UNIVERSITY OF THE WESTERN CAPE

Faculty of Community and Health Sciences

RESEARCH PROPOSAL

Title: Understanding the dynamics of accessing chronic medicines in rural and urban settings in South Africa

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Table of Contents

1. Introduction

1.1 Overview of health care in South Africa

South Africa is in the midst of a profound health transition that is characterised by a quadruple burden of HIV and TB, maternal and child health, non-communicable diseases and violence, injuries and trauma. (Mayosi. et.al, 2009). Ensuring reliable access to, and appropriate use of, safe, effective, and affordable medicines is one of the core functions of an effective health system. (Roberts, M. and Reich, M., 2011) and has become a part of the fulfilment of the fundamental right to health.

Chronic diseases pose long-term demands on South Africa's already burdened health care system. Few health systems in poorly resourced settings are organized to meet the needs of chronic patients (Goudge et. al., 2009) and they are already burdened with the management of diseases with complex and adverse impacts on health systems (Kotwani, 2010). Improving access to medicines and retention in care is a complex challenge for all actors in the public and private sectors involved in the field of medicines supply and calls for a different focus and approach to Public Health policy and action (Igumbor, 2010) and re-orientation of service delivery in light of the challenges in the health system (Schneider, H. et.al, 2006).

Eighty-three percent of the South African population is not covered by medical aid or health insurance (Blecher et.al, 2011) and Primary Health Care (PHC) remains the only effective way of delivering some form of health care. The public sector in South Africa faces increased pressure on the health care system to meet the health needs of the population and health facilities are faced with a high workload and limited human resources to meet the demand for services (Reagon & Igumbor, 2010). This has led to stress and burn out among health care workers, some of whom are also battling with disease themselves. (Benatar, 2004). South Africa has therefore re-affirmed its commitment to primary health care through the Primary

Health Care Re-engineering strategy which seeks to strengthen district health systems and ultimately improve health outcomes (Pillay & Barron, 2011).

1.2 Problem Statement

Access to medicines is a key feature of a functional health system and there have been recent efforts to recognize medicines not just as a commodity but a key pillar of the health system (WHO, 2009). Patients' inability to access medicines remains a key concern for policy makers and threatens clinical outcomes in the event of interrupted treatment cycles. One of the critical needs for strengthening access to medicines is for operational research to inform policy and programmes. Operational research is underused in global health yet its methods are useful for the systematic identification of problems and the search for potential solutions (Royston G, 2011). In South Africa, there have been numerous media reports of stock outs for essential medicines over the past year yet little research has been done to identify and characterise the challenges in the area of drug supply management (Tayob, 2013).

For example, the Western Cape Department of Health (WCDOH) is estimated to consume approximately R0, 3 billion per annum on research, but relatively little of that funding speaks to solving the operational and systems challenges facing health services in the province. In a recent report, the department reported that patient experiences of health services are largely negative but the authorities are unaware as to how to use this feedback to constructively in provincial planning processes and contributes to shaping policies and practice in the service areas (WCDOH, 2012). Research has shown that negative experiences with the health system can discourage patients from accessing services (Reagon and Igumbor, 2010). As well as providing ongoing formative feedback to improve access to medicines, a more abstract, interpretive analysis which explores the context-mechanism-outcome relationship for interventions using the guiding question "what works, for whom, under what circumstances?"

needs to be utilised (Greenhalgh et.al, 2009; Pawson and Tilley, 2004) in order to inform future policies and planning but also to assess adaptability of specific interventions to other contexts. The delimitations of this study are set on the lower levels of the supply chain, specifically distribution and use where significant variations occur in different contexts and not regulation, selection and procurement functions which are centrally performed by the state.

1.3 Relevance of the Study

A recent publication by the Department of Health under the National Health Care Facilities Audit reported a 54% failure in compliance to the vital measure dealing with availability of medicines and recommended priority attention to supply chain management. (HST, 2012). There has also been a spate of media reports on stock-outs of essential medicines at the primary care level in recent years and confidence in the public sector has waned. The South African health system is undergoing a major transition towards a National Health Insurance (NHI) funding system and an overhaul of primary health care through the current re-engineering process is key to its success. This presents an opportune time to assess the current downstream barriers to accessing medicines against proposed plans for the NHI and the re-engineering process for improving the distribution and use of medicines. The second sub-study is an assessment of a multi-million dollar public-private partnership between the WCDOH and a private distributor commissioned to package and deliver chronic medicine parcels to stable public sector patients in the Western Cape. This is the only intervention of its kind in the country with express aims to address facility staff shortages and high workloads by depopulating primary healthcare facilities, reducing waiting times and improve patient adherence (*see Annex 1 for more detail*). The intervention, now in its eighth year has not been evaluated and policy makers are keen to know what is working well, what is not and how can processes be improved. For instance, over the last few months there has been an

increased rate of non-collected parcels which are returned to the Cape Town CDU depot; however the reasons and the magnitude of this problem are unknown. Some of the questions that arise which this research will elucidate are whether CDU objectives are appropriately aligned with demand needs e.g. why are patients not meeting their appointments?; What are the consequences for facility e.g. in terms of storing uncollected parcels; and what are the consequences to the CDU in terms of costs? In May 2013, the Department of Health issued a moratorium to stop facilities from returning non-collected parcels as this was a costly exercise. Finally, the research will ascertain whether central dispensing an answer to supply chain challenges can be adapted in other settings.

2. Literature Review

2.1 Understanding chronic diseases and models of care

The WHO defines chronic diseases as diseases of long duration and generally slow progression (WHO, 2013). The common characteristics of chronic diseases are complex etiology, long period of incubation as well as long-term progression. Most chronic diseases are not curable. There are many aspects which are still unknown about their origin although many factors have been identified as relevant: genetic and environmental factors, individual life-style, etc. Similarly, therapy is complex and outcome depends on multiple factors (AHPSR, 2011).

Over the years, experts have attempted to come up with models to respond effectively to chronic diseases. One of the most widely used models is that of Wagner (2005). This chronic care model (CCM) is patient centred and based on the premise that effective chronic disease management is delivered in a partnership between the community and health system. Good functional and clinical outcomes are based on productive interactions (Bodenheimer, Wagner, Grumbach, 2002; Wagner et al, 2005). In order to attain productive interactions, the system

needs to develop four areas at the level of practice which are self management support, delivery system design, decision support and clinical information (Wagner et al, 2005). The aforementioned levels reside in the health care system. However, it is critical to note that the health system does not exist in isolation but rather is embedded in the larger community; therefore community resources and policies may influence the kind of care that is delivered. Self management support exists at both community and health care system level. In addition self management support is the most visible part of care to the patient, followed by delivery system design. The delivery system design relates to the composition of the health care team and the way interaction happens between the health system and the patients (Wagner et al, 2005).

2.2 Barriers to accessing medicines

2.2.1 Health system barriers

Most health service delivery models were created at a time when acute diseases accounted for the largest disease burden and they were often not designed to deliver routine quality care for patients suffering from chronic diseases and were therefore not responsive to these patients' specific needs. To enable care for patients with chronic diseases, health care systems need to have certain characteristics that are different from acute care systems: These systems will require new clinical management strategies (routine appointments, patient rosters, adherence monitoring), different modes of staff functioning (interdisciplinary coordination, patient-centered care, performance monitoring), innovative drug supply systems and strengthened community linkages (family and community supports, novel types of outreach) (Nolte and McKee, 2008). Quality of care has also been cited as an important aspect in the delivery of health services. The literature on providers and their interactions with patients, particularly in South Africa, tends to cast them in a negative light (Jewkes et.al, 1998; Edgington et.al, 2002; Wood and Jewkes, 2006; Horwood et.al, 2009). However, little attempt has been made to

investigate provider perspectives on the daily challenges and their changing roles due to the changing disease profile. Zoffman and Korkveld (2012) have suggested that health professionals need detailed knowledge of the barriers to health services, their own roles in these barriers, ways to overcome them, and recognizable evidence of having succeeded for them to develop effective interventions.

Another important consideration in the subject of access to medicines is the availability of the medicines. Medicines are no longer viewed as just a commodity but an important part of the health system. Inadequate access to pharmaceuticals plays a role in perpetuating disparities in access. Medicines may not be accessible because of weak distribution structures. There is a growing realisation that health problems require not just better coordination of traditional roles but also new ways of working together in order to achieve a synergistic combination of the strengths, resources and expertise of the different sectors. A large variety of public-private partnerships, combining the skills and resources of a wide range of collaborators in innovative ways, have emerged with a view to strengthening or improving coordination of health services (Widdus, 2001).

The WHO has attempted to illustrate the relationship of medicines to the entire health system using the building blocks concept. The theory suggests that effective provision of medicines is dependent on other building blocks such as health workforce, governance, information, service delivery, and financing. People are at the centre of the system as mediators, beneficiaries and actors driving the system itself (WHO, 2009).

2.2.2 Demand-side barriers

Considering the case of South Africa, public primary level services provide chronic care and treatment without any user fees; however, many studies have cited a range of barriers with

accessing health care. Inequalities in health care are exacerbated by the huge socioeconomic disparities across social classes and location as rural populations face the greatest barriers to health care; longer distances and travel times than their urban counterparts (Cleary et. al., 2013; Silal et. al., 2012; SAHR, 2011) and have limited mobility due to underdeveloped transport infrastructure (Bryceson, 2009).

Affordability of transportation costs associated with accessing medicines in public facilities for conditions that require ongoing treatment and care has been a subject of concern (Cleary et. al., 2013; Tuller et.al., 2010; Goudge et. al., 2007; Hardon et. al., 2006). In particular, TB and HIV studies have highlighted transport costs as a major cause for patients' defaulting on treatment and the subsequent effect on health outcomes (Yoder, Mkhize & Nzimande, S, 2009; van Kooten Niekerk et. al., 2006). Some studies have documented patients' coping mechanisms and found that the majority who cannot afford to pay for transport costs rely on family members and friends for support or sell assets to cope with transport costs (Sauerborn, Adams & Hein, 1996). A submission by a consortium of Non-Governmental Organisations (NGOs) working in rural South Africa have proposed provision of transport subsidies for health care in rural areas as an appropriate response to enabling access to health facilities by rural citizens and a reduction in loss to follow-up as part of the National Health Insurance (NHI) package citing similar interventions in Mexico, China, Taiwan, Korea and Nicaragua (Submission on the Green paper on NHI, 2011).

2.3 Conceptual Framework

The knowledge base underpinning the study of access to medicines suggests that access is influenced by the interplay of affordability, availability, acceptability, accessibility and quality of medicines and underlying social determinants (Thomas and Penchansky, 1981; REACH, 2012 and WHO, 2007). 'The conceptual framework depicted below combines

aspects of various models and further acknowledges the role of communities, policies and context.

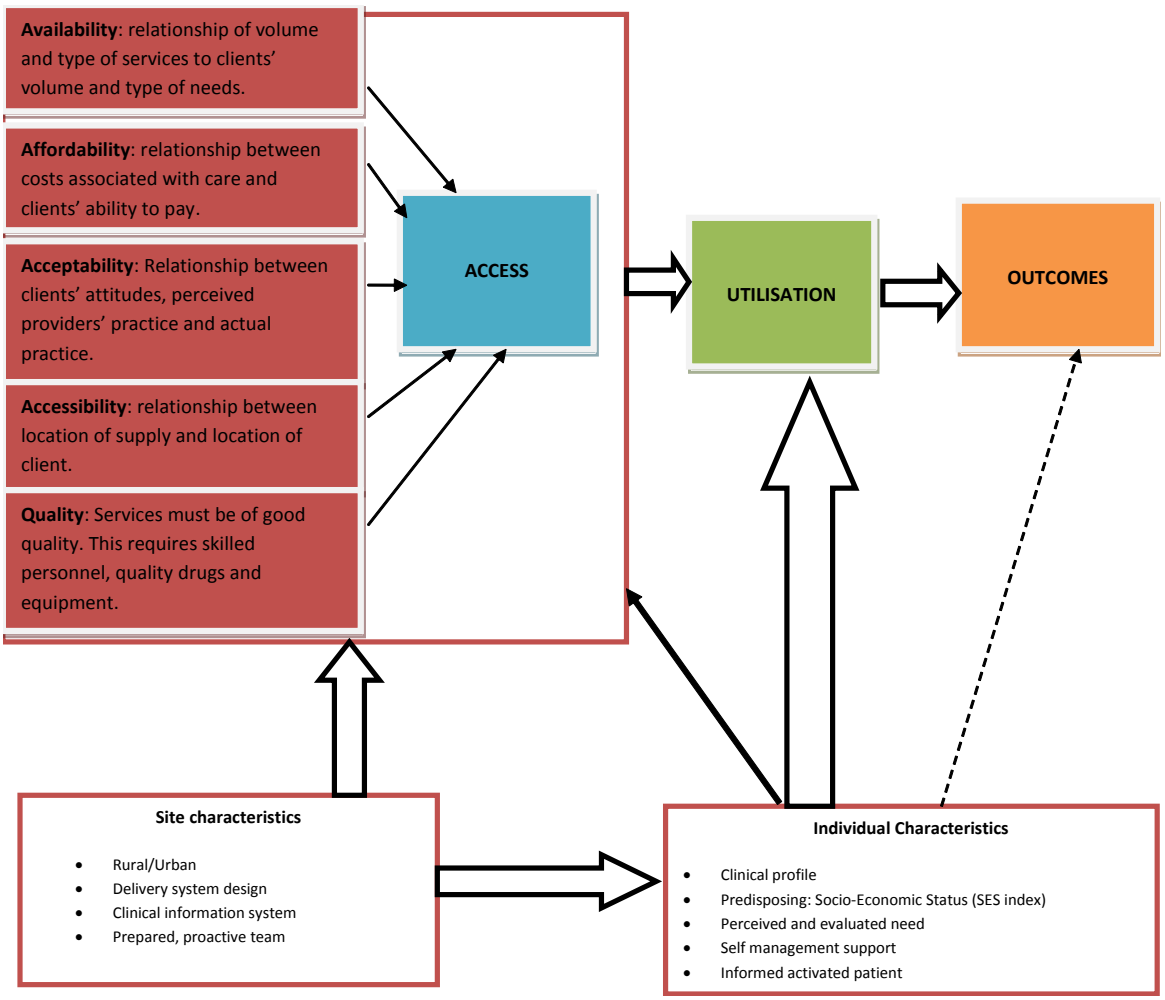

***Fig 2**: Adopted from the following models: (1) Access framework by Thomas & Penchansky, 1981and (2) Researching Equity in Access to Health Care (REACH) Framework, 2012, (3) WHO's AAAQ Right to Health framework, 2007 and Wagner's Chronic Management Model.*

2.4 Epistemological Approach

A critical aspect of this research is the ability to recognise health systems as complex, adaptive systems (English et.al, 2011).The epistemological approach is largely interpretive, given that the researcher will endeavour to understand meanings, contexts and processes as perceived from different perspectives, and individual and shared social meanings of the issues under review (Crowe, et.al, 2011). Much of the health services research community is already convinced of the value of interpretive, context-sensitive research (Greenhalgh et.al,

2009) because of its ability to capture meanings, summarise them into essential themes of understanding and capture the important aspects of the phenomena, giving plausible insights, rather than theory, into the experience of a phenomenon.

3. Aim/Objectives

3.1 Aim

The aim of the study is three-fold: to describe the current situation in provision of HIV and diabetes medicines in two provinces, describe the CDU intervention (the only existing large-scale pilot intervention aimed at improving access to medicines) and finally, develop guidelines for improving and/or adaptation of the CDU in the Eastern Cape.

3.2 Specific Objectives

1. To conduct a situational analysis on the state of chronic medicines provision in rural and urban public sector facilities in the Eastern and Western Cape provinces to identify supply and demand barriers to accessing medicines.
2. To describe the implementation process of the CDU intervention in the Western Cape.
3. To assess the effects of the CDU intervention on availability, acceptability and quality of services.
4. To assess the applicability of the CDU in the Eastern Cape and develop guidelines for implementation.

4. Methodology

This research will be conducted in three phases and for each phase an appropriate design will be employed to address the research questions specified.

Research Setting

The study sites are in five districts in the Eastern Cape and the Western Cape provinces. These are Alfred Nzo and Amathole (Eastern Cape) and Cape Metropole, Eden and Central Karoo (Western Cape). Selection of districts reflects the rural and urban dynamics in each of the provinces. The estimated population size for the Eastern Cape is 6.8 million while that of the Western Cape is 5.3million (Statistics South Africa, 2011).The two provinces portray different characteristics in the standard of health services.

4.1 Phase 1: Situational analysis on the state of access to medicines in two provinces in South Africa

This phase utilises the AAAQ framework (see Fig 2) to describe the current situation regarding access to medicines at primary level facilities in the Eastern Cape and Western Cape provinces highlighting the opportunities and barriers to accessing essential medicines. Secondly, the study identifies innovations that have been implemented in the past five years to improve access to medicines.

Key questions:

1. What is the current situation regarding access to medicines in primary level public sector facilities e.g. what are the existing supply and demand opportunities and barriers to accessing chronic medicines?

2. How are these barriers different or similar across different contexts (rural-urban), diseases (HIV, diabetes)?

3. What mitigating strategies have/are being put in place to overcome these barriers (including daily ad hoc practices by providers)?

4. What interventions have been piloted to improve access to medicines within the last five years?

5. What recommendations do providers have for future improvement of access to medicines?

Study design: This sub-study utilises data from a cross-sectional qualitative study from the Accessing Medicines in Africa and South Asia (AMASA) Project, (UWC Registration number: 11/7/8) which the researcher has been working on since 2010, having been involved in all aspects of the research. Primary data from 14 primary level sites (6 sites in the Eastern Cape and 8 in the Western Cape) form part of this study. Cross-sectional studies allow the researcher to collect perspectives from a range of informants (Leedy and Ormrod, 2010) with different roles in the health system.

Data Sources: In-depth key informant interviews using semi-structured interview guides to obtain primary data on the key questions listed above.

Sampling method: Sampling was designed with an aim to obtain views from a range of informants working in the medicines supply chain and disease management. These include provincial, district and sub-district managers; facility managers, nurses and doctors dealing with HIV and diabetes patients, pharmacists and community health workers (+/-5 per site), yielding a total of approximately 86 in-depth qualitative interviews. These facilities reflect both rural and urban dynamics of accessing medicines. A detailed breakdown of respondents is given in *Annex 2*.

Data Analysis: The qualitative transcripts were cleaned then transported to MAXQDA for storage and coding. The researcher derived a coding framework with themes guided by the

AAAQ framework (availability, affordability, acceptability, accessibility and quality) which was applied to the data set during initial analysis.

Overview of preliminary findings: The researcher identified several supply and demand factors influencing access to medicines. These have been used to shape abstracts for scientific papers (both of which she is lead author) and to inform the next phases of this research. Publication outlines that have been developed based on findings from this phase are listed below and the same will apply for each objective in the next phases:

Paper 1: Frontline Health Workers as Brokers: Provider Perceptions, Experiences and Mitigating Strategies to Improve Access to Medicines in the Eastern Cape Province, South Africa (submitted to journal, currently under review)

Paper 2: Characterising the Downstream Supply Chain Management Challenges in South Africa: Implications on Availability of Essential Medicines (manuscript currently under development).

Papers 1 addresses supply and demand issues in the Eastern Cape; Paper 2 focuses on distribution of medicines in both provinces, specifically the challenges associated with management of medicines supply. These papers pave the way for phase 2 which assesses the CDU, the only model for centralised dispensing not only in South Africa but the region. The Researcher seeks to explore its usefulness in addressing existing barriers to accessing medicines, i.e. could it provide solutions to some of the challenges faced in the Eastern Cape in light of the current severe stock-outs of essential medicines in the public sector?

4.2 Phase 2: An assessment of the CDU intervention

The Researcher will assess aspects of a large-scale intervention (estimated at over five million rand every five years) that the WCDOH has implemented in public facilities to

improve access to medicines. The intervention seeks to achieve the following: redistribution of workload for pharmacists in health facilities, improved supply chain management practises, reduced waiting times for patients and overall improved quality of services. A brief overview and workflow diagram is provided in *Annex 1*.

In studies of new interventions, understanding process is as important as understanding the outcomes. Therefore one part of this sub-study will aims to understand how the intervention operates, identify what factors influence its operation and outcomes, and isolate the strengths and weaknesses of its implementation (Calnan and Ferlie, 2003). Policy makers require this information for process improvement and to assess its potential for adaptation in other contexts. To achieve this, studies of changes in health care practise employ a variety of conceptual and theoretical models. Evidence from these studies often indicates that the implementation of interventions could have been improved and that successful implementation is not only related to the quality of evidence underlying the intervention but also to a complex interaction of factors on multiple levels (Greenhalgh et al. 2004).

Phase 2a: Describe the implementation of CDU intervention using the Normalisation Process Model

Objective: To describe the implementation process of the CDU intervention in order to understand how it operates and the factors (contextual, operational, patient) that influence its implementation.

The Researcher will adopt the Normalisation Process Model (NPM), an evidence-based model with a particular focus on theorising the dynamics of implementation processes. It attempts to unravel the complex realities of the implementation process, phenomena that are not always covered by other social science theories and will help the researcher to examine

more closely the complexities of the implementation process (May et al., 2010; Leon 2011). Refer to *Annex 3* for more detail on the model.

Study design: This sub-study aims to identify the factors that influenced the normalisation of the CDU intervention, drawing on the NPM as an analytical tool. The design is a mixed method study utilising routine quantitative data which provides the descriptive trends of what has happened over time and a qualitative study which explores key informant perceptions and experiences with the intervention.

Data Sources

- **Routine data**: Data be analysed for April 2012 to date, the period for which the current contractor, UTi Pharma has been providing the service to WCDOH. Data for the previous years is not available. Data will be collected at two levels and for uniformity, the Researcher will collect data for the same period in both instances.
    - *Provincial level*: The following variables will be extracted from the CDU electronic database: number of HIV and diabetes patients benefiting from the CDU at the four selected the sites, frequency of prescription rejection and acceptance and reasons, turn-around time for processing prescriptions, number of non-collected medicines by site and condition. This data is captured electronically during script processing and automatically submitted to a central repository at the CDU depot. The Researcher will submit a list of variables required to the Data Manager and they will draw a query and provide the data in excel.
    - *Facility level:* manual records will yield data on patient adherence to appointments for CDU collection e.g. how many CDU patients adhered to their appointments? If they missed, how long it took before they visited the facility again or were Lost-to-Follow-Up (LTFU). How many patients have been de-registered from the CDU

programme? These will be used as proxy outcomes for CDU "success". Each CDU patient is allocated to an Adherence club and the club has a schedule of bi-monthly appointments to pick up their medicines or go through routine check-up. When the patient visits the facility, the register is marked. If the patient misses an appointment, they are de-registered from the CDU. The Researcher will make copies of these manual registers and enter the data into an excel spreadsheet.

- In-depth key informant interviews (using semi-structured guides, see *Annex 6* for detail) with a range of key informants involved in the CDU process (nurses, pharmacists, doctors, quality assurance personnel, delivery personnel, facility liaison officers, CDU Manager and policy makers who developed the model). Broadly, interview schedules will have questions guided by the NPM such as: (i) how the intervention affects interactions between people and practice? (interactional workability); (ii) how the intervention relates to existing knowledge and relationships? (relational integration); (iii) how division of labour is affected by the intervention and how it was deployed (skills-set workability)' (iv) how the intervention relates to the institution in which it is set? (contextual integration). At the facility level data on local context, operational issues, selection criteria for patients onto the CDU, registration and de-registration of patients from the CDU, trends of collection and non-collection of medicines over time; perceptions on why chronic patients do or do not collect their medicines will be gathered from interviews with front-line health workers.

Sampling of sites: The CDU depot where prescription processing and central dispensing is done plus four health facilities in Cape Metropole will form part of this sub-study. The intervention was initiated in the Cape Metropole about eight years ago therefore these sites have had considerable experience with the intervention. In addition, they represent

different contexts, demographics, type of medicines offered through the CDU, trends of efficient collection and non collection. Selection is also guided by verbal reports by the CDU Manager and Facility Liaisons. For both the depth required and the variables being considered, the researcher feels these sites will provide what is required. Key informants will be purposively selected as elaborated under "Data Sources" (+/-5 informants per site). Flexibility will be exercised as additional informants may be identified through snow-balling.

Data Analysis

Qualitative interviews will be recorded then transcribed. Thematic content analysis will be used to identify elements of the implementation process. The transcripts will be read and re-read to identify common responses in relation to key areas. The NPM will be used towards the end of the process to group themes according to the constructs of the model and assist in interpretation of the findings.

Routine data from provincial level is available in Excel format. Data quality checks will be done by checking dataset for completeness and accuracy. If there are any incomplete or inaccurate records, these will be queried with the Data Manager. Data will then be analysed in SPSS to provide a description of trends over time for each variable. Facility level data will first be captured into excel then analysed in SPSS. The same process of checking for completeness and accuracy will be followed and if there are queries, these will be raised with the nurses (CDU champions) on site. Data will be analysed in SPSS using frequencies and means.

The desired outcomes from the quantitative analysis will include: percentage of non-collected parcels over time by site and by condition, number of HIV and diabetes patients benefiting from the CDU at the selected the sites over time, frequency of prescription

rejection and acceptance and reasons, turn-around time for processing prescriptions, trends in adherence to clinic appointments.

Phase 2b: Qualitative study to assess the effect of the CDU intervention on availability, acceptability and quality of services.

This phase is motivated by the need to ensure that the CDU model satisfies the needs of the intended beneficiaries, in this case the patient and the health provider. Using relevant aspects of the access framework as a guiding tool (see Fig. 2), the sub-study will assess how the intervention impacts on *availability* (of medicines), *acceptability* and *quality* of services.

Study design: Cross-sectional qualitative study consisting of interviews with key informants (nurses, and pharmacy managers).

Data Sources

- Patient experiences with the intervention will be gathered through focus group discussions (2 per site, 1 with CDU beneficiaries and another with non-CDU beneficiaries giving a total of eight), all conducted in vernacular languages (see *Annex 6* for interview guides in English, Afrikaans and Xhosa). The non-CDU beneficiaries will be a control group to allow the Researcher an opportunity to assess differences in satisfaction with services between beneficiaries and non-beneficiaries.
- In-depth interviews with nurses and pharmacists who are or have been involved in the CDU process at any stage during the implementation period (see *Annex 6* for interview guide).

Sampling of patients: Patients will be identified at the facility when they come to collect their medicines bi-monthly. Following the guidelines for sampling for phenomenological studies, which attempts to understand people's perceptions, perspectives and understanding

of a particular situation (Leedy and Ormrod, 2010), up to 40 patients will be recruited among those who have had direct experience with the phenomenon being studied. (Creswell, 1998 in Leedy and Ormrod, 2010).

Data analysis: Qualitative data from key informant interviews and focus group discussions interviews will be recorded and transcribed. They will then be coded and analysed assisted by MAXQDA, qualitative analysis software. Xhosa and Afrikaans transcripts will be translated to English then back translated to ensure that meanings are not lost in translation. Repeated reviewing and sorting of the data are integral in the process of analysis. An initial coding frame will be developed and applied systematically to the whole dataset with the aid of MAXQDA as the first level of analysis. The next level will involve extracting data to illustrate the themes of the access framework or any other emerging themes which assist in interpreting the findings. Finally, there will be a cross analysis of findings from CDU and non-CDU beneficiaries to establish whether there are any notable differences with their experiences with the health services.

Feedback workshops: Since, this is operational research, feedback workshops will be conducted with key informants to present the findings and also to get consensus on findings.

4.3 Phase 3: Assess the applicability of the CDU intervention (or aspects of it) in the Eastern Cape and develop guidelines for implementation.

The Researcher will focus on applicability of the intervention to the Eastern Cape to assess whether the CDU model can address some of the challenges identified in Phase 1 and if so, how it can be applied. Walt and Gilson (1994) emphasize the need to not only focus on prescriptions for health policy reforms but also how such reforms should be carried out and who is less likely to favour or resist such policies. They introduce the Health Policy Triangle, a framework which focuses on the complex inter-relationship of *context* (situational,

structural, cultural and exogenous factors), *content* (the substance of an intervention), *process* (the way policies are initiated, developed, implemented and evaluated) and *actors* (individuals, groups, organisations) that affect the policy.

Method: Lavis and colleagues (2009) have identified several key questions against which to assess applicability in a health systems context, including differences in the setting in terms of constraints, health system arrangements and other baseline conditions that may affect the feasibility and acceptability of the intervention elsewhere. The Researcher will utilise the questions from the "*SUPPORT Tools for evidence-informed health Policymaking (STP), STP 5 (Using research evidence to frame options to address a problem) and STP 9 (Assessing applicability of findings of a systematic review)* by Lavis and colleagues. The tools specify the following questions to assess whether an intervention is applicable:

- Are there important differences in on-the-ground realities and constraints that might substantially alter the feasibility and acceptability of the intervention?
- Are there important differences in health system arrangements that may mean the arrangement could not work in the same way?
- Are there important differences in the baseline conditions that may yield different absolute effects even if the relative effectiveness was the same?
- What insights can be drawn about the intervention, implementation and monitoring and evaluation?
- Which stakeholder views and experiences which might influence an option's acceptability and its benefits?

Data Sources (to answer the questions above)

- Primary data gathered in Phases 1 and 2.

- Purposively selected actors identified through a stakeholder analysis. This group is envisaged to include health managers within the Department of Health in the Eastern Cape, local experts in the area of pharmaceutical supply chain such as academics and representatives from Management Sciences for Health, representatives of interest groups e.g. patient groups such as Treatment Action Campaign and others who will be identified at that stage. These informants will be interviewed face-to-face or telephonically depending on where they are based.

Data analysis: Interviews will be recorded then transcribed. Data from Phase 1 and 2 will be transcribed already at that stage. Thematic content analysis will be used to identify important elements of developing the intervention. The transcripts will be read and re-read to identify common responses in relation to key areas. The Health Policy Triangle will be used towards the end of the process to group themes according to the constructs of the model and assist in interpretation of the findings.

4.4 Rigour

The following processes will be implemented to ensure that data collection, analysis and interpretation are appropriate as suggested by Leedy and Ormrod (2010); Pierce (2007):

Triangulation – Using multiple sources (more than one source in all cases) and multiple methods (in-depth interviews, focus group discussions, observations) to establish chain of evidence and to compare findings from different sources. 2) *Collaboration* – working collectively with the CDU Manager and facility liaison officers to develop tools and develop interpretations from the data. 3) *Member checking* – Data will be taken back to respondents (in all phases) to validate and interpret the data. 4) *Peer reviewing* through periodic meetings with the Supervisory team. 5) *Researcher reflexivity*: The researcher will continuously reflect on her own potential biases. Reflexivity entails the researcher

being aware of his effect on the process and outcomes of research based on the premise that 'knowledge cannot be separated from the knower' (Steedman, 1991). *6)* Training of interviewers to standardise their understanding of issues and the interview process. *7) Pilot*: the initial interviews will be treated as a pilot and the Researcher together with the trained research assistants will reflect on the tools to find out if they are generating the required information. Relevant modifications will be done if necessary. 8*) Validity and reliability of secondary data:* The Researcher will develop a list of variables and submit to the Data Manager at the CDU depot where the data is kept in a repository. The Data Manager will draw a query and provide the data in excel. Data quality checks will be done by checking dataset for completeness and accuracy. If there are any incomplete or inaccurate records, these will be queried with the Data Manager. Once the statistical tests are done, they will be shared with the CDU Manager and the Data Manager to aid in interpretation. Where the data is facility specific, the findings will be included in key informant interviews with health workers to enable them a chance to comment on the reliability of the data. With the facility-level data, the relevant variables from facility records will be entered into excel followed by a similar process of checking for completeness and accuracy. If there are queries, they will be refered to the nurse or pharmacist. Once the statistical tests are done, they will be shared with the nurses and pharmacists to aid in interpretation. The Researcher will handle all the data to ensure consistency in processing. The qualitative interviews will also assist in triangulating the reflections from the data.

4.5 Generalisability

Findings from this study may not be generalised beyond the settings because of the different contexts. This is not the focus of the study. However, the lessons obtained may be applicable in other contexts, for example the Eastern Cape as will be assessed in Phase 3.

4.6 Limitations of the Study

1. Cross-sectional studies provide a snap-short of what is happening with the intervention and may not address issues that may be identified over time.
2. Phase 2 only includes urban sites because the CDU intervention was initiated in the Cape metropole, however the intervention may have different outcomes in rural settings.
3. Some of the variables in the CDU dataset may be influenced by external factors such as changes in policy. The WCDOH issued a moratorium in May 2013 to prohibit facilities from returning non-collected PMPs to the depot so it will be difficult to ascertain the magnitude of the problem of non-collected PMPs based on this data.

5. Ethical Statement

Permission to conduct the study will be sought from the University of the Western Cape Research and Ethics Committee. All the participants in this study will receive an information letter informing them about the purpose of the study. Written consent will be sought from participants. All participants will be assured that participation in this study is voluntary, and that they can withdraw from the study at any time (see *Appendix 4*). Incentives will be set at an appropriate level so that they are neither too high nor too low that participants do not appreciate them. One way of ensuring the above is to avoid cash incentives and rather use grocery or airtime vouchers. In this study, participants will receive a R20 Shoprite voucher for participation. Since this research contributes to existing debate in access to medicines (a part of the AMASA project), the researcher will conduct this research in the sites that the DOH has already granted permission (see official letters attached in *Appendix 6*).

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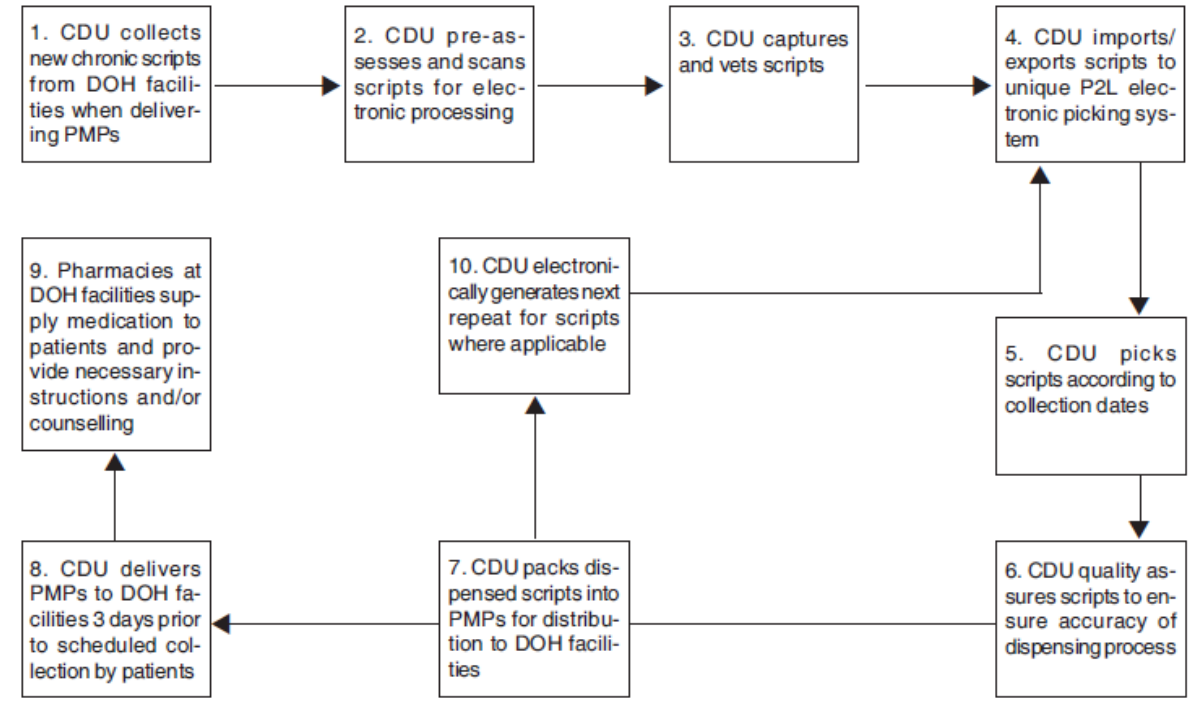
Annex 1: The CDU Model

This model is a public-private partnership unique to the Western Cape (and South Africa) where the WCDOH has contracted a private pharmaceutical distribution company to pre-package chronic medicine. The provider collects prescriptions from sites, dispenses the medicines according to the prescription, makes patient medicine parcels into sealed tamper-evident parcels and distributes these parcels to facilities. Patients who are termed 'stable' benefit from the CDU service by getting pre-packaged medicines in a 28 day cycle.

Workflow in the CDU process (Du Toit et al, 2008)

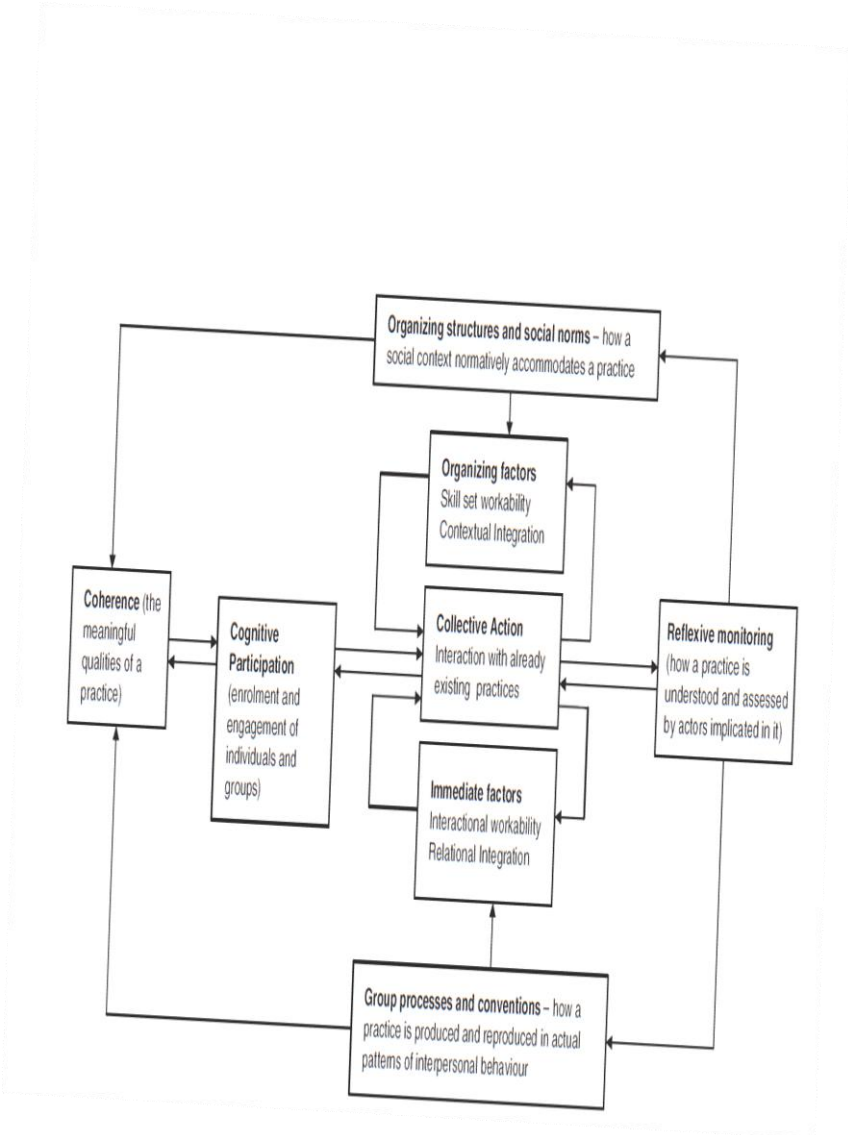


PMP = Patient Medicine Parcel

Annex 2: Breakdown of respondents

Category	Number of respondents
Provincial, district and sub-district managers	6
Nurses	30
Doctors	28
Pharmacists/Assistants	14
Community Health Workers	8
Total	86

Annex 3: Normalisation Process Model



Appendix 4: Consent forms and information sheets

ACCESSING CHRONIC MEDICINES IN SOUTH AFRICA

Certificate of Consent

RESPONDENT STUDY NUMBER:_____

Respondent declaration

"I have been invited to participate in research about access to HIV and diabetes medicines. I understand that I will participate in an interview. I have been informed that the risks are minimal and I am aware that there may be no benefit to me personally. I have been given the name and address of a researcher who can be easily contacted."

"I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study and understand that I have the right to withdraw from the interview at any time without in any way affecting my work/health care."

Print name of participant: _____

Signature of participant: _____

Place and Date (dd-mm-yy):_____

Telephone number: _____

Fieldworker declaration

"I have accurately read or witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely."

Print name of fieldworker: _____

Signature of fieldworker: _____

Place and Date (dd-mm-yy):_____

A copy of this Informed Consent Form was provided to the participant (initials fieldworker, _____).

ACCESSING MEDICINES IN SOUTH AFRICA: INFORMATION SHEET

Introduction

My name is _____. I am doing research on access to medicines in the public sector in South Africa. I am going to give you information and invite you to be part of this research. Before you decide, you can talk to anyone you feel comfortable with about the research. This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and we will take time to explain. If you have questions later, you can ask them at any time.

Purpose of the research

Access to medicine and the availability of medicine can affect peoples' lives in different ways. We want to investigate access to HIV and Diabetes medicines at this site, including experiences with the Chronic Dispensing Unit (CDU). Your information can contribute much to our understanding and knowledge of how patients access medicines and inform future policy interventions.

Type of Research

This research will involve your participation in an interview which will take about 1 hour of your time.

Participant Selection

You are invited to take part in this research because you are a provider/patient who collects medicine from this facility or through the CDU.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate you will not be disadvantaged in any way.

Procedures

To find out more about your experience, we would like to sit down with you and discuss a few things. For that, an interview will be done by _____. The information recorded is confidential, and no one else except me will access the information documented during your interview. If you do not wish to answer a certain question during the interview, you may say so and the interviewer will move on to the next question.

Risks and Discomforts

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. However, we do not wish for this to happen. You do not have to answer any question or take part in the interview if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits

We cannot pay you for taking part in the interview, but your participation helps us to better understand the ways in which people access medicine.

Confidentiality

The research being done in the community may draw attention and if you participate you may be asked questions by other people in the community. We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name and we will lock that information up with a lock and key.

Right to Refuse or Withdraw

Taking part in this study is completely voluntary and you can decide not to participate in the interview or stop the interview at any time. If you choose not to participate in the study there will be no problems for you, and it will not affect your health care in any way.

Who to Contact

If you have any questions, you can ask them now or later. If you wish to ask questions

later, you may contact me on the following:

- Researcher: Bvudzai Magadzire; Tel: 021-9599386/0715234343; E-mail: bmagadzire@uwc.ac.za
- Supervisor: Dr Kim Ward; Tel: 021-9593340; E-mail: kward@uwc.ac.za

This research has been reviewed and approved by the Senate Research Committee and Ethics Committee of the University of the Western Cape. Should you want more information about this committee, please contact the Chairperson at 021-959 2949.

TOEGANG TOT MEDISYNE IN SUID AFRIKA
Toestemmingsertifikaat

STUDIENOMMER VAN PASIëNT:_____

Verklaring deur pasiënt

"Ek is genooi om deel te neem aan navorsing oor toegang tot medisyne. Ek verstaan dat ek aan 'n onderhoud sal deelneem. Ek is ingelig dat die risiko's minimaal is en ek is bewus daarvan dat daar dalk nie vir my persoonlik voordeel in is nie. Ek het die naam en adres van 'n navorser gekry wat maklik gekontak kan word."

"Ek het die voorafgaande inligting gelees, of dit is vir my voorgelees. Ek het die geleentheid gehad om vrae daaroor te stel en enige vrae wat ek gestel het, is bevredigend beantwoord. Ek stem vrywillig in om aan die studie deel te neem en verstaan dat ek die reg het om op enige tydstip uit die onderhoud te onttrek sonder dat dit my gesondheidsorg op enige wyse sal beïnvloed."

Naam van deelnemer in drukskrif: _____

Handtekening van deelnemer: _____

Plek en Datum (dd-mm-jj):_____

Telefoonnommer: _____

Verklaring deur Veldwerker

"Ek het die toestemmingsvorm akkuraat voorgelees vir die potensiële deelnemer of waargeneem dat dit akkuraat voorgelees is, en die individu het die geleentheid gehad om vrae te stel. Ek bevestig dat die individu uit vrye wil toestemming gegee het."

Naam van veldwerker in drukskrif: _____

Handtekening van veldwerker: _____

Plek en Datum (dd-mm-jj):_____

'n Afskrif van hierdie Oorwoë Toestemmingsvorm is aan die deelnemer voorsien (voorletters van veldwerker, _____).

TOEGANG TOT MEDISYNE IN SUID AFRIKA
INLIGTINGSBLAD – PASIëNT

Inleiding

My naam is _____. I doen navorsing oor toegang tot medisyne in die openbare sektor in Suid-Afrika. Ek gaan aan u inligting verskaf en u nooi om deel te wees van hierdie navorsing. Voordat u besluit, kan u eers met enigiemand met wie u gemaklik voel oor die navorsing praat. Hierdie toestemmingsvorm mag moontlik woorde bevat wat jy nie verstaan nie. Vra asseblief vir my om te stop wanneer ons deur die inligting gaan en ons sal tyd bestee om te verduidelik. As jy later vrae het, kan jy dit enige tyd stel.

Doel van die navorsing

Toegang tot medisyne en die beskikbaarheid van medisyne kan mense se lewens op verskillende maniere beïnvloed. Ons wil graag ondersoek doen na toegang tot medisyne in jou gemeenskap. Maar voordat ons dit kan doen, glo ons dat dit noodsaaklik is om te leer watter medisyne jy gebruik. Jou inligting kan baie help om ons te laat verstaan en weet hoe pasiënte toegang kry tot medisyne en dit kan toekomstige beleidsbesluite en -ingrypings rig.

Tipe Navorsing

Hierdie navorsing behels u deelname aan ’n onderhoud wat ongeveer 1 uur van u tyd in beslag sal neem.

Seleksie van Deelnemers

U word uitgenooi om deel te neem aan hierdie navorsing omdat u gekies is uit pasiënte wat medisyne by hierdie plek kom afhaal.

Vrywillige Deelname

U deelname aan hierdie navorsing is totaal vrywillig. U kan kies of u wil deelneem of nie. Indien u verkies om nie deel te neem nie, sal die gesondheidsdienste wat u by hierdie fasiliteit ontvang, voortgaan en niks sal verander nie.

Prosedures

Om meer uit te vind oor wat u dink van die medisyne wat u gebruik, sal ons graag met u wil sit en ’n paar dinge bespreek. Om daardie rede sal ’n onderhoud gevoer word deur _____ en ek sal terselfdertyd neerskryf wat u sê. Die inligting wat opgeteken word is vertroulik, dus sal niemand behalwe ek self en my navorsingspan toegang hê tot die inligting wat gedurende die onderhoud opgeteken is. Die onderhoud sal ongeveer 20 minute van u tyd in beslag neem. Indien daar tydens die onderhoud ‘n bepaalde vraag is wat u nie wil beantwoord nie, kan u so sê en dan sal die onderhoudvoerder aanbeweeg na die volgende vraag.

Risiko’s en Ongemak

Daar bestaan ’n risiko dat u toevallig persoonlike of vertroulike inligting mag deel, of dat u ongemaklik voel om oor sekere van die onderwerpe te praat. Ons wil egter nie hê dat dit moet gebeur nie. U hoef nie ’n vraag te beantwoord of deel te neem aan die onderhoud as u voel dat die vraag (vrae) te persoonlik is of as u ongemaklik voel om daaroor te praat nie.

Voordele

Ons kan u nie vergoed vir u deelname aan die onderhoud nie, maar u deelname help ons om ‘n beter begrip te kry van die maniere waarop mense toegang kry tot medisyne.

Vertroulikheid

Die navorsing wat in die gemeenskap gedoen word, kan dalk aandag trek en as u deelneem mag ander mense in die gemeenskap dalk aan u vrae stel. Ons sal nie inligting oor u met enigeen buite die navorsingspan deel nie. Die inligting wat ons uit hierdie navorsingsprojek bekom sal privaat gehou word. Enige inligting oor u sal ’n nommer daarop hê in plaas van u naam en daardie inligting sal ons agter slot en grendel bewaar.

Reg om te weier of te onttrek

Deelname aan hierdie studie is heeltemal vrywillig en u mag besluit om nie aan die onderhoud deel te neem nie of om op enige tydstip die onderhoud te beëindig. Indien u sou verkies om nie aan die studie deel te neem nie, sal dit vir u geen probleme skep nie, en dit sal nie u gesondheidsorg op enige wyse beïnvloed nie.

Wie om te kontak
Indien u enige vrae het, kan u dit nou of later stel. Indien u die vrae later wil stel, kan u met enige van die volgende persone in verbinding tree:

- Projekkoördineerder: Dr. Kim Ward
    - Tel: 021-9599386/0715234343
    - E-pos: bmagadzire@uwc.ac.za
- Studieleier: Dr. Kim Ward
    - Tel: 021-9593340
    - E-pos: kward@uwc.ac.za

Hierdie navorsing is deur die Senaat van die Universiteit van Wes-Kaapland se Navorsings- en Internasionale Betrekkinge-Komitee beoordeel en goedgekeur. Indien u meer inligting oor hierdie komitee verlang, kontak asseblief die Voorsitter by 021-959 2949.

UKUFIKELELA KUMAYEZA E- MZANTSI AFRIKA

ISiqinisekiso seMvume – izigulana ezikwaziyo ukufunda nokubhala

INOMBOLO YOKUFUNDA YESIGULANA:_____

Isibhengezo sesigulana

"Ndimenyelwe ukuba ndithabathe inxaxheba kuphando malunga nofikelelo kumayeza. Ndiyaqonda ukuba ndiza kuthabatha inxaxheba kudliwanondlebe. Ndazisiwe ukuba imingcipheko mincinane kwaye ndiyazi ukuba akuzi kubakho nzuzo eza kum ubuqu. Ndilinikiwe igama nedilesi yomphandi onokuqhagamshelwa lula."

"Ndilufundile ulwazi oluphumayo, okanye ndilufundelwe. Ndiye ndanalo ithuba lokubuza imibuzo malunga nalo kwaye nayo nayiphi na imibuzo endiyibuzileyo iphendulwe ndaza ndaneliseka. Ndinikezela ngemvume ngokuzithandela ukuba ndibe ngumthabathi-nxaxheba kwesi sifundo kwaye ndiyaqonda ukuba ndinalo ilungelo lokurhoxa kudlilwanondlebe ngalo naliphi na ixesha ngaphandle kokuba oko kuchaphazele inkathalelo yempilo yam."

Bhala ngoonobumba igama lomthabathi-nxaxheba: _____

Umtyikityo womthabathi-nxaxheba: _____

INdawo kunye noMhla (umhla-inyanga-unyaka):_____

Inombolo yemfonomfono: _____

Isibhengezo somphandi wangaphandle

"Ndifundele ngokuchanekileyo okanye ndingqinele ngokuchanekileyo ufundo oluchanekileyo ifomu yemvume umthabathi-nxaxheba onganomdla, kwaye lo mntu ube nethuba lokubuza imibuzo. Ndiyaqinisekisa ukuba lo mntu unikezele ngemvume ngokukhululekileyo."

Bhala phantsi ngoonobumba igama lomphandi wangaphandle: _____

Umtyikityo womphandi wangaphandle: _____

INdawo kunye noMhla (umhla-inyanga-unyaka):_____

Ikopi yale Fomu yeMvume eQondayo ibonelelwe kumthabathi-nxaxheba (oonobumba begama lomphandi wangaphandle, _____).

UKUFIKELELA KUMAYEZA E-MZANTSI AFRICA

ISiqinisekiso seMvume - izigulana ezingakwaziyo ukufunda nokubhala

INOMBOLO YOKUFUNDA YESIGULANA:_____

Isibhengezo sesigulana – esifundelwe isigulana

"Ndimenyelwe ukuba ndithabathe inxaxheba kuphando malunga nofikelelo kumayeza. Ndiyaqonda ukuba ndiza kuthabatha inxaxheba kudliwanondlebe. Ndazisiwe ukuba imingcipheko mincinane kwaye ndiyazi ukuba akuzi kubakho nzuzo eza kum ubuqu. Ndilinikiwe igama nedilesi yomphandi onokuqhagamshelwa lula. Ndilufundile ulwazi oluphumayo, okanye ndilufundelwe. Ndiye ndanalo ithuba lokubuza imibuzo malunga nalo kwaye nayo nayiphi na imibuzo endiyibuzileyo iphendulwe ndaza ndaneliseka. Ndinikezela ngemvume ngokuzithandela ukuba ndibe ngumthabathi-nxaxheba kwesi sifundo kwaye ndiyaqonda ukuba ndinalo ilungelo lokurhoxa kudlilwanondlebe ngalo naliphi na ixesha ngaphandle kokuba oko kuchaphazele inkathalelo yempilo yam."

Ingqina

"NdiLubonile ufundo oluchanekileyo loxwebhu lolwazi kwakunye nolwefomu yemvume eya kumthabathi-nxaxheba onganomdla, kwaye lo mntu ube nethuba lokubuza imibuzo. Ndiyaqinisekisa ukuba Io mntu unikezele ngemvume ngokukhululekileyo."

Bhala ngoonobumba igama lengqina: _____

Umtyikityo wengqina: _____

INdawo kunye noMhla (umhla-inyanga-unyaka):_____

Ushcilelo lobhontsi womthabathi-nxaxheba:

Inombolo yemfonomfono yomthabathi-nxaxheba:_____

Isibhengezo somphandi wangaphandle

"NdiLubonile ufundo oluchanekileyo loxwebhu lolwazi kwakunye nolwefomu yemvume eya kumthabathi-nxaxheba onganomdla, kwaye lo mntu ube nethuba lokubuza imibuzo. Ndiyaqinisekisa ukuba Io mntu unikezele ngemvume ngokukhululekileyo."

Bhala phantsi ngoonobumba igama lomphandi wangaphandle: _____

Umtyikityo womphandi wangaphandle: _____

INdawo kunye noMhla (umhla-inyanga-unyaka):_____

Ikopi yale Fomu yeMvume eQondayo ibonelelwe kumthabathi-nxaxheba (oonobumba begama lomphandi wangaphandle, _____).

UKUFIKELELA KUMAYEZA E- MZANTSI AFRIKA

ISiqinisekiso seMvume – izigulana ezikwaziyo ukufunda nokubhala

INOMBOLO YOKUFUNDA YESIGULANA:_____

Isibhengezo sesigulana

“Ndimenyelwe ukuba ndithabathe inxaxheba kuphando malunga nofikelelo kumayeza. Ndiyaqonda ukuba ndiza kuthabatha inxaxheba kudliwanondlebe. Ndazisiwe ukuba imingcipheko mincinane kwaye ndiyazi ukuba akuzi kubakho nzuzo eza kum ubuqu. Ndilinikiwe igama nedilesi yomphandi onokuqhagamshelwa lula.”

“Ndilufundile ulwazi oluphumayo, okanye ndilufundelwe. Ndiye ndanalo ithuba lokubuza imibuzo malunga nalo kwaye nayo nayiphi na imibuzo endiyibuzileyo iphendulwe ndaza ndaneliseka. Ndinikezela ngemvume ngokuzithandela ukuba ndibe ngumthabathi-nxaxheba kwesi sifundo kwaye ndiyaqonda ukuba ndinalo ilungelo lokurhoxa kudlilwanondlebe ngalo naliphi na ixesha ngaphandle kokuba oko kuchaphazele inkathalelo yempilo yam.”

Bhala ngoonobumba igama lomthabathi-nxaxheba: _____

Umtyikityo womthabathi-nxaxheba: _____

INdawo kunye noMhla (umhla-inyanga-unyaka):_____

Inombolo yemfonomfono: _____

Isibhengezo somphandi wangaphandle

“Ndifundele ngokuchanekileyo okanye ndingqinele ngokuchanekileyo ufundo oluchanekileyo ifomu yemvume umthabathi-nxaxheba onganomdla, kwaye lo mntu ube nethuba lokubuza imibuzo. Ndiyaqinisekisa ukuba lo mntu unikezele ngemvume ngokukhululekileyo.”

Bhala phantsi ngoonobumba igama lomphandi wangaphandle: _____

Umtyikityo womphandi wangaphandle: _____

INdawo kunye noMhla (umhla-inyanga-unyaka):_____

Ikopi yale Fomu yeMvume eQondayo ibonelelwe kumthabathi-nxaxheba (oonobumba begama lomphandi wangaphandle, _____).

UKUFIKELELA KUMAYEZA E-MZANTSI AFRICA

ISiqinisekiso seMvume - izigulana ezingakwaziyo ukufunda nokubhala

INOMBOLO YOKUFUNDA YESIGULANA:_____

Isibhengezo sesigulana – esifundelwe isigulana

“Ndimenyelwe ukuba ndithabathe inxaxheba kuphando malunga nofikelelo kumayeza. Ndiyaqonda ukuba ndiza kuthabatha inxaxheba kudliwanondlebe. Ndazisiwe ukuba imingcipheko mincinane kwaye ndiyazi ukuba akuzi kubakho nzuzo eza kum ubuqu. Ndilinikiwe igama nedilesi yomphandi onokuqhagamshelwa lula. Ndilufundile ulwazi oluphumayo, okanye ndilufundelwe. Ndiye ndanalo ithuba lokubuza imibuzo malunga nalo kwaye nayo nayiphi na imibuzo endiyibuzileyo iphendulwe ndaza ndaneliseka. Ndinikezela ngemvume ngokuzithandela ukuba ndibe ngumthabathi-nxaxheba kwesi sifundo kwaye ndiyaqonda ukuba ndinalo ilungelo lokurhoxa kudlilwanondlebe ngalo naliphi na ixesha ngaphandle kokuba oko kuchaphazele inkathalelo yempilo yam.”

Ingqina

“Ndilubonile ufundo oluchanekileyo loxwebhu lolwazi kwakunye nolwefomu yemvume eya kumthabathi-nxaxheba onganomdla, kwaye lo mntu ube nethuba lokubuza imibuzo. Ndiyaqinisekisa ukuba lo mntu unikezele ngemvume ngokukhululekileyo.”

Bhala ngoonobumba igama lengqina: _____

Umtyikityo wengqina: _____

INdawo kunye noMhla (umhla-inyanga-unyaka):_____

Ushcilelo lobhontsi womthabathi-nxaxheba:

Inombolo yemfonomfono yomthabathi-nxaxheba:_____

Isibhengezo somphandi wangaphandle

“NdiIubonile ufundo oluchanekileyo loxwebhu lolwazi kwakunye nolwefomu yemvume eya kumthabathi-nxaxheba onganomdla, kwaye lo mntu ube nethuba lokubuza imibuzo. Ndiyaqinisekisa ukuba Io mntu unikezele ngemvume ngokukhululekileyo.”

Bhala phantsi ngoonobumba igama lomphandi wangaphandle: _____

Umtyikityo womphandi wangaphandle: _____

INdawo kunye noMhla (umhla-inyanga-unyaka):_____

Ikopi yale Fomu yeMvume eQondayo ibonelelwe kumthabathi-nxaxheba (oonobumba begama lomphandi wangaphandle, _____).

Appendix 5: Data collection tools

SITUATIONAL ANALYSIS

Key Informant Interview Guide: Health providers in public sector

Respondent Characteristics and Site	**Date of interview**		

Respondent ID		**Tracer Medicines**		
Type of Provider		**Clinic or group**		
Highest degree		**Health System Level**		
Sex	*1 Male*	*2 Female*	**Health Sector**	*1 Public*	*2 Private*
Age				

---

1. Professional Activities

Describe your roles and activities in this clinic.

How long have you been practicing this profession?

In what kinds of other clinics have you worked in besides this one?

Probe: Do you work in both public and private sectors?

Probe: Which levels of the health system have you worked in?

Probe: Have you worked in a different district or province?

2. Conditions Treated

Do you treat any of the following conditions?

*Diabetes Type II

*HIV

3. Medicines Available

What medicines are available for these conditions? (*Probe for as many as can be named)*

4. Prescriber Use of TM

Which medicines do you prefer to use for these conditions?

Probe: For what reasons do you choose these medicines?

Are you familiar with the following medicines? *(List TMs based on grouping)*

Probe: Have you used them in your practice, in past or present?

Probe: What are your impressions of their ease of use and efficacy?

What influences your treatment decisions?

Scientific literature

Government policies and regulations

Treatment experiences with patients

5. Effectiveness of TM

How effective are these medicines that were mentioned in treating the conditions?

(List relevant health problems / medicines sequentially)

What treatment guidelines do you use for the medicines you described?

Probe: Are these guidelines effective for the cases that you see?

Probe: Are there situations in which you would use a different strategy with the medicines. What benefits and risks are there in this approach?

Probe: Are there situations when you would combine the medicines with other types of medicines? *(e.g., anti-malarial with anti-biotic)*

6. Quality of TM

Do you have concerns about legitimacy, quality and safety that influence whether you recommend branded or generic medicines to patients?

What factors might contribute to the entry and circulation of fake medicines and medicines of poor quality into the supply chain?

Probe: Are you aware of steps that are being taken at international, national or local levels to prevent these products from circulating?

7. Problems with TM

What challenges or risks have you encountered with these medicines?

Probe: Are there any specific challenges or risks in using combination therapies?

(relevant for TMs: e.g. lamivudine)

8. Patients' Appropriate Use

What are the most significant factors affecting patient adherence with treatment?

Probe about the following issues for each tracer medicine if not mentioned spontaneously:

Poor tolerance for medicine side effects; Pill burden; Diet-related issues; Patients' daily habits; Affordability of medicine; Availability of medicines; Limited access to clinic and pharmacy; Concern about the safety or effectiveness of the medicine; Limited understanding about the medicine or illness; Fear of social exposure and stigma within family or community; Language and other cultural barriers in your interactions with them.

How do you manage adherence-related challenges or adverse events with the patients?

Probe: Are there specific barriers to adherence that come with different medicines?

Probe: How do patients communicate their concerns to you?

9. Use for Other Conditions

Do you use the medicines for other health conditions other than what is indicated?

Probe: Are these medicines effective in treating these conditions?

Are other providers or clinics using these medicines for other conditions?

Do patients use these medicines for conditions other than what is indicated?

Probe: How do you respond to patient requests or demands for treatments that you have not recommended for them?

10. Misuse

In what ways are these medicines used inappropriately, either by providers, patients or people in the community? Please provide examples if you are aware of any.

11. Patient Access

Where do you refer patients for acquiring the medicines you prescribe for them?

Probe: Do you also refer to private sector pharmacies?

What factors affect your patients' ability to obtain their medicines?

Probe about the following issues if not mentioned spontaneously:

Limited stock of medicines in public or private sector

Cost of medicines

Poor access (e.g., because of distance or transportation problems)

What strategies exist within the health system to help patients overcome these barriers?

Where else might patients obtain medicines if they cannot get them from the recommended sources?

Probe: What access points in the formal sector might patients use?

Chronic Dispensing Unit (CDU) Study

Key Informant Interview Guide (questions will vary according to roles)

Respondent Characteristics and Site

Date of interview					

Respondent ID			**Tracer Medicines**		
Type of Provider			**Clinic or group**		
Highest degree			**Health System Level**		
Sex	*1 Male*	*2 Female*	**Health Sector**	*1 Public*	*2 Private*
Age					

---

1. Describe your roles and activities in this organisation/clinic.
2. How many diabetes (type 2) and/or HIV patients are benefiting from the CDU service (in this facility)?
3. Describe the process/criteria for registering and de-registering patients onto the CDU? Is this effective?
4. What has been your experiences providing medicines to patients through the CDU?
    a. What have been the advantages with regards to Access to Medicines (ATM)?
    b. What have been the disadvantages with regards to ATM?
5. What are the trends of collection and non-collection of medicines in the past 6 to 12 months?
6. What factors hinder some patients from collecting their CDU parcels timely?
7. Are there any differences and/or similarities between the CDU service and the ordinary facility based service?
8. In your view, how can the (i) CDU service be improved on both the operational level and for patients?
9. What contextual, operational, site and patient characteristics need to be considered in the design and implementation of such an intervention?
10. To what extent does the CDU intervention fit into the overall Chronic Care Model?
11. Is there anything else that you would like to add?

Focus Group Discussion Guide with CDU Patients and Non-CDU patients (relevant questions will be asked to each group)

SITE			

Respondent ID		**Clinic or group name**	
Tracer		**Location**	
		Public or Private	*1 Public* / *2 Private*
Interview Start Time		**Urban, Peri-urban, Rural**	*1* / *2* / *3*

"To begin, we would like to ask you some general questions about yourself."

RESPONDENT CHARACTERISTICS

1. Sex	*1* F	*2* M	**2. Age**		**3. Head of household?**	*1* Yes	*0 No*	**4. Number in household**	

Marital status *Tick one only*

Never married	*Married*	*Co-habitating*	*Separated*	*Divorced*	*Widowed*

Place of residence: _____

1 Urban	*2 Peri-urban*	*3 Rural*

Employment status *Tick one only*

Not working	*Retired*	*Student*	*Seasonal Work*	*5 Part-time Work*	*6 Full-time Work*

5.**Occupation** *Tick one only*	*1*	*2*	*3 Small business*	*4 Professional*

Specify	*Unskilled labour*	*Vocational labour*	*owner or manager*	
_____				*5 Other*

9. **Personal income per month**

9.1 **"Is this income regular for most months?"**

1 Yes	*0 No*

Tick one only

10. **Household income per month**

Tick one only

11. **"What is your highest level of education completed?"** *Tick one only*

1 No Schooling	*2 Primary school*	*3 Secondary school*	*4 Vocational school*	*5 University*	*6 Post-graduate*

12. **Religion**

1 Muslim	*2 Protestant*	*3 Catholic*	*4 Pentecostal*	*5 Hindu*	*6 Other (specify):*

13. **How long have you been a CDU patient?**

1. What has been your experiences obtaining medicines (through the CDU)?
2. What have been the:
   i. Advantages
   ii. Disadvantages
3. What factors hinder other patients from coming to collect their CDU parcels?
4. Are there any differences and/or similarities between the CDU service and the ordinary facility based service?
5. In your view, how can access to chronic medicines be improved?
6. Is there anything else that you would like to add?

PLEK			
Datum van onderhoud	*Dag*	*Maand*	*Jaar*

Respondent se ID		**Naam van kliniek of groep**	
Tracer Medicine (TM)		**Ligging**	

		Publiek of privaat	*1 Publiek*	*2 Privaat*	
Begintyd van onderhoud		**Stedelik, buitestedelik, landelik**	*1 Stedelik*	*2 Buitestedelik*	*3 Landelik*

"Om mee te begin, sal ons graag vir jou algemene vrae oor jouself wil vra."

EIENSKAPPE VAN RESPONDENT

• **Geslag**	*1* V	*2* M	**2. Ouderdom**		**3. Hoof van huis?**	• Ja	*0 Nee*	**4. Nommer in huishouding**	

• **Huwelikstatus** *Merk slegs een*

• *Nooit getroud*	• *Getroud*	• *Woon saam*	• *Vervreem*	• *Geskei*	• *Weduwee / wewenaar*

• **Woonplek:** _____	*1 Stedelik*	*2 Buitestedelik*	*3 Landelik*

• **Werkstatus** *Merk slegs een*	*1. Werk nie*	*1. Afgetree*	1. *Student*	*1. Seisoenswerk*	*5 Deeltydse werk*	*6 Voltydse werk*

• **Beroep** *Merk slegs een* *Spesifiseer* _____	*1 Ongeskoolde arbeid*	*2 Beroepsarbeid*	*3 Eienaar of bestuurder van 'n klein sakeonderneming*	*4 Professioneel*
				5 Ander

• **Persoonlike inkomste per maand**		9.1 ***"*Is hierdie inkomste gereeld vir die meeste maande?"**	*1 Ja*	*0 Nee*

Merk slegs een

• **Huishoudelike inkomste per maand**	

Merk slegs een

"Wat is jou hoogste vlak van voltooide onderrig?" *Merk slegs een*

• *Geen onderrig*	• *Primêre skool*	• *Sekondêre skool*	• *Beroepskool*	• *Universiteit*	• *Na-graads*

• **Geloof**

• *Moslem*	• *Protestant*	• *Katoliek*	• *Pinksterkerk*	*5 Hindoe*	*6 Ander (spesifiseer):*

Fokusgroep-gespreksgids + Telefoniese opvolging

1. Hoe lank is jy al 'n CDU-pasient?
2. Wat is jou ervaringe van die verkryging van medisyne deur die CDU?

3. Wat is die:

   - Voordele
   - Nadele

4. Watter faktore verhinder ander pasiënte om hul CDU-pakkies te kom haal?

5. Is daar enige verskille en/of ooreenkomste tussen die CDU-diens en die gewone fasiliteitsgebaseerde diens?

6. Hoe kan toegang tot kroniese medikasie, volgens jou mening, vebeter word?

7. Is daar enigiets anders wat jy wil byvoeg?

Phando ululanda uMkhondo kuMsebenzisi waMayeza oneQondo eliPhezulu

ISIZA	**Umhla wodliwanondlebe**		

I-ID yoPhendulayo				**IYeza eliPhandwayo**	
Inqanaba lonyango	*1*	*2*	*3*	**IKliniki okanye iqela**	
Ixesha elisikiweyo				**INdawo**	

Oqhuba udliwanondlebe: "Ukuqalisa, singathanda ukukubuza imibuzo nje ngokubanzi malunga nawe isiqu."

IIMPAWU ZALOWO UPHENDULAYO

ISini	*1* F	*2* M	**2. UBudala**		**3. INtloko yosapho?**	Hayi	Ewe	**4. Inani elusatsheni**	

Imeko yomtshato *(Korekisha enye kuphela)*

Zange atshate	*Utshatile*	*Uyahlalisana*	*Wahlukenen eqabane*	*Uqhawule umtshato*	*Ubhujelwe liqabane*

Imeko yengqesho *(Korekisha enye kuphela):*

Akusebenzi	*Uyasebenza*	*Uhleli phantsi*	*Ungumfundi*

Umsebenzi: _____

Ingeniso yesiqu nngokwe [ixesha leyunithi]		8.1 *Uphando:* Ingaba le yingeniso eqhelekileyo? (*Korekisha enye kuphela)*	*1 Hayi*	*2 Ewe*

Ingeniso yosapho ngokwe [ixesha leyunithi]	

*Ingaba une-inshorensi yezempilo?

Hayi	*Ewe*

(*Korekisha enye kuphela)*

Imfundo (elona nqanaba liphezulu ulifumeneyo) *(korekisha enye kuphela)* [sebenzisa izintlu ezisekelezelwe apha elizweni]

Akukho mfundo	*Isikolo samabanga aphantsi*	*Isikolo samabanga aphakamileyo*	*Isikolo somsebenzi wezandla*	*IDyunivesithi*	*Imfundo engaphaya kwesidanga*

Inani leminyaka yokufunda: _____

Inkolo [sebenzisa izintu ezifanelekileyo apha ezliweni]

UBusilamsi	*UbuKrestu*	*UbuHindu*	*UbuBhudi*	*5 Enye (dwelisa):*

Oqhuba udliwanondlebe: "Ngoku, singathanda ukukubuza imibuzo ethile ngokubanzi malunga nempilo yakho."

Isikhokelo sengxoxo zamacela + Ulandelo lwemfonomfono

14. Lixesha elingakanani usisigulane se CDU?
15. Ngawaphi amava okhe wanawo ekufumaneni amayeza nge CDU? Zintoni?
16. Zintoni ezintintela (phazamisa) ezinye izigulane ukuba zizokuthatha iipasile ze CDU?
17. Ukhona umahluko okanye ukufana phakhathi kweenkonzo ze CDU okanye kwiinkonzo zekliniki?
18. Ngokokubona kwakho ufikelelo kumayeza ezifo ezinobuzaza zingaphunulwa njani?
19. Ingaba ikhona enye into engenye ofuna ukuyongeza?

Oqhuba udliwanondlebe: "Enkosi kakhulu ngoncedo lwakho malunga nolu dliwanondlebe."

Phase 3 interviews with key actors

1. Are there important differences in on-the-ground realities and constraints that might substantially alter the feasibility and acceptability of the intervention?
2. Are there important differences in health system arrangements that may mean the arrangement could not work in the same way?
3. Are there important differences in the baseline conditions that may yield different absolute effects even if the relative effectiveness was the same?
4. What insights can be drawn about the intervention, implementation and monitoring and evaluation?
5. Which stakeholder views and experiences which might influence an option's acceptability and its benefits?

Appendix 6: Letters of permission to conduct research

SIPHI Fellowship Programme

Submitted via email: bvanwyk@uwc.ac.za

19 February 2016

Dear Sir,

Re: Application for a SIPHI writing fellowship

I am applying for the SIPHI writing fellowship to spend three months at the Institute of Tropical Medicine, Antwerp during the period April-June 2016, departing on the 2nd of April and returning on the 30th of June.

During this time, I plan to work on one article from my PhD research and on the supporting chapters for my thesis. This fellowship will provide an opportunity to work closely with my co-supervisor, Professor Bruno Marchal.

Thank you for the opportunity to be considered for this fellowship.

Yours faithfully,

Bvudzai P. Magadzire

Institute of Tropical Medicine
Foundation of Public Utility

Department of Public Health
Health Service Organisation unit

Antwerpen, 24 February, 2016

To: The Chair of the PhD Commission
ITM

RE: Registration of PhD candidates & *Social Innovation in Public Health Impulse* programme

Dear colleague,

Since 2014, the Department of Public Health is managing the Social Innovation in Public Health Impulse (SIPHI) fellowship programme. This programme is funded by the Department *Economie, Wetenschap en Innovatie* (EWI) and links the School of Public Health, University of the Western Cape (South Africa) and the ITM through a programme of short doctoral-level fellowships. SIPHI aims at enabling PhD students to take a short "sabbatical", to engage in critical exchange with faculty and speed up their doctoral research.

Besides doctoral workshops, skills labs and other activities at the School of Public Health, University of the Western Cape, a number of exchange visits have been organised whereby PhD students from UWC and ITM have spent time at the other institution.

I would like to inform you that we expect this year Ferdinand Mukubang and Bvudzai Magadzire to stay at ITM in the frame of SIPHI. I am their ITM promotor and Sara Van Belle is co-promotor of Ferdinand Mukubang.

Bvudzai is working on the central drug distribution system in the Western Cape Province, assessing the effectiveness of the central dispensing unit, which prepackages drugs for chronic disease patients and dispatches them to health centres. She is analyzing the bottlenecks in the system that contribute to non-collection of drugs. She is expected to defend her thesis late this year and would come to ITM to finalise 2 papers and start working on writing up the dissertation.

Ferdinand is progressing well, too. His focus is on evaluating the effectiveness and mechanisms that make antiretroviral treatment (ART) clubs work in the Western Cape Province. He started 1,5 years ago and will work on data analysis and publications while in Antwerp. Please find their files attached.

I would like to ask you to register these PhD students.

Yours faithfully,

Bruno Marchal
Bruno Marchal

Institute of Tropical Medicine | Foundation of public utility | RPR 0410.057.701 | IBAN BE 38 2200 5311 1172
Nationalestraat 155 | 2000 Antwerpen | Belgium | Tel: +32 (0)3 247 66 66 | Fax: +32 (0)3 216 14 31 | E-mail: info@itg.be | Website: www.itg.be

UNIVERSITY of the WESTERN CAPE

UNIVERSITY OF THE WESTERN CAPE
FACULTY OF COMMUNITY AND HEALTH SCIENCES

POSTGRADUATE STUDENT PROGRESS REPORT: 2015

13 October 2015

Please Note:
1. **Maximum two pages.**
2. **Report to be forwarded to Faculty Postgraduate Committee via Departmental Postgraduate Committee.**
3. **Supervisor to complete comments on page 2.**

PART A (To be completed by Student)

Candidate Name:	**Bvudzai Priscilla Magadzire**	Student Number:	**3214425**
Programme:	**PhD Public Health**	First Enrolment:	**2012**
Department:	**School of Public Health**	Expected Completion:	**2016**
Supervisor:	**Dr Kim Ward**		
Co-Supervisor(s):	**Prof. Wim Van Damme**		
Title:	**Understanding the dynamics of accessing chronic medicines in the Public sector: Implications for policy in South Africa.**		

OUTLINE MAIN OBJECTIVES FOR PERIOD UNDER REVIEW [Jan – Oct of current year]:

- Data analysis
- Manuscript development for publication
- Conduct selected activities linked to the scoping review

SUMMARY OF PROGRESS:

1. THE OBJECTIVES ACHIEVED:

- Two manuscripts have been completed, both have undergone peer review. One has been re-submitted post revision
- A third manuscript is currently under development
- Screening of abstracts for the scoping review has been completed

2. OTHER ACTIVITIES (*conference attendance, papers published*)

- Writing workshop at the MRC.
- Presented at the 2015 Public Health Association of South Africa (PHASA) Conference.

3. **OTHER COMMENTS (*This section should also be used to highlight any problems encountered over the past year)***

- The publication process for journals generally takes a couple of months and slows the writing process. Also, there is no guarantee that the manuscript will be accepted.

4. THE OBJECTIVES FOR NEXT PERIOD [for subsequent year]

- Development of remaining manuscripts
- Finalise thesis
- Disseminate findings at conferences

Student: Bvudzai Magadzire
Date: 12 October 2015

PART B (To be completed by Supervisor)

5. SUPERVISOR COMMENTS:

Supervisors should give a brief statement on the progress of student. In cases where the student has exceeded the normal registration period, the supervisor should comment on why this is so. Supervisors should also give an indication of the expected date of completion.

I am very please with Bvudzai's progress. She has written three manuscripts this year. Over the next few months she will work on her thesis and revise her manuscripts. She should submit in May 2016.

Supervisor  **Date: 13.10.15**

Endorsement by Departmental PG Coordinator:..... Date:.....

Contact details
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CURRICULUM VITAE

1. **Family name:** **Magadzire**
2. **First names:** **Bvudzai Priscilla**
3. **Gender :** **Female**
4. **Residence status:** **Zimbabwean with South African Permanent Residence**
5. **Education:**

Institution / Dates	Degree(s) or Diploma(s) obtained:
University of Western Cape, South Africa (2012-current)	**PhD Public Health**
Institute of Tropical Medicine, Belgium (2014)	**Health Policy Analysis (short course)**
University of Stellenbosch, South Africa (2009)	**MPhil HIV/AIDS Management**
University of Stellenbosch, South Africa (2008)	**Postgraduate Diploma in HIV/AIDS Management**
Solusi University, Zimbabwe (2006)	**BSc. Environmental Health**

6. **Language skills:** Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
English	1	1	1
Shona	1	1	1
Ndebele/Zulu/Xhosa	5	5	5

7. **Membership of professional bodies:**
   - Health Systems Global (Scientific Committee member for the Health System Global Conference in Vancouver, Canada – 2016)
   - Public Health Association of South Africa

8. **Key Skills:**
   - **Evaluation:** Experience in conducting baseline studies, mid-term reviews, operational research studies and end of project evaluations. Such work has been conducted for organisations such as DFID, Save the Children (UK), Mindset Health (3 programmes funded by PEPFAR through JHHESA), Networking AIDS Communities of South Africa, Ithembalabantu Community Resource Centres and provincial government departments.
   - **Research:** Experience in participating in the research process beginning from developing research proposals, protocols, work plans, budgets, undertaking data collection and analysis and report writing. Experience in qualitative and basic quantitative research designs.
   - **Project management:** Demonstrated successful supervision and management of multiple research projects, managing interface with governments and civil society**.**
   - **Networking and business development:** Liaising and maintaining relationships with donor agencies, NGOs, government departments. Facilitating interactive platforms for dissemination of research findings and information exchange between stakeholders; forging strategic partnerships with civil society, writing newsletter articles for circulation within the development sector. I have also created a database of consultants working in the Development sector in South Africa and the region.
   - **Teaching:** Guest lecturer for two Masters in Public Health courses (Qualitative Research Methods and Public Health and Epidemiology).

8. **Other short courses attended**: Theory Based Impact Evaluation (3ie), Monitoring and Evaluation Fundamentals (USAID), Research methods (Stellenbosch University), Atlas Ti (University of the Western Cape).

9. **Awards and Fellowships**
   - **Current: PhD Fellowship on Health Policy, Systems Complexity and Social Change** from the South African National Research Foundation (NRF), through the University of the Western Cape, ending end of 2015.
   - **2014**: Awarded a full scholarship by the Belgian Cooperation for Development to take a short course in **Health Policy Analysis** at the Institute of Tropical Medicine, Antwerp.
   - **2014: African Doctoral Dissertation Research Fellowship** awarded through the African Population & Health Research Centre and funded by Canada's International Development Research Centre (IDRC).
   - **2013: Emerging Voices for Global Health** - an initiative of the Institute of Tropical Medicine (Belgium aimed at empowering promising global health researchers with intensive skills and training facilitate their participation in global health conferences.
   - ***2010*: Young Researchers' Initiative** - a year-long structured scientific writing mentorship programme which was run by the Health Economics and HIV/AIDS Research Division (HEARD) at the University of Kwa Zulu – Natal.

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10. Work Experience

Date	Location	Company	Position	Description of work
2012-current	South Africa	University of Western Cape	PhD Fellow	As a **Doctoral Research Fellow in Health Policy and Systems Research**, my PhD research is centred on improving access to medicines and retention in care at the primary care level for people with chronic lifelong conditions with a particular focus on HIV, Diabetes and Hypertension. This is a collaborative project with the Western Cape Department of Health and involves identifying, health system and population related factors affecting medicines access and identifying innovations at primary care and community level.
Current	South Africa	WHO Alliance for Health Policy & Systems Research through the South African Medical Research Council	Lead Researcher	Conceptualizing and designing a systematic review in relation to a **local issue of policy priority on access to medicines**. The scoping review seeks to identify **community based models for distributing medicines for chronic diseases** with an intention to inform public health policy development in this area.
2014	Home-based	Karolinska Institutet, Sweden	Co-Researcher	Desk review and write up of a chapter on the global status of Gender and TB.
2014	SADC	DFID/SARPAM	Consultant	Develop a credible Theory of Change and undertake **policy analysis** to demonstrate civil society influence on **national and regional pharmaceutical policies and decisions relating to access to medicines in the Southern Africa**.
2013	South Africa	University of the Western Cape/South African Medical Research Council	Researcher	Investigating access to primary healthcare (PHC) for the migrant population in the Western Cape and implications for policy.
2010-2013	South Africa	University of the Western Cape (funded by the EU)	Researcher	"**Accessing Medicines in Africa and South Asia (AMASA)** project was a 3-year multi country project funded by the EU. The research investigated how the interplay of patent regimes, pharmaceutical regulation, availability of drug production facilities, primary health care infrastructure, service provision and engagement by foreign donors influence access to medicines within five health care areas – maternal health, **HIV/AIDS**, malaria, TB, and mental health.
2012	South Africa	Save the Children UK	Lead Evaluator	Conducted an end of term Evaluation of Save the Children's Protection Programme for Children on the Move (unaccompanied migrant minors) in Limpopo Province. Designed evaluation protocol, data collection tools and conducted data collection, analysis, presentation of findings and report writing.
2011	South Africa	John Snow Inc. (JSI)	Researcher/ Team Leader	Endline survey for the **LIVESTRONG & JSI Cancer Anti-Stigma Initiative**. The survey was a follow-up to the baseline conducted in 2010 to assess changes in knowledge, attitudes and practices regarding cancer in 3 provinces (Gauteng, Western & Eastern Cape).
2011	South Africa	(SARPAM), SADC Secretariat, African Development Bank, Harvard School of Public Health	Country group facilitator	The **SADC Flagship Policy Course on Pharmaceutical Reform** was held for policy makers, regulators, civil society and private sector in all SADC countries.
2010	Gauteng, Limpopo	Save the Children UK	Lead Researcher	**Baseline study for the programme "Providing young people with skills to succeed in South Africa".** SCUK commissioned a baseline analysis of the local labour market to identify what vocational skills were most in demand in the local labour market in South Africa and Zimbabwe, and which of those skills SCUK could effectively deliver through the program to address some of the challenges faced by young migrant workers. The programme also identified potential related opportunities in migrant children's country of origin. The findings were used to inform the programme strategy and track impact on the M&E indicators at the end of the programme.
2010	Western Cape, Eastern Cape, Gauteng	John Snow Inc & Livestrong Anti-Stigma Initiative	Team Leader managing a team of 15 fieldworkers	**Knowledge, Attitudes & Practices (KAP) on Cancer for the JSI & Livestrong Anti-Stigma Initiative.** Overall project leadership including developing a work plan, sampling of households in Orlando West (Gauteng), Mdatshane (Eastern Cape) and Khayelitsha (Western Cape) recruitment and training of fieldworkers, data collection in the three provinces and writing up of fieldwork report.
2009 – 2010	South Africa (National study)	Mindset Health (funded by PEPFAR)	Co-Evaluator/ Fieldwork Team leader	**Programme Evaluation of 2 components of the PEPFAR funded National Mindset Health Programme**. This was a national study and I was involved in study design and fieldwork in PHC facilities.
2010	South Africa	Stellenbosch University/Futures Group	Facilitator	**Facilitation of the HIV and AIDS Policy in the workplace module (2010)**: Selected by the Health Policy Initiative (Futures Group) and University of Stellenbosch to facilitate small group tutorials for the module on **HIV/AIDS Policy in the workplace** as part of the Postgraduate Diploma in HIV/AIDS Programme. I tutored a group of **35 educators from the Mpumalanga Department of Education**.

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Date	Location	Company	Position	Description of work
2010	South Africa	World Vision South Africa	Consultant	**Consolidation of the Programme Design Document for World Vision South Africa (2010)**: Consolidated the Programme Design Document (2010-2015) for the Mbekweni Area Development Programme's 4 projects covering Health, Nutrition and HIV, Economic Empowerment, Child Development and Sponsorship.
2009	South Africa	Centre for Municipal Research & Advise (funded by Netherlands Govt)	Co-Evaluator	**Centre for Municipal Research and Advise**: The overall objective of the project is to establish a more effective HIV and AIDS responsive local government in South Africa by adopting a coordinated municipal response, building on previous experiences and research and aiming at the development of good practices to be disseminated among all South African municipalities.
2009	South Africa	Ithembalabantu (funded by CODA UK)	Lead Evaluator	**External Evaluation of the Ithembalabantu Community Social Development Project**, a network of 9 community advise offices in KZN) with support from Comic Relief and CODA International.
2009	South Africa	Networking AIDS Societies of South Africa (funded by Global Fund, DOH e.t.c)	Co-Evaluator	**Evaluation of the Networking AIDS Community of South Africa (NACOSA)'s Capacity Building (mentoring and training) Programme** funded by GFATM: I put together an evaluation methodology and work plan on behalf of a team of 6 people. The evaluation comprised of a literature review, key informant interviews with representatives from 24 AIDS service organisations in the Western Cape, Northern Cape and Eastern Cape. In addition, interviews with key people at NACOSA, funders such as Department of Health, and Global Fund, Starfish Greathearts were conducted. After this, I participated in the findings discussions and contributed in report writing.
2009	South Africa	Mindset Health (funded by PEPAR)	Co-Evaluator	**Evaluation of Mindset Health Programme**: Part of a team of 4 that evaluated the impact of Mindset e-Health programme. The overall objective of this evaluation was to establish whether *Mindset 's HIV & TB related content is both accurate and well-aligned with the priorities and needs of the South African National Department of Health which are expressed through the National Strategic Framework for HIV & STIs (NSP 2007-2011)* and also whether Mindset has effectively facilitated communication for government and other partners. The study was qualitative in nature involving **review of national policy** and project documents; telephonic and face-to-face interviews in Gauteng, Eastern Cape and Western Cape with a sample of key stakeholders. Finally, I was responsible for the write up of a section of the report.
2009	South Africa	Department of Cultural Affairs & Sport	Co-Evaluator	**Formative Evaluation of the Stars in their Eyes Programme**: Conducted an evaluation of the "Stars in their Eyes", a Dutch funded football development programme which sought to take advantage of the 2010 FIFA World Cup to uplift under-privileged communities in the Western Cape. The programme also made use of soccer as a platform to reach out to communities with ***HIV related education*** through life-skills sessions. A co-component of the programme was also to ensure that ***women are also included in the traditionally male dominated sport***.
2008	Zimbabwe	Zimbabwe AIDS Prevention Project (funded by UK DFID)	Researcher	**Operational Research on Male Involvement in Prevention of Mother to Child Transmission (PMTCT) of HIV in selected Ante-and Post-Natal clinics in Zimbabwe**.
2008	Zimbabwe	Elizabeth Glaser Paediatric AIDS Foundation (EGPAF)	Rapporteur	**Workshop on Child Rights and Gender mainstreaming in Prevention of Mother to Child Transmission (PMTCT) programming**, (2008): Rapporteur for the workshop which was hosted by the ***EGPAF*** for the purpose of capacity building their national partners.
2008	Zimbabwe	Zimbabwe Women Resource Centre & Network (funded by ADB)	Researcher	Put together a research methodology for carrying out a **Gender Audit of the National Reproductive Health Policy and the Zimbabwe National HIV/AIDS Strategic Plan (ZNASP) 2006-2011**. This study was commissioned by the Zimbabwe Women Resource Centre and Network. June 2008.
2007	Zimbabwe	National Treasury South Africa & Min. of Finance Uganda (through Jimat Development Consultants)	Research Assistant	Prepared the evaluation methodology and work-plans for the **First Phase evaluation of the Paris Declaration Aid Effectiveness Agenda in South Africa & Uganda** on behalf of the National Treasury and Ministry of Finance respectively.
2007	Zimbabwe	European Commission Humanitarian Office (ECHO)/ CARE International	Research Assistant	**Evaluation of Home Based Care Practices in Zimbabwe**: Provided research support through organisation of stakeholder meetings and information dissemination workshops in Zimbabwe.
2007	Zimbabwe	Plan International/ Jimat Development Consultants	Research Assistant	**Baseline survey for the European Union funded Malaria Programme (2007)**: Prepared research methodology and financial budget for the baseline survey. This study guided the programme that was implemented in 7 districts in Zimbabwe.

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Date	Location	Company	Position	Description of work
2007	Zimbabwe	Jimat Development Consultants	Research Assistant	**Compiled recommendations on the inclusion of the needs of vulnerable groups** (People Living with HIV/AIDS, Orphans and Vulnerable Children, the elderly, the disabled) in water & sanitation projects for the **DFID funded Protracted Relief Programme,** Phase 2.
2007	Zimbabwe	European Union/Jimat Development Consultants	Rapporteur	Rapporteur for the **European Union funded on Trade and Trade Related Study in Zimbabwe**. Captured proceedings from the dissemination workshop and co-wrote the workshop report.
2007	Malawi	World Bank/National AIDS Council/Jimat Development Consultants	Co-Evaluator	**Assessment of the effectiveness of income generating activities (IGAs) for HIV/AIDS impact mitigation interventions in Malawi.**
2007	Zimbabwe	Plan Australia/Burnett Institute/Jimat Development Consultants	Research Assistant	**Evaluation of the 'Reducing Community Vulnerability to HIV/AIDS**. The 3 research questions where around the extent to which the programme: (i) Reduced discrimination, stigma *and denial of the rights of people affected by HIV and AIDS*; (ii) Strengthened capacity of government, NGOs, CBOs and communities to increase the quality and scale of services responding to the needs of people affected by HIV and AIDS and (iii) Increased capacity and opportunities for *orphans and vulnerable children* to develop within their communities using the Sustainable Livelihoods Approach.
2007	Zimbabwe	JBIC/Jimat Development Consultants	Research Assistant	**Survey for the Japanese Bank for International Cooperation (JBIC), 2007**. Part of a team of fieldworkers who conducted household interviews with beneficiaries of the development programme to assess levels of satisfaction among users of the installed fixed telephones.
2006	Zimbabwe	ECHO/Jimat Development Consultants/	Research Assistant	**Evaluation of the European Commission Humanitarian Office (ECHO) Brussels Food Security, HIV/AIDS and Water & Sanitation and projects under the 2004-2005 funding agreements**.
2006	Zimbabwe	Masters dissertation	Research Assistant	Male Involvement in Prevention of Parent to Child Transmission (PMTCT) of the HIV virus (Masters in Social Work thesis). I was responsible for cleaning the data and coding it into an excel spreadsheet.
2006	Zimbabwe	Plan International/ Jimat Development Consultants	Research Assistant	**Evaluation of the 5-year Primary Health Care Programme** for Plan International (2006). The programme focused on increasing access to safe water and sanitation; **HIV/AIDS impact mitigation through PMTCT, nutrition gardens** and **community based health education using IEC advocacy material** as well as malaria control; **School-based Health programmes**.
2006	Zimbabwe	Plan International/ Jimat Development Consultants	Research Assistant	**Evaluation of Plan International's Early Childhood Care and Development programme for Orphans and Vulnerable Children in Zimbabwe,** (2006). I was a Research Assistant and I facilitated focus group discussions and interviews with programme beneficiaries.

11. Conference Presentations

- Public Health Association of South Africa (PHASA), 2015**. (Title: Medicines are essential to maintain a stable & productive population: the Chronic Dispensing Unit as a mechanism to improve Access to Medicines.).** Magadzire BP, Mathole, T & Ward K.
- Western Cape Government (Health) Provincial Research Day, 2015. **(Title: Medicines are essential to maintain a stable & productive population: the Chronic Dispensing Unit as a mechanism to improve Access to Medicines.).** Magadzire BP, Mathole, T & Ward K.
- AIDS 2014, Melbourne, Australia. **(Title: Improving supply chain efficiency through centralised dispensing of chronic medicines: a case study of the Chronic Dispensing Unit in the Western Cape Province, South Africa).** Magadzire BP, Ward K, Matthys T.
- Access to Medicines Dissemination Conference 2013, London, UK. **(Title: Frontline health workers as brokers: Provider perceptions, experiences and mitigating strategies to improve access to essential medicines in South Africa).**
- **Public Health Association of South Africa (**PHASA) 2013, Cape Town, SA. **(Ensuring equitable access to medicines: Lessons from the rural and urban settings in the Eastern Cape Province).** Magadzire BP, Ward K, Budden A, Sanders D.
- UWC Research Day 2013, Cape Town, SA. **(Title: Whose Role Is It Anyway? Key informant perspectives on substance abuse and access to medicines in the Western Cape Province, South Africa).** Magadzire BP, Ward K, Sanders D.

12. Publications

- Magadzire BP, Budden A, Ward K, Jeffery R, Sanders D. (2014). **Frontline health workers as brokers: Provider perceptions, experiences and mitigating strategies to improve access to essential medicines in South Africa.** *BMC Health Services Research.*

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- Magadzire BP, Marchal B, Ward K. (2015). **Improving supply chain efficiency through centralised dispensing of chronic medicines: a case study of the Chronic Dispensing Unit in the Western Cape Province, South Africa.** *BMC Health Services Research.*
- Magadzire BP, Mathole, T, Ward K (under review)**. Variation in definition of patient stability at primary health care facilities: implications for patient enrollment onto a centralised dispensing programme in South Africa.** *PlosONE*.

13. Other relevant information:

- Reviewer for BMC Pregnancy and Child Birth (2015)
- Reviewer for the Journal of BMC Pharmaceutical Policy and Practice (2014)
- On-going scholarly exchanges on women and migration in Sub-Saharan Africa with Professor Elaine McDuff, Truman University, USA.

UNIVERSITY of the
WESTERN CAPE

OFFICE OF THE DEAN
DEPARTMENT OF RESEARCH DEVELOPMENT

31 October 2013

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Ms BV Magadzire (School of Public Health)

Research Project:	Understanding the dynamics of accessing chronic medicines in the public sector: Implications for policy in South Africa.
Registration no:	13/9/40

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

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

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

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