore community pharmacists views and perceptions in terms of; their role and willingness (or not), to provide and strengthen HIV prevention and management services. The study would also explore pharmacists current contribution to providing HIV prevention and management services, and explore barriers and facilitators that influence community pharmacists' decisions to enhance HIV prevention and management services, or not.

The major findings of this study are that pharmacists are willing to strengthen HIV prevention and management services within the City of Cape Town. There is an acknowledgement from participants that as healthcare providers, pharmacists have not been as involved in the prevention and management of HIV in South Africa. The pharmacists interviewed in this study suggest that they can play a greater role as part of the healthcare team but there have been barriers which prohibited them from being more involved and engaged in HIV prevention and management. Barriers that participants mentioned relate to their inability to prescribe due to their scope of practice and their limited time with the patient contrasted with the need to still run a profitable business due to them not being reimbursed for the time spent counselling, but mainly being reimbursed for the dispensing of medication.

Community pharmacies are more easily accessible to people seeking HIV prevention and management services, compared to public sector health facilities, due to the geographical location of community pharmacies in urban and rural areas and in addition community pharmacies often trade for longer hours and over weekends compared to public sector health facilities that are not open over weekends and generally closes earlier than community pharmacies. Community pharmacies are considered appointment-free environments, people

have easy access to pharmacists to receive healthcare advice and services. The convenience factor of pharmacies was mentioned by all participants in their interviews. The participants also provided input on opportunities to overcome identified barriers so that they can be more involved and not only be active in one element of HIV management which is the dispensing and compounding of ARV's. Prospects exist to expand their HIV prevention and management services and create awareness through marketing these services in their communities.

The pharmacists interviewed said that they could expand their role and services in HIV prevention and management. A study conducted by Maja *et al.*, (2018) assessing the perspectives of pharmacists offering HIV testing services in community pharmacies in Lesotho, found that pharmacists were willing to offer HIV testing and counselling services. Maja *et al.*, (2018) found that 87.5% of the pharmacists in their study agreed that HIV testing and counselling should be offered in community pharmacies.

Ease of access to a community pharmacist was a strong enabling factor to encourage patients to utilise community pharmacies for HIV prevention and management services. Our findings were consistent with Myers *et al.*, (2019) which posits ease of accessibility of pharmacists i.e. patients not needing an appointment to see a pharmacist, and the fact that pharmacies are considered largely a HIV stigma-free environment due to not being linked to any specific condition, which makes pharmacies an incredible untapped potential in providing HIV prevention services.

The pharmacists who participated in this study mainly focused on the dispensing of ARVs and had very little involvement in HIV prevention and management services. These pharmacists are keen to expand their service offerings but acknowledged that they were not fully immersed in providing these services. The challenges that they experienced were institutional, such as pharmacists being unable to prescribe ARVs, limited time for patient-pharmacist interaction and not being remunerated for HIV counselling services. Similar

barriers are outlined in a study conducted by Myers *et al.*, (2019). One of the findings from Myers *et al.*, (2019) was a lack of counsellors, whereas in our context the HIV counsellor would be the pharmacist who is already challenged with limited patient-pharmacist interaction.

The findings on the enabling factors present an opportunity for pharmacists to extend their current role in HIV prevention and management. In a previous study conducted by Gilbert (2016), the main findings of that study indicated that pharmacists have not taken up the challenge to be more involved in HIV prevention and management and that they are missing an opportunity to be more involved and play a more meaningful role. Pharmacists indicated that patient counselling is time-consuming and should be ideally conducted by a nurse in a public facility (Gilbert, 2016). The findings from Gilbert (2016) are not found to be consistent with our study, where we found that pharmacists are willing to provide HIV counselling within a community pharmacy setting. The major concern of the pharmacists in our study was that in providing HIV counselling there was the need for pharmacists to be remunerated for the time spent counselling patients. The varying views from the pharmacists in Gilbert (2016) compared to our study could be attributed to the sample of pharmacists used. Gilbert (2016) study utilised a systematic random sampling technique and the pharmacists may not have had a keen interest in HIV, whereas in this study the inclusion criteria were applied which was the completion of HIV-related CPD activities. This inclusion criterion was specifically chosen to ensure we include pharmacists who have an interest in HIV and could understand the complexity and requirements in delivering HIV prevention and management services.

The role of the community pharmacist as a healthcare professional was mentioned as a motivating factor by the pharmacists in this study and can be seen as an enabling factor for the pharmacist to aspire to and enhance their HIV prevention and management services. This view is substantiated in a systematic review conducted by Tseng *et al.*, (2012) stating that

pharmacists, in various settings including community pharmacies, have an integral role to play in patient care and can have a substantial and positive impact on patient outcomes. In addition, the community pharmacist's accessibility to the people in their respective communities would make it easier for pharmacists to provide HIV prevention and management services. The pharmacist's role as a healthcare provider was mentioned as a strong motivator driving their willingness to strengthen HIV prevention and management services, but it also came across strongly as an enabling factor. This is in agreement with the results of a study conducted by Ryder *et al.*, (2013) where the community pharmacists described pharmacy-based HIV testing as accessible, convenient and non-stigmatising and this led to these pharmacists accepting the idea of pharmacy-based HIV testing (Ryder *et al.*, 2013).

An implication for future research could be on the remuneration of HIV services and support structures that would be available from the Department of Health or other non-profit organisation to allow all people, irrespective of their income and ability to pay for services to access community pharmacies for HIV prevention and treatment services.

5.2 Implications for practice:

Legislative and regulatory changes are required to allow pharmacists to prescribe ARVs. The pharmacist's current scope is limited and would result in people being tested and diagnosed with HIV but not being initiated on therapy. In addition, people require easy access to pre-exposure prophylaxis (PrEP) for HIV and allowing pharmacists to prescribe would make this preventative medication more easily accessible. Collaboration between healthcare professionals is required to ensure pharmacists are integrated and acknowledged as part of the team of healthcare professionals who can prescribe ARVs.

5.3 Limitations:

The limitations of this study are due to the exploratory nature thereof and that it only represents

the views of a group of pharmacists in Cape Town. The findings of this research can therefore not be generalised but can provide an understanding of the community pharmacist's experiences. All pharmacies in this study were located within urban areas and this could be a limitation. The pharmacists were chosen based on strict inclusion criteria and this may have limited the number of pharmacists who were able to participate. The benefit of the strict criteria allowed the researcher to interview pharmacists who were already interested in HIV prevention and management services due to their interaction with CPD activities related to HIV. The hold placed on permits for pharmacists who completed the PIMART course did not allow for further investigation into the benefit of pharmacists as prescribers of ARV's, however, the results of this research could be utilised to understand the willingness of pharmacists to be more involved.

5.4 Conclusion:

Community pharmacies are conveniently located and accessible to the community as an appointment-free environment to access healthcare services and advice. This study unearthed the views and perceptions of pharmacists in strengthening their HIV management and prevention services. It should be noted that the pharmacists who participated in this study acknowledge their role as healthcare providers and are willing to strengthen their HIV prevention and management services within their pharmacies in Cape Town.

5.5 Recommendations

The pharmacists in this study shared their views and perceptions on strengthening HIV prevention and management services. These pharmacists expressed a willingness to strengthen their HIV prevention and management services in their pharmacies. There is literature from previous studies that supports task shifting and the involvement of pharmacists in providing HIV prevention and management services. The pharmacists in this study identified barriers and

facilitators in providing HIV prevention and management services and in the interviews also expressed what they believed were available opportunities to expand HIV services in community pharmacies.

- To enable pharmacists to prescribe ARV's the approval of a permit process with the Department of Health would be required. It is therefore recommended that the Department of Health considers the benefits of task shifting and allow pharmacists to prescribe ARV's. Allowing this would ensure people have easy access to HIV prevention and management services.
- It is recommended that pharmacists promote HIV prevention and management services at their pharmacies and in the interim, while awaiting the permit approval, utilise virtual doctor consultations, offered in the pharmacy, to enable the prescribing of ARV's by a doctor. In this manner, patients would be able to have a doctor's consultation in the pharmacy.
- The development and implementation of a standard operating procedure for pharmacists to follow when encountering people seeking HIV prevention and management services. The document must include a step-by-step process to ensure the pharmacists conduct HIV prevention and management services in accordance with pharmacy practice regulations and adhere to the standard HIV guidelines.
- Identify and implement an electronic patient management platform that can ensure effective record keeping of patient details and history taking. This platform can be used to save patient details and allow for patient follow-up and adherence monitoring.
- Information sharing sessions with other healthcare professionals who prescribe ARV's need to be established to allow a shared learning experience.
- Pharmacists are allowed to charge a fee for counselling and can establish a standard fee to cover the pharmacist's time to provide HIV prevention and management

services. Paying for HIV services was identified as a barrier, however, identifying medical aid and non-medical aid funding for payment for counselling services in the pharmacy could generate additional revenue and enable community pharmacists to increase their staffing complement and free up the pharmacists to counsel people seeking HIV prevention and management services.



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APPENDICES:

1. Appendix 1: Interview guide
2. Appendix 2: Information sheet for participants
3. Appendix 3: Consent form for participants



Appendix 1: Interview guide

Interview Guide

The questions are merely a guide as the interviews will be semi-structured in-depth interviews and new questions may emerge as the interview unfolds.

Title: Exploring Pharmacists' views and perceptions in strengthening HIV prevention and management services within community pharmacies in Cape Town, South Africa.

Archival #:

Site:

Interviewer:

Date:

Start:

End:



Obtain consent to record the session and inform the participant that the interview will require 1 hour of their time:

Demographic and Contextual Information

Participant number	Gender	Ethnicity	The age range of participants	Cape Town health district

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Questions:

1. What HIV prevention and management services are currently provided within your pharmacy?
2. What additional HIV prevention and management services could pharmacists offer within your pharmacy?
3. What type of HIV prevention and management services are currently offered in your pharmacy and are these promoted to the public?
4. What are the motivating factors in providing HIV prevention and management services in your community pharmacy?
5. What barriers exist in providing HIV prevention and management services in community pharmacies?
6. How would providing HIV prevention and management services affect the current way of working in your community pharmacy?

Appendix 2: Information sheet for participants

Project Title: Exploring Pharmacists' views and perceptions in strengthening HIV prevention and management services within community pharmacies in Cape Town,

South Africa.

What is this study about?

This research is being conducted for Master's Degree purpose by Bronwyn Macauley to understand the views and perceptions of pharmacists in strengthening HIV prevention and management services within community pharmacies in Cape Town, South Africa. We are inviting you to take part in this research project based on your knowledge of pharmacy and understanding of the current role and scope of practice of a pharmacist in HIV prevention and management. The results of this study could be used to provide recommendations to further maximize community pharmacists' input in HIV related services within their community.

Pharmacists selected to partake in this study must be proficient in the English language, permanently employed, for a period not less than two years. Participants must have completed Continuous Professional Development (CPD) activities related to HIV in the past 24 months.

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

You will be asked to take part in a one hour face to face interview with the researcher. If interviews cannot be conducted face to face, online platforms or telephonic interviews will be conducted. You will be asked if the interviews can be audio recorded and can consent to it being recorded or not.

The types of questions that you will be asked are:

1. What HIV prevention and management services are currently provided within your pharmacy?
2. What additional HIV prevention and management services could pharmacists offer within your pharmacy?
3. What type of HIV prevention and management services are currently offered in your pharmacy and are these promoted to the public?
4. What are the motivating factors in providing HIV prevention and management services in your community pharmacy?
5. What barriers exist in providing HIV prevention and management services in community pharmacies?
6. How would providing HIV prevention and management services affect the current way of working in your community pharmacy?

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution.

To ensure your anonymity,

- (1) Your name will not be included in the data collected;
- (2) All information collected will be stored on the researcher's laptop and only the researcher has access to their laptop which is password protected.
- (3) A consent form will be saved on the researcher's laptop which is password protected and will form part of the researcher's thesis.

(4) To protect the identity and the nature of the participant's involvement in the research, the name of the participants will not be used, only the researcher will know the identity of the participants, and instead of names, the researcher will consistently use pseudonyms (in the form of numbers) throughout the transcripts, analysis and reporting, to conceal the identity of the participants.

What are the risks of this research?

There may be a risk of the participant being identified in this study however there will be necessary steps taken to conceal the name and identity of the participant throughout the study.

There may be concerns about organisational judgement due to the participants understanding of the subject matter and whether the participant can provide insight on the subject matter.

This may lead to unwarranted stress to the participant in the study.

The risk of psychological stress may exist due to the sensitive nature of the topic and may affect the participant emotionally as they reflect on hindering factors.

If the participant experiences any discomfort psychologically or otherwise the researcher will act promptly to assist the participant and where necessary an appropriate referral will be made to a suitable professional for further assistance or intervention.

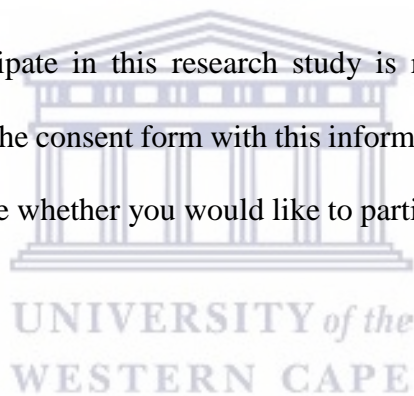
What are the benefits of this research?

The results of this research could be used to provide recommendations to further maximize community pharmacists' input in HIV prevention and management services within their community. The benefits will be additional resources and avenues for people to access HIV prevention and management services and hopefully result in a decline in HIV incidence and greater management of PLWH.

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

Your participation in this research is entirely voluntary, which means that you are free to decline participation. It is your decision whether or not to take part. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. If you decide to participate in the study, you are free to withdraw at any time – and without giving a reason. To withdraw from the study you can simply email the researcher and inform them that you no longer wish to partake and any information shared would be destroyed and not revealed to anyone and it will not be included in the results. You may also choose not to answer particular questions that are asked in the study. If there is anything that you would prefer not to discuss, please feel free to say so.

Your signed consent to participate in this research study is required before I proceed to interview you. I have included the consent form with this information sheet so that you will be able to review it and then decide whether you would like to participate in this study or not.



What if I have questions?

Should you have further questions or wish to know more, I can be contacted as follows: Student

Name: Bronwyn Macauley

Student Number: 2513087

Mobile Number: 082 440 2871

Work Number: 021 460 1444

Email: 2513087@myuwc.ac.za

I am accountable to my supervisor: Bey Schmidt School

of Public Health:

Tel: +27-21 - 959 2809

Fax: +27- 21 - 959 2872

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

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Appendix 3: Consent form for participants:

Title: Exploring Pharmacists' views and perceptions in strengthening HIV prevention and management services within community pharmacies in Cape Town, South Africa.

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

I agree to be audio recorded during my participation in the study

I do not agree to be audio recorded during my participation in the study



Participant's name.....

Participant's signature.....

Date.....

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