North West Province Department of Health and BroadReach Healthcare Partnership Model

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Abstract South Africa has the largest number of people living with HIV globally, and the world's largest antiretroviral therapy (ART) programme with over 2 million people estimated to have received ART by 2013 [2,3]. Recognizing the significant constraints on public sector resources to meet increasing public demand and need for ART initiation, BroadReach Healthcare and the North West Province Department of Health (DOH) implemented the private General Practitioner (GP) 'Down Referral' Model commencing in 2005 and ongoing, to provide HIV treatment and care for patients stable on ART. Implementation of this model leverages existing capacity within the private sector, shifting delivery of ART in stable patients from hospitals to lower-level private health facilities, and allowing public facilities to focus on initiating new ART eligible patients and managing complex cases. Over 10 years, the model has proved highly successful where the probability of patient survival at 12 and 48 months is 99% and 89% respectively, and retention at 48 months remains high at 94% [7]. This model is a simple, robust, evidence based and easily replicable model for rolling out a defined health service at scale, and further demonstrates potential for public private partnerships in addressing the burden of chronic disease.

Keywords Private Public Partnership in Health Care Service Delivery

and the improved survival of people living with HIV, the South African health system has to contend with an unprecedented demand for HIV/AIDS-related health care resources.

In spite of the above, there has been an astronomical increase in the number of people living with HIV on treatment in South Africa. Estimates show that the number of people on antiretroviral therapy in South Africa increased from less than 600,000 in 2008 to over 2,100,000 in 2013 [3]. However, a significant proportion of people requiring treatment still do not have access, with the treatment gap estimated to be as high as 45% in certain populations [4]. In addition, the current ART coverage success is fraught with challenges of poor patient retention, suboptimal adherence and treatment failure, partly due to insufficient human resources and high patient load for the limited capacities in health facilities.

The North West Department of Health ART program for HIV/AIDS at Dr. Kenneth Kaunda District is coordinated through Klerksdorp/Tshepong hospital complex. In 2005 the hospital complex recognized that the Wellness Centre in Tshepong hospital would not be able to cope with the growing number of patients requiring ART. BroadReach was approached to explore an alternative solution to meet the growing demand. The General Practitioners (GPs) programme was launched in September 2005 at Klerksdorp/Tshepong hospital complex. The programme was also expanded to Potchefstroom Hospital and Mafikeng hospital complexes in 2009 and 2010 respectively. In 2012 the programme was further expanded to include two clinics that form part of the Tshepong hospital catchment area.

1. Background

South Africa is the country with the largest number of people living with HIV in the world [1]. It also has the world's largest antiretroviral therapy (ART) programme, with over 2 million people estimated to have received ART by 2013 [2, 3]. With the advances in antiretroviral treatment

2. Program Goal

The programme shifts the delivery of ART in stable patients from hospitals to lower-level private health facilities

(‘down referral’), allowing public facilities to focus on initiating new ART-eligible patients and managing complicated cases. Private GPs under this model manage acute comorbidities, complications and other chronic conditions, including diabetes and cardiovascular diseases.

The purpose of this treatment programme is to provide additional support to the public sector health system in order to meet the demand for HIV care and treatment by leveraging existing capacity within the private sector. The programme utilizes private sector GPs to provide ongoing HIV care and support as well as the management of co-morbidities to public sector patients. The program operates in accordance with all South African Government (SAG) Department of Health rules and guidelines for managing patients on ART. Patients in the Down Referral Model therefore have access to the same ART drugs as those in the public sector, and follow the same visit and laboratory monitoring schedules.

3. Stakeholders and Roles

The primary stakeholders in the GP Down Referral Model are the North West Department of Health, BroadReach and the General Practitioners (GPs). BroadReach is responsible for overall program coordination; paying GP consultation fees; monitoring and evaluation (including GP performance and patient progress); GP and patient training; and reporting to the Department of Health, the Hospital and to the US President’s Emergency Plan For AIDS Relief (PEPFAR). GPs provide ongoing HIV care (monthly) and clinical monitoring of patients, write monthly prescriptions, refer patients to the hospital for any complications, complete clinical forms, and distribute antiretroviral drugs that are dispensed by hospital pharmacies.

Wellness centers based at three hospitals (Tshepong, Mafikeng and Potchefstroom) are responsible for patient initiation on ART. Once stable, patients are either down referred to primary healthcare clinic (PHC) or to a GP of their choice. Hospitals also provide care for patients referred for any complications, opportunistic infections and antenatal

care. Pharmacies located at the hospital procure and distribute all patient medications to GP offices for patient collection. National Health Laboratory Services (NHLS) is responsible for blood tests. All three partners are signatories on a Memorandum of Understanding (MOU) that was signed in November 2005 and was renewed on 02 April 2013.

4. Patient Enrollment

Doctors at the public health facilities routinely screen patient files in order to identify patients who are eligible for down referral. Eligibility criteria for down referral is that a patient has been on ART for a minimum of six months; has a suppressed viral load (VL <1000) in the past six months, and an absence of opportunistic infections. Historically, patients with chronic conditions were excluded from the down-referral program but were later included in the expanded scope of the programme to include diabetes and hypertension. Once a patient is deemed eligible for down referral, they are given a choice to have follow-up visits at their local clinic, or alternatively to join the down referral program and select a GP of their choice. (See fig.1 below for process flow).

Once a patient has selected the down referral program, a referral document (down referral form) is completed by the doctor. The document contains relevant information about the patient, their ART regimen and recent lab results. The patient is then instructed to take the form and visit the Regional Coordinator Assistant (RCA) who is located at Hospital Wellness centres for orientation to the program.

The patient orientation sessions are conducted either individually or in small groups on a daily basis. Patient orientation includes the provision of adherence tools, an education session on HIV and adherence, and a complete orientation to the program. The patient then signs the program consent form, select their GP and the Regional Coordinator schedule the first appointment.

Figure1. Overview of Patient Enrolment

5. Drugs and Lab Processes

Once a patient is down referred to a GP for care, the RCA inform the hospital pharmacy of the patients' new GP. The hospital pharmacy then arrange for a courier service to deliver the medicines on a weekly basis. A 30-day supply of drugs is dispensed on a 28-day cycle. On a weekly basis, a courier service (from the hospital) drops off medicines for patients who are due for appointments the following week, picks up new prescriptions, and fetch any uncollected meds to return to the pharmacy.

South African treatment guidelines requires that all patients receive annual laboratory monitoring, which include a CD4, VL and any other regimen-specific investigations (i.e. FBC, ALT etc.). Patients in the down referral model are reminded in the month prior to scheduled labs that they need to visit the Wellness Centres and clinics for their blood draw, and they receive a red reminder notice in their packet of medicine. Laboratory results for patients are filed by a lab technician to be picked up by the RCA every Friday. The results are faxed to data capturers for inclusion in the database.

6. Monitoring Drug Pick Up

A patient who misses his/her scheduled drug pick-up day has a one-week grace period. If a week has elapsed beyond the scheduled drug pick-up, then the doctor completes a new prescription for the patient indicating that they have uncollected meds. This information is sent to the database (via fax) and to the Pharmacy, resulting in suspension of drug dispensing, and a status change for the patient to "Suspended". The patient will then be tracked by the RCA assisted by dedicated patient tracers.

7. Adherence Monitoring

There are many factors that can make it harder for a patient to stick to a treatment plan. Depression and stress can affect a patient's ability to carry out their daily tasks, including taking medications. Alcohol and illicit drugs can affect judgement and memory, and in some cases may react badly with HIV drugs, causing dangerous toxicity [5]. Being at work can complicate the task of taking medications due to confidentiality problems and/or unpredictable daily schedules [6].

BroadReach's Adherence Programme was formalised in 2008 and is run by the Adherence Team which consists of the Adherence Coordinator and Adherence Supporters. The Adherence Coordinator is responsible for coordinating the work of the Adherence Team. Each Adherence Supporter works with the Regional Coordinator who manages all programmatic issues at his/her site. Aid for AIDS Treatment Support Staff (TSS) also plays a crucial role in the adherence programme. They are responsible for counselling unsuppressed patients with a viral of between 400 and 2000.

8. Broad Reach's Approach to Non-adherence Challenges

Once a patient is identified as a defaulter, s/he is put in a category ranging from 'cautionary' to severe. Such categorisation determines the action to be taken and the person responsible for that action. For example, if a patient is categorised as severe, the BroadReach Adherence Supporter arrange a home visit for that patient. During the home visit, the Adherence Supporter records the details of the patient on the adherence report spreadsheet.

Regular home visits and direct observation of non-adherent patients taking their medicines does not only ensure that patients adhere to their treatment, but also gives an opportunity for the community and to health worker to provide support, monitor for symptoms of adverse reactions to ART and/or HIV-related complications, to answer questions about medications and their side effects.

Healthcare providers should attempt to understand and address non-adherence within the larger context of socio-economic hardship in which most patients in resource-poor settings live.

9. Programme Outcomes

Since the inception of the programme in 2005, there were 4 129 patients that were enrolled on the programme and 2 759 were current (remaining on treatment). Retention rate was 95% and Viral Load Suppression was 93% [7]. Leisegang et al. [8] found that the GP model had similar outcomes but lower costs than the public-care program, largely due to lower visit frequencies.

10. Lessons Learned

Public-private partnerships (PPP) are a viable and rapid mechanism to relieve public sector capacity constraints. Political support, government leadership, aligned goals and clear agreements for roles and responsibilities among all partners are critical for implementation success. The PPP model has achieved superior outcomes (follow up and viral load suppression) to public or private models alone.

Acronyms

AEs	Adverse Effects
AfA	Aid for AIDS
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
BRHC	BroadReach Healthcare
CD4	Measure of patient's immune strength (T-cell glycoprotein)
GP	Private General Practitioner
HIV	Human Immunodeficiency Virus
KOSHMED	Klerksdorp, Orkney, Stilfontein, Haartebeesfontein Med

NWDoH	North West Department of Health
OIs	Opportunistic Infections
PM	Programme Manager (BroadReach Field Staff)
PN	Professional nurse
RC	Regional Coordinator (BroadReach field staff)
RCA	Regional Coordinator Assistant (BroadReach Field Staff)
Surgery	Practice/Office of a General Practitioner
VL	Viral Load

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