

Scaling Up: Toward Universal Access to Antiretroviral Drugs in South Africa

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This paper outlines South Africa's HIV/AIDS treatment policy as well as barriers to achieving universal access to antiretroviral (ARV) treatment. In searching for solutions to this problem, this paper examines an ARV treatment pilot program initiated by Médecins Sans Frontières (MSF). This program, which demonstrates that an ARV treatment program can be successfully implemented in a resource-limited setting, emphasizes a decentralized, patient-centered approach. The program initiated by MSF serves as a replicable model for ARV therapy scale-up in both urban and rural districts in South Africa. This paper argues that the MSF approach should be implemented nationwide, while remaining flexible enough to account for South Africa's diversity of cultural contexts.

Introduction

With 5.5 million people living with HIV/AIDS in South Africa, only India has more people infected with the virus (UNAIDS, 2006). While HIV/AIDS causes over 800 deaths per day in South Africa, the virus, if treated effectively, is not a death sentence (Koenig, 2006). The introduction of antiretroviral drugs (ARVs) in the mid-1990's provided life-saving treatment for those infected with HIV and signaled a new phase in the global fight against the growing epidemic. Despite the life-saving results of these drugs, it was not until 2003 that the South African government committed to providing HIV treatment in the public health care system. The Operational Plan for Comprehensive HIV and AIDS Care, Management, and Treatment for South Africa (Operational Plan) provided a blueprint for rolling out ARV treatment nationwide. Regarding this plan, President Thabo Mbeki boasted that "South Africa has one of the largest such treatment programmes in the world" (Republic of South Africa, 2006).

Although the government has demonstrated increased commitment to providing HIV treatment, the provision of ARVs has been insufficient to meet the growing need for treatment by those infected with the virus. The World Health Organization (WHO) estimates that in September 2006, over 1 million South Africans were in need of HAART (Highly Active Antiretroviral Therapy)¹, yet only 32% (287,000-363,000) were receiving it. Only 21% of children in South Africa with HIV are receiving ARV therapy (WHO, UNAIDS, & UNICEF, 2007). Moreover, despite government efforts to decentralize the health care system, poor and rural populations still receive unequal access to treatment (Stewart, Padarath, & Bamford, 2004).

Since South Africa has a district-based health care system, it allows for pilot programs at the local level. One such program, initiated by the international NGO Médecins Sans Frontières (MSF), or Doctors Without

Borders, revealed that an ARV treatment program could be successfully implemented in resource-limited settings.² This MSF pilot program, which started in a township outside of Cape Town and was later extended to a rural town in the Eastern Cape Province, emphasizes a decentralized, patient-centered approach to ARV treatment. Although significant barriers exist to scaling up HIV treatment programs in South Africa, through innovative strategies and increased government commitment providing universal access to ARVs in the public health care system is an attainable long-term goal. This paper argues that the program initiated by MSF serves as a replicable model for ARV therapy scale-up in both urban and rural districts and should be implemented nationwide in South Africa.

Background

After the end of apartheid, the Republic of South Africa and the ruling party, the African National Congress (ANC), faced a growing HIV/AIDS epidemic that threatened the long-term stability of the country. Mainly due to HIV related diseases, male life expectancy fell from 61.5 years in 1994 to 49.2 years in 2004 (Kapp, 2004). The government's response to the epidemic, especially in the provision of HIV treatment, has been slow and constrained by a lack of political will.

At a time when HIV was exploding throughout South Africa, many government officials were openly questioning the scientific consensus on the causes of AIDS and dismissing the benefits of ARV drugs. In 2000, President Thabo Mbeki questioned the causal link between HIV and AIDS, instead arguing that poverty was the main cause of AIDS. Furthermore, he questioned the effectiveness of ARV treatment and argued that the proper response to the problem should include nutrition and traditional medicine. In a letter sent to world leaders, Mbeki acknowledged the epidemic but defended his government's response, arguing that "a simple superimposition of Western experience on African reality would be absurd and

illogical” (Mbeki, 2000). Therefore, the government introduced the HIV/AIDS/STD Strategic Plan for South Africa 2000-2005, which promised a multi-sector response; however, this plan ignored the ARV treatment option (Butler, 2005).

Under pressure from the legal system and civil society groups like the Treatment Action Committee (TAC), the government, in 2002, began providing ARV drugs to pregnant women and victims of rape (van Rijn, 2006). In 2003, the government approved a comprehensive policy on HIV/AIDS. The Operational Plan for Comprehensive HIV and AIDS Care, Management, and Treatment for South Africa committed to providing ARV therapy through the public health care system and set benchmarks for progress. The Operational Plan, which is still the government’s official policy, contains a target to provide ARV treatment to more than 1.4 million people by 2008 (South Africa Department of Health, 2003).

While the Operational Plan is a significant improvement over previous government policy, questions persist about the government’s commitment to achieving universal access to treatment. Even with the recent expansion in treatment, almost 70% of the HIV population eligible for HAART is not receiving it. Furthermore, while ARV treatment is addressed in the Operational Plan, equal emphasis is placed on the role of nutrition and traditional medicine. The message contained in the Operational Plan is clear: ARV therapy is viewed as one treatment among many, but not the primary treatment option. These views were evident at the 2006 International AIDS Conference in Toronto, where the South African HIV/AIDS exhibit promoted the use of garlic, lemons, and beets as treatment options (BBC News, 2006). Critics of the government, like the TAC, acknowledge that nutrition is essential to HIV/AIDS care and traditional medicine can improve the well-being of patients, but argue that these methods alone are not sufficient for treating HIV/AIDS (Treatment Action Campaign, 2005).

In defense of the government, progress has been made with regard to implementing the Operational Plan and increasing the number of patients on HAART. Between December 2005 and September 2006, the number of public and private patients on HAART increased from 200,000 to 325,000 (WHO, UNAIDS, & UNICEF 2007). By 2010, the coverage rate is expected to rise to over 50% (Nattrass, 2006). Certainly, expanding access to treatment would not be possible without the declining price of ARV drugs and the influx of resources from international agencies like the United States President’s Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund. These increases, however, indicate a growing commitment by the South African government to providing ARV treatment in the public sector. Ambitious targets for treatment are being established within new government

policy. A draft of a new government plan, the ‘HIV and AIDS and STI strategic plan for South Africa 2007-2011’, aims to expand treatment to 80% of those diagnosed with HIV (South Africa Department of Health, 2007).

The Challenge

Like most countries, in South Africa there is a connection between wealth and quality of health care. While the wealthiest citizens seek health care in the private system, the majority of the population relies on an inferior public health care system. Similarly, inequality in HIV treatment exists between the private and public sectors, as patients in the private system, representing 20% of the population, receive 50% of the ARV treatment (WHO, 2006a). The public health care system is district-based, with each of the nine provinces divided into districts. Health services and clinics in each district are supported by a central hospital (Gaede, Mahlobo, Shabalala, Moloi, & van Deventer, 2006). Despite efforts to localize control of the public health care system and increase the number of clinics, many South Africans, especially in rural areas, still lack adequate care (Coustasse, Hilsenrath, & Rojas, 2005).³

The primary impediment to scaling up ARV treatment is not funding or supplies of affordable drugs, but the lack of health care workers (Fox & Goemaere, 2006). Health professionals (doctors, nurses, pharmacists, and counselors) are essential for the provision of ARV treatment, as patients have to continuously check into treatment sites. There has been a migration of health care workers from the public to the private sector and from rural to urban areas (Butler, 2005). The government estimates that 13,805 new health professionals are needed by 2008 to meet the targets of the Operational Plan (South Africa Department of Health, 2003). In 2003, there were 52,574 unfilled health care jobs in the public sector, a 31.1% vacancy rate (Schneider, Blaauw, Gilson, Chabikuli, & Goudge, 2006).

Quality of care is an essential component of effective treatment. Patients must feel comfortable with the staff if they are to adhere to their treatment plan over a lifetime. Unfortunately, many patients feel alienated from the public health care system and have a negative view of health care workers. Public sector health care workers are frequently viewed by patients as “harsh, unsympathetic and readily breaching patient confidentiality” (Schneider et al., 2006, p. 19). Another problem is that health care workers themselves suffer from high HIV prevalence rates, with as many as 16% of health workers infected with HIV (Schneider et al., 2006). Finally, efforts to reform clinical practices are limited because of the “entrenched system of task-oriented care” (Stein, Lewin, & Fairall, 2006, p. 995). “Task-oriented care,” a system that assigns nurses

specific duties to perform for every patient, prevents close, one-on-one relationships between patients and nurses.

Further perpetuating the problem is the international brain drain of health care workers to developed countries. Doctors and nurses trained in South Africa, deterred by low pay and poor working conditions, are drawn to better opportunities in developed countries. The WHO estimates that 37% of South African doctors and 7% of nurses are practicing in another country (WHO, 2006b). Every year, approximately 500 doctors and 1,000 nurses from South Africa register with the United Kingdom General Medical Council (Schneider et al., 2006). Ironically, the same developed countries that are donating foreign aid for South Africa's health care crisis are the beneficiaries of this brain drain.

Another barrier to achieving universal treatment is the stigma about HIV/AIDS.⁴ Effective treatment requires patients to adhere to a daily schedule of ARV medicine, but shame causes some patients to hide their treatment from people at work or home (Stewart, Padarath, & Bamford, 2004). The WHO warns that "the fear of side-effects, stigma and widespread skepticism about Western medicines prevent many people from seeking treatment" (WHO, 2005). This stigma has been aggravated by government leaders who send mixed signals on HIV treatment. Many NGOs, such as the TAC, are working on reducing the stigma through HIV education and treatment literacy.

Although South Africa's health care system has moved toward decentralization- a strategy designed to treat patients at community clinics rather than hospitals- some segments of the rural population are still too far away from health services. Because most treatment sites are located in urban areas, rural populations have unequal access to ARV treatment (WHO, 2006a). Moreover, pressure to achieve benchmarks may lead to disproportionate service in wealthier, easier-to-reach urban areas (Saloman et al., 2005).

Fortunately, the cost of ARV drugs is no longer viewed as a barrier to increasing treatment. The South African government has reached agreements with producers of generic ARV drugs to procure them cheaply, and many generic drugs are now domestically produced. The cost of HAART, on average, is now less than \$150 per patient per year (Butler, 2005). And while it may be argued that the relative price of treatment excludes access for most South Africans, the drugs are affordable for the government to provide them for free at public treatment sites. Compared with prices in developed countries (\$10,000-15,000 per patient per year), the price of ARV drugs should not prevent universal access in South Africa. In fact, the WHO praised the South African government for allocating \$1 billion in its budget over a three year period for HIV/AIDS, most of which is for antiretroviral therapy

(WHO, 2006a). Yet even with this investment, drug availability is seen as a problem among health care workers. At times, limited supplies have prevented clinics from increasing the number of patients receiving treatment (Stein, Lewin, & Fairall, 2006).

While the declining price of ARV drugs has made treatment economically feasible, much of the rollout is dependent on funding from foreign agencies like PEPFAR and the Global Fund. In fact, 53.9 % of public sector patients are beneficiaries of some external funding (Nattrass, 2006). Since these external resources are not guaranteed in the future, the long-term challenge will be to sustain increased ARV therapy coverage while becoming less dependent on foreign assistance.

As mentioned previously, the failure of political leadership regarding HIV/AIDS is also detrimental to scaling up treatment. According to Stein, Lewin, and Fairall (2006, p. 955), "one manifestation of under-resourcing has been the dearth of national leadership regarding HIV/AIDS within the Department of Health. This has been attributed partly to the frustrations of working in a context where ART [anti-retroviral treatment] is still not actively endorsed by senior national government." For example, the Health Minister, Dr. Manto Tshabalala-Msimang, is a frequent target of criticism. She is nicknamed "Dr. Garlic" by many activists because she advocates garlic, olive oil, and beets as treatment options instead of antiretroviral drugs (Kapp, 2004).

A final challenge is the "verticalization" of treatment programs. "Vertical" programs (alternative treatment programs that exist outside of the main delivery system) are often initiated by NGOs who want to achieve quick results. The drawback of this approach is that many health-care workers leave the public health care system in order to take better-paying jobs with NGOs. Also, the government has to monitor and coordinate these multiple services (Salomon et al, 2005). This problem raises the issue of whether NGOs should work within the government system or establish separate programs. The next section of this paper provides an example of the international NGO, MSF, which has worked within the government system and achieved impressive results.

The MSF Pilot Program in Khayelithsha and Lusikisiki

Before the South African government approved the 2003 Operational Plan, there were efforts at the district level to provide free ARV treatment in the public sector. One of the first programs to administer ARV treatment was a joint effort initiated by MSF, with the support of the Nelson Mandela Foundation and the South African Department of Health. In 2001, the MSF-led program was launched in Khayelithsha, a township outside of

Cape Town, with a goal to demonstrate that ARV treatment could be provided in a resource-limited urban setting.² The program was later extended to Lusikisiki, a town in the Eastern Cape Province, in order to prove that the same model could be effective in a resource-limited rural setting. In this partnership, MSF provided funding and management assistance while the public sector provided infrastructure and health staff.

The ARV treatment programs in Khayelitsha and Lusikisiki are still ongoing, but results from previous years indicate program efficacy. A study in Khayelitsha by Coetzee et al. (2004a) concluded that the MSF program demonstrates that patients could be retained on ARV treatment in a resource-limited setting in a developing country. The authors revealed that the probability of survival on ARV therapy after 24 months in the program was 86.3% for all patients (Coetzee et al, 2004a). Without treatment, it is likely that half of the patients would have died within a year (MSF, 2002). Furthermore, “the excellent retention of patients could be related to services being situated within the primary care setting close to patients’ homes and family environment as well as to the careful preparation of patients” (Coetzee et al, 2004a, p. 30). In 2006, Fox and Goemaere (2006) reported that 2,000 patients in Khayelitsha were receiving free ARV treatment, including 130 children.

In Lusikisiki, the South African Department of Health reported that at least 2,200 people were receiving treatment at the clinics (South Africa Department of Health, 2006). According to MSF, this number represents universal coverage in Lusikisiki for the year 2005 (MSF, 2006). Given that less than a third of eligible patients are on ARV treatment nationwide, these results demonstrate program efficacy.

While this paper argues that the MSF pilot program offers an effective treatment model that can be applied across South Africa, the approach should be flexible enough to account for different cultural contexts within the country. South Africa, with over 47 million people and 11 official languages, is home to a diverse range of cultures, beliefs, and income levels. Treatment education offered in a township in the Western Cape Province may have to be tailored differently than treatment education in a rural town in the Eastern Cape. Drug identification charts, daily schedules, and educational materials explaining the risks and benefits of ARV treatment will have to be printed in several languages. Additionally, programs in rural areas may need more resources to address greater infrastructure and human resource constraints in comparison to urban locations (Natrass, 2006).

Similarly, each of South Africa’s nine provinces varies significantly with regard to resources, demographics, and commitment of the local government to HIV/AIDS treatment. Compared to the other provinces, the Western Cape has the lowest HIV

rate (5%), the second highest GDP per capita (R30,628), the most doctors per uninsured persons (55/100,000), and the highest government health spending per person (R1433) (Natrass, 2006). In contrast, the town of Lusikisiki, in a rural area of the Eastern Cape, has an 80% poverty rate (household expenditure less than R800 per month) and 14 times fewer doctors than the national average (MSF, 2006). Despite these differences, the MSF program was effective in both settings.

Recommendations: Applying the Lessons of Khayelitsha and Lusikisiki

The key to success of the programs in Khayelitsha and Lusikisiki is a decentralized, patient-centered approach to treatment. Decentralization is accomplished by treating patients at multiple clinics located in the targeted community. This differs from a “referral system” approach, where patients initially are assessed at the district hospital and then are referred to a local clinic. Beginning treatment at the clinic level is advantageous because it reduces bureaucratic inefficiency between different levels of the health system. (MSF, 2006) MSF reports that “initiating treatment at the hospital, and then passing them on to the clinic creates a bottleneck in treatment and an unnecessary shuttling of service users, prescriptions and lab results between institutions, all of which can lead to a break in confidence among service users” (MSF, 2006).

Focusing the treatment at the clinic-level allows health workers to engage the community and adapt the program to the local cultural context. With the support of community groups and adherence counselors, a patient-centered approach focuses on empowering patients to take responsibility for their own treatment. In this approach, patients are considered partners in the process and become involved in planning their treatment.

With the decentralized, patient-centered approach, the programs at Khayelitsha and Lusikisiki focus on three main strategies: (1) task shifting among health care workers, (2) building capacity through strong community involvement, and (3) improved clinical infrastructure (MSF, 2006). Task-shifting is a strategy that delegates most of the responsibility of the ARV treatment program to the primary health-care staff, rather than health specialists. The primary responsibility of patient care falls to nurses, community workers, lay counselors, and volunteers. The WHO, as part of their 3-5 Initiative (the goal to treat 3 million people by 2005) advocates for this strategy. It states, “[t]ask-shifting represents a radical departure from traditional delivery models that depend on specialist workers and it could make a major contribution to expanding access to HIV

services, especially among poor and marginalized populations” (WHO, 2006b, p. 8).

Task-shifting is especially appropriate in rural settings where few doctors are available. In Lusikisiki, doctors visit clinics once or twice per month to support the staff, but treat patients only in difficult cases. Nurses play a central role in this approach. They are trained in HIV management and prescribe ARV therapy. If support from community workers and volunteers is provided, nurses can focus on patients and menial tasks can be assigned to non-professional staff. A study of the Khayelitsha program concluded that: “with support, nurses can diagnose and treat most opportunistic infections and deliver ART [anti-retroviral treatment] in line with standardized protocols” (Coetzee et al., 2004b, p. 894).

Community involvement is essential for building capacity in ARV treatment programs. In the Lusikisiki program, enrolled patients are required to identify a treatment assistant, usually a family member, who is aware of the patient’s HIV status and willing to assist with medication. Trained adherence counselors are also available to ensure patients are properly maintaining their treatment regimen. Further support is provided through peer group meetings, where patients can openly discuss their treatment and support each other. Community support is supplemented by education materials, or “treatment literacy”, such as drug identification charts, daily schedules, and pillboxes (WHO, 2003).

Both programs depend on volunteers, many HIV positive themselves, to assist in weekly support groups. Reliance on non-professional staff is essential to support under-staffed facilities. Volunteers can perform a variety of tasks usually assigned to nurses, thereby freeing up nurses to perform essential functions. Of course, coordination of volunteers and non-professional staff requires effective program management. Therefore, strategic management is another essential component of program success.

Improved and modernized clinical infrastructure is also needed to strengthen the approach. For example, MSF reported that the Lusikisiki program was responsible for a number of clinical improvements, including increasing the percent of clinics with reliable electricity from 16% to 50%, the percent of clinics with water supply from 0% to 50%, the percent of clinics with telephone access from 0% to 75%, and the percent of clinics with fax machines from 0% to 50% (MSF, 2006). These improvements will enable clinics to better communicate with hospitals regarding testing, treatment, and referrals. If this model is to succeed throughout South Africa, the government must improve the capacity of the district health care system to handle increased patient loads.

Although rationing of ARV drugs is the reality in the public sector, the programs at Khayelitsha and

Lusikisiki attempt to treat every patient who is eligible. In the public health system, a patient becomes eligible for ARV treatment when their CD4 cell count, a measure of the immune system's strength, falls below 200 (Nduru, 2006). Many in-program deaths in ARV treatment programs result from patients who began treatment at an advanced stage of the disease (Lawn, Myer, Orrell, Bekker, & Wood, 2005). Providing universal ARV treatment to patients at an early stage of the infection is not only crucial to saving lives, but is more cost-effective than waiting until a patient’s health deteriorates (Badri et al., 2005). Therefore, administering ARV drugs at an early stage in the disease is necessary for treatment efficacy.

Improved capacity necessitates several important reforms. First, since the shortage of health care workers is the main barrier to scaling up treatment, South Africa should adopt a human resources plan to address this problem. This plan must include higher pay and benefits for health workers in the public sector, improved training and recruitment, as well as other incentives to prevent the brain drain of health workers. Second, an increase in staff needs to be matched with modernized clinical infrastructure. Third, the number of ARV treatment sites should be expanded, especially in rural areas. Fourth, ARV treatment programs should attempt to treat HIV/AIDS patients at an early stage of the disease. And finally, South African leadership must voice a strong and consistent message of support for ARV treatment.

Comparative Analysis

Compared to the rest of Sub-Saharan Africa, South Africa fares only slightly better in ARV treatment coverage. Currently, about 28% of HIV positive people in Sub-Saharan Africa are receiving ARV therapy. Given that the coverage rate was only 2% in 2003, significant strides have been made in scaling up treatment across the region (WHO, UNAIDS, & UNICEF, 2007). This increase is attributed to cheaper drugs, free provision of drugs in the public health sector, and international aid programs. The results from country to country vary widely, however, depending on factors such as national capacity, HIV/AIDS awareness, and coordination between sectors. Botswana, for example, has achieved a 95% coverage rate, while Mozambique stands at 14% (WHO, UNAIDS, & UNICEF, 2007).

South Africa has 25% of the total number of Sub-Saharan Africans on ARV treatment coverage and the largest program in the region. However, “South Africa’s performance is relatively poor given its economic, institutional and epidemiological characteristics” (Nattrass, 2006, p. 3). With the largest economy in Africa (World Bank, 2006), South Africa could be achieving more. Other countries in Sub-Saharan Africa have achieved higher coverage rates with

far fewer resources. Kenya and Namibia, for example, have treatment plans that cover 44% and 71% of the HIV/AIDS population, respectively (WHO, UNAIDS, & UNICEF, 2007).

Like South Africa, the rest of Sub-Saharan Africa faces a severe shortage of health professionals. The World Bank reports that 38 out of 47 countries in Sub-Saharan Africa have fewer than 20 physicians per 100,000 people (World Bank, 2006). If progress is to continue across the region, the scarcity of health workers will have to be addressed. The programs in Khayelitsha and Lusikisiki demonstrate that high ARV treatment coverage is possible in settings that are constrained by the shortage of health professionals. The decentralized, patient-centered model can also provide lessons for other countries in scaling up ARV treatment.

Conclusion

South Africa faces many barriers to achieving universal access of HIV treatment. It must be stressed that achieving universal coverage of ARV therapy is a long-term goal and not feasible in the short-term. The model applied in Khayelitsha and Lusikisiki is not a panacea. For now, the programs depend on financial support from MSF and organizations such as the Nelson Mandela Foundation. The ultimate goal, however, is to hand off these programs entirely to the provincial governments. Sustaining and expanding this model within the public health system is possible without NGO support, but will require additional investment from the government. A shortage of resources allocated by the government will hamper any effort to scale up ARV therapy. However, the decentralized, patient-centered model is the best approach given the previously mentioned challenges to treatment that exist in South Africa.

The programs in Khayelitsha and Lusikisiki provide an effective ARV treatment model for South Africa and contain lessons for other countries challenged with HIV/AIDS. Not only do ARV drugs save lives, they are affordable for and available to many countries. Every person with HIV, however poor or remote, deserves access to life-saving treatment.

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Endnotes

¹ HAART is typically a combination of three or four antiretroviral drugs.

² Areas with minimum health infrastructure and high levels of poverty.

³ According to Coustasse et al. (2005), barriers include "Cost of health care, distance, availability and cost of transport."

⁴ The HIV/AIDS stigma needs to be further explored, but it is not within the scope of this paper.