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The antiretroviral moratorium in the Free State Province of South Africa: Contributing factors and implications

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Abstract

In November 2008, a moratorium on initiating new patients onto antiretroviral (ARV) treatment was enacted by the Provincial Department of Health in the Free State province of South Africa. The moratorium, which was part of a series of cost curtailment measures, lasted for four months. During this time, an estimated thirty additional patients in the province died from AIDS each day. The moratorium contradicted national government's commitment to scaling-up of ARV treatment to 80% of those in need by 2011. This article uses the health systems components outlined by Harries et al. as crucial to the delivery of quality care as a conceptual framework to assess the causal elements of the antiretroviral moratorium. It examines the factors that contributed to the moratorium, including poor financial management systems, human resource and equipment shortages, weak monitoring and evaluation systems, and bureaucratic malfunctioning. This article describes South Africa's system of fiscal federalism and its impact on health budgeting. As the first official cessation of provincial roll-out, the moratorium served as a litmus test for government's reaction to critical challenges in the expansion of the ARV treatment programme at both national and provincial levels. It therefore provides a valuable case study for the state's response to some of the systematic and health infrastructural problems that have characterised South Africa's ARV roll-out since its inception.

Introduction

HIV and ARV treatment in South Africa

South Africa has the largest HIV epidemic in the world with approximately 5.7 million people living with the virus (UNAIDS 2008). By the end of 2010, over 1 million people in South Africa have initiated antiretroviral (ARV) treatment (Republic of South Africa 2010). Despite the scale-up of public access to ARVs subsequent to government's commitment to the Operational Plan on Comprehensive HIV and AIDS Care, Management and Treatment (2003), the state continues to confront the dual legacies of apartheid's inequitable distribution of health resources, and the failure of the post-apartheid state to control the epidemic (McIntyre *et al*. 1995; Coovadia *et al*. 2009: 831). The AIDS denialism of President Thabo Mbeki and Health Minister Tshabalala-Msimang obstructed South Africa's public provision of ARVs (Baleta 1999: 1711; Cohen 2000: 590-1), and delays to South Africa's ARV roll-out resulted in the unnecessary loss of over 330,000 lives during Mbeki's presidential tenure (Chiqwedere *et al*. 2008: 412).

Before South Africa's democratic transition, the senior management of the public health sector was highly centralised and cronyist. After 1994, government transformed the National Health Department by pursuing a policy of affirmative action, with an associated loss of institutional memory and problems relating to a lack of experience among senior management (Coovadia *et al*. 2009: 831). Government also issued numerous policies aimed at alleviating human resource shortages that compromised the delivery of health services, particularly at primary levels (*ibid*: 830). However, these policies were not implemented effectively, and by the close of the 1990s there were substantial reductions in the nurse-to-population ratio and the percentage of doctors working within the public sector (*ibid*).[1]

The erosion of accountability within the Health Department and a lack of experience, professional development and support under successive Health Ministers detracted further from the Department's ability to integrate national health policies with provincial and local implementation plans. Weaknesses within the public health sector were demonstrated by the gross financial mismanagement which emerged across the three tiers of government – national,

[1] In 1998, there were 149 public sector nurses per 100,000 of the population. By 2007, this had fallen to 110 per 100,000 population in 2007. The percentage of doctors working within the private sector rose from 40% in the 1980s to 79% in 2007, and external migration remains at high levels.

provincial and local. By the financial year 2008/09, all provinces were experiencing severe problems with their health budgets. The AIDS Law Project,[2] claimed that financial mismanagement had resulted in a total health overspend of R10 billion for the financial year 08/09 (AIDS Law Project 2009).

ARVs service delivery in the Free State

The National Health Act (2003) commits the National Department of Health to playing an oversight role in relation to Provincial Health Departments, such as approving business plans and monitoring their implementation (Republic of South Africa 2004). However, priorities for health programmes determined at national level are not necessarily aligned with capacity at provincial and district levels. In the provincial rollout of ARVs, provinces have been left to develop their own targets for patient initiation and the broader scale-up of health services. At the end of 2008, when the ARV moratorium was enacted in the Free State, the province had no methodology by which it set treatment targets and aligned these with budgets. The Free State also has the lowest rates of provincial ARV treatment coverage, at only 25% of those eligible for treatment accessing it (Dorrington *et al*. 2006).

From 2005, the provincial scale-up of ART programmes across South Africa's nine provinces began in earnest. In the absence of guidelines, norms or standards issued by the National Department of Health, the Free State developed its own systems for scale-up (Schneider *et al*. 2010: 13). The province struggled to initiate patients onto ARVs quickly enough to meet the high demand for treatment, and its model of ARV provision through a small number of centrally located clinics meant that treatment remained inaccessible for many. This was partly the result of the laborious accreditation process for ARV sites, and partly because of human resource shortages and infrastructural constraints.[3] The concentration of services in urban centres meant that many patients had to travel long distances to access care, and lengthy waiting lists at

[2] An public interest law centre and monitoring group, now called Section27 (in reference to the section in South African Constitution that outlines the state's commitments to socio-economic rights).

[3] The accreditation process was implemented under Tshabalala-Msimang, and prevented the decentralisation of ARV treatment to public health clinics. It was initially meant to ensure that ARV clinics had adequate medical resources, i.e. a doctor, nurse, voluntary counselling and testing and laboratory facilities. However, accreditation soon became another bulwark to ART provision due to its requirements of a dietician and social worker. Public health workers and activists saw the finer criteria as being fulfilled once the roll-out gained momentum, but the Health Department insisted that, for an ARV treatment site to be accredited, all requirements had to be met rather and not just the necessities.

central facilities indicated the high unmet demand for ARVs. Between May 2004 and December 2007, one quarter of patients on the province's ARV waiting list died before accessing treatment (Ingle *et al*. 2010: 3).

Changes in national government's HIV response

In September 2008, President Thabo Mbeki resigned his position and Kgalema Motlanthe assumed the presidency for the remainder of the parliamentary term. In the same month as his succession, Motlanthe replaced Health Minister Tshabalala-Msimang with Barbara Hogan, who was known for her financial acuity and her support for evidence-based health interventions. Her appointment was therefore perceived as a turn-around for the Department of Health and a sign of its mounting of new, evidence-based, effective responses to HIV. (BBC 2008).

In October 2008, Hogan gave a speech at the opening of the International AIDS Vaccine Conference announcing that South Africa had the largest ARV programme in the world (Hogan 2008). Recent data highlights the rapid pace of ARV treatment scale-up, with a 12-fold increase in the number of patients initiating ARVs since 2002/03 (Cornell *et al*. 2010: 2266). With scale-up, there is evidence that ARV treatment coverage is improving as patients are enrolling for treatment with less advanced disease (*ibid*: 2265). From 2004 onwards, ARV provision has also reduced AIDS mortality and the number of maternal orphans in South Africa (Johnson 2009).

Despite the rapid expansion of ARV treatment coverage, the Department of Health indicated that, in 2008, less than half of adults eligible for ARVs were in fact on treatment (Republic of South Africa 2010). In 2006, Nattrass (2008: 398-406) has argued that South Africa's ARV coverage was relatively low in the context of its development, demographic characteristics and institutional capacity. Despite the state's considerable expenditure on health and the existence of a range of supportive policies, by the end of the 1990s a number of South Africa's health outcomes were worsening (Chopra *et al*. 2009: 1025). Since 1994, life expectancy had declined by almost 20 years, largely because of the rise in HIV-related mortality (*ibid*: 1023, Bradshaw *et al*. 2004: 278–9). Epidemics of communicable and non-communicable diseases increased demands for health services at a time in which human resources and funding decreased, and poor management compromised the functioning of the public health sector further (Barron *et al*. 2009).

Concern regarding poor budgeting practices within the public health sector came to the fore in November 2008 when, despite Health Minister Hogan's commitments to better financial oversight and to the expansion of ARV coverage, a moratorium on initiating new patients onto ARVs was implemented in the Free State province. The moratorium, together with the broader health overspend across Provincial and National Health Departments, led Health Minister Hogan to commission an investigation into the financial and operational practices that continued to deplete health budgets and accrue massive overspends. An investigative taskforce called the 'Integrated Support Team' was formed under the leadership of the ex-Deputy Auditor-General, and visited every province to consult with chief financial officers, auditors, accounts general, Members of Executive Council (MECs) for Health and heads of department to ascertain the chief cost drivers in health.

The Task Team began its review of the Free State Department of Health in March 2009, and submitted a report to Minister Hogan in April 2009. Shortly thereafter, President Jacob Zuma appointed Aaron Motsoaledi as the new Minister of Health, replacing Hogan. Despite the persistent requests by health advocacy and monitoring groups for public access to the report, it was kept under embargo by the Department of Health until June 2010 (although the report had been leaked to key figures within the HIV advocacy sphere and published online by the Treatment Action Campaign a month early in May 2010).

Methodology

Harries et al. (2009) outline six elements of a health system that are crucial to the functioning and delivery of quality care. These are: (1) adequate numbers of skilled human resources, (2) good physical infrastructure, (3) sound financial management, (4) reliable monitoring and evaluation (M&E), (5) good leadership and stewardship, and (6) efficient procurement and distribution of health commodities (Harries *et al*. 2009: 1194-1199). This article uses these six elements as a conceptual framework with which to assess the contributing factors to the Free State's ARV moratorium. This research indicates that a crisis in financial management catalysed the breakdown of health service delivery that resulted ultimately in the ARV moratorium. It describes how the source of this crisis may be found in the failure of fiscal decentralisation within the public health sector, and the weak integration and functioning of South Africa's fiscal structures for the delivery of healthcare.

The co-authors used interdisciplinary research methods to collate and assess data on the contributing factors and implications of the ARV moratorium. Health systems research, with a particular focus on the role of implementation management, and analyses of the impacts of fiscal decentralisation on the public health sector in South Africa, were combined with primary, documentary research. The principal source for this research was the report of the Integrated Task Team, based on a detailed analysis of the Free State's budgeting practises and on interviews with key informants in the Provincial Department of Health and Treasury (Barron *et al*. 2009: 15 – 16). Other primary documentary sources included key legislation concerning public expenditure and health services; memoranda and correspondence from Free State and National Department of Health officials; reports by the HIV Clinicians Society of Southern Africa, AIDS Law Project and Treatment Action Campaign; and articles published by *Health-e*.[4]

'Stop putting new clients on ARVs'

On 3 November 2008, the head of the Free State's Comprehensive HIV and AIDS Management Programme emailed the provinces Chief ARV Pharmacist with an instruction in the subject line to 'Stop putting new clients on ARVs'. The email stated:

> This province (FS) is experiencing an acute shortage of antiretroviral drugs…This will lead to clients on treatment defaulting not because of their own fault. The only way to avoid this is by keeping the remaining ARVs for the exclusive use of those on treatment already with the exception of clients on the PMTCT program (pregnant women). In the meantime the FSDoH (Free State Department of Health) will be trying to find ways to remedy this situation (Tshabalala 2008).

The Chief ARV pharmacist forwarded this email to healthcare workers and facility managers, acknowledging its serious implications:

> We are facing a difficult period. You at the sites are faced with an even worse situation whereby you have to turn patients away because of the present circumstances. The same patients who look at you as their last hope in life' (Santho 2008).

The ARV moratorium was the forerunner in a series of cost curtailment measures which were implemented by all 31 public healthcare facilities in the

[4] *Health-e* is an NGO that researches and publishes stories on health, with a primary focus on South Africa.

Free State on 24 November 2008. These reduced the services available by drastic measures, and terminated all outreach services (with the exception of oncology). Clinical admissions were limited to 'dire need only', and at one hospital patients were instructed 'to go home and phone to hear if a bed is available' (Free State Province Department of Health 2008).

Two weeks after the moratorium was implemented officially, the Head of the Free State Health Department, Pax Ramela, issued a statement alleging that the moratorium was the fault of National Treasury for under funding provincial health programmes and forcing the province to implement cost curtailment measures. Ramela admitted that 'the entry of new patients into the program has been delayed since the beginning of November', but denied that any treatment interruptions had taken place (Ramela 2008: 2). This was contradicted by messages from Free State healthcare workers, who notified the South African HIV Clinicians Society that they had run out of ARVs in the first week of November.

Health Minister Hogan was quick to react to the Free State's ARV moratorium, committing additional funds to replenish drug stocks and dispatching health systems experts to the province. By 9 November, Hogan had arranged for the transfer of R9.5 million in emergency funds to the province to purchase ARVs. The Free State's MEC for Health, Sakhiwo Belot, admitted later that the additional funds were sufficient only to sustain existing ARV patients until the end of January 2009, but not to enrol any new patients (Belot 2009). He also stated that the funds were spent on alleviating the province's broader budgeting crisis, and not solely on the ARV programme, thus demonstrating the province's inability to ring-fence budgets for specific health programmes, and its chaotic shifting of funds from one budget line to another.

Contributing factors to the Free State ARV Moratorium

Poor financial management

After the democratic transition of 1994, South Africa implemented a quasi-federal political system with the division of the state into three spheres: national, provincial and local (Schneider and Stein 2001: 724, Wehner 2000: 40). In the South African health sector, national government develops policies, provincial governments are responsible for policy implementation and service delivery, and local governments are charged with the provision of primary healthcare (McIntyre and Klugman 2003: 108). The Constitution mandates that

the three spheres of government have concurrent powers within the health sector and that they integrate their functioning to streamline service delivery. To finance the delivery of services at provincial and local government levels, South Africa has decentralised fiscal structures so that provinces and local governments may exercise greater autonomy in allocating resources between and within departments (*ibid*: 110).

Provinces and local governments derive their funding from a combination of revenue from block transfers at national level and, on a smaller scale, through local taxation and revenue collection. The Public Finance Management Act prescribes that national legislation which entails service delivery in provinces must include projections of the financial implications for provinces (Wehner 2000: 57). This gives legal recognition to the additional cost burden that provinces are required to bear when national departments enact new legislation. However, in practice, provincial and national budgets may not account sufficiently for new policy proscriptions, and national policies may not reflect the realities of provincial and local capacity or the feasibility of expanded service delivery (McIntyre and Klugman 2003: 108).

South Africa operates on a three year 'rolling budget' known as the Medium Term Expenditure Framework. When the Finance Minister presents the budget for the current financial year to Parliament, estimates are given for the following two years. Due to the relatively small sums of revenue raised provisionally, provinces rely on national government for approximately 97% of their budgets (Hassim *et al*. 2007: 88).

There are two primary forms of transfer which national government allocates to the provinces: the equitable share, and conditional grants. The equitable share mandates an equitable distribution of national revenue between the national, provincial and local governments (Wehner 2000: 61). Equitable share funds are unconditional and, as long as they uphold the policy goals and constitutional obligations of national government, provinces may divide them between departments and programmes as they see fit. Provincial governments have little influence over the size of their allocated equitable shares, but they may determine how to allocate these resources across different sectors (McIntyre and Klugman 2003: 114). However, accounting officers within different departments must manage their budgets in conjunction with provincial treasury. If a provincial department lacks the capacity to influence the budgeting process, its funding will suffer accordingly.

Conditional grants, the other primary form of revenue sharing, are transferred to provincial departments to spend on specific programmes. Their purpose is to ensure that provinces have sufficient funds to implement programmes that have

been developed nationally. Conditional grants also supplement service delivery and compensate for resource provision that may benefit the inhabitants of more than one province. The conditional grant for HIV is known as the 'Comprehensive HIV and AIDS Grant', and its objective is to finance a range of HIV interventions in provinces, including voluntary counselling and testing, ARV treatment, and the prevention of mother-to-child transmission (Republic of South Africa 2009, Hassim *et al*. 2007: 88). The Comprehensive HIV and AIDS Grant was initially established during the years of political conflict between key state actors over resource allocation for HIV programmes. Its purpose was to ring-fence funding for HIV services, particularly the provision of ARVs, and to thereby protect these funds from being absorbed into and reallocated within provincial health budgets.

In spite of the elaborate system of grants and transfers to ensure the equitable distribution of funds across spheres of government and between provinces, in practice the system remains highly centralised at national level (Wehner 2000: 71). There is an abiding perception among provincial government officials that policy changes from national level are not supported adequately by budgetary changes (McIntyre and Klugman 2003: 113). The continual changes wrought by evolving health policies, human resource requirements and patient demand make it difficult for provinces to plan and adjust budgets accordingly.

In the official explanation for the ARV moratorium, MEC Belot listed numerous reasons for the provincial Health Department's lack of funds which had resulted in the cost curtailment measures. These included: the increase in patient numbers; the Occupational Specific Dispensation (a wage increase for nurses discussed further below), the takeover of mortuaries from the South African Police Services; and the state of the global economy with rising inflation rates on medical goods and services (Belot 2009). The findings of the Integrated Support Team corroborated Belot's claim that these unfunded mandates had exhausted province's health budget, resulting in a massive overspend. Using estimates of national expenditure and the Free State's budget statements, the report shows that National Treasury had under-funded the province's health mandates, including the Comprehensive HIV and AIDS Grant and the Occupation Specific Dispensation. The Free State's proportion of the national Comprehensive Grant for HIV/AIDS had decreased, despite the increase in overall funding for the grant increasing (Table 1). For example, in the 2005/06 financial year, the Free State received 8.8% of the grant, a total of just over R100,000. By 2008/09 the absolute amount given to the Free State increased to nearly R200,000 but this represented just 6.8% of the total grant.

Although the proportion of the HIV grant is approximately the same as the Free State's proportion of the total population (around 6%), the province had the

second highest antenatal HIV sero-prevalence in 2007 of 33%. It also covers a vast geographical distance, and provides services to patients from the Eastern Cape and Lesotho (Barron *et al*. 2009, Steyn *et al*. 2009: 1 – 6). These factors increased the demand for HIV and other health services in the province.

From the financial year 2005/06 onwards, the Free State allocated approximately one quarter of the budget derived from provincial revenue and the equitable share to health, with a projected increase over the Medium Term Expenditure Framework (i.e. for the current and following two financial years). This projection remained fairly constant, with marginal increases from 2005/06 to 2008/09, and adheres to established practices in the provincial division of budgets.

But from 2004/05, the Free State Health Department had overspent its health budget each financial year. Finally, in 2008/09, provincial Treasury took measures to reign in the Health Department's overspending and changed the Health Department's cash delegations. Reduction of over-expenditure led to a rapid increase in outstanding accruals, which prevented facilities from replenishing stocks of medical supplies including essential medicines. This led to the rationing of health services and, shortly thereafter, the implementation of severe cost curtailment measures including the ARV moratorium.

Inadequate human resources and infrastructure

In the months preceding the Free State's enactment of the ARV moratorium, the provincial public health system came under immense strain due largely to weak financial management and mounting human resource shortages. By 2006, fewer than half of the approved ARV pharmacist posts in the Free State had been filled (Steyn *et al*. 2009: 4). Poor pay and difficult working conditions had worsened the human resources shortage (*ibid*). A lack of investment in the public health sector had failed to develop infrastructure and compounded the deterioration of existing health technologies. Infrastructure requirements for ARV provision include electronic ordering, stock management systems and storage. Despite national policy directives, more than two years after the Free State's ARV programme had begun, a number of facilities still lacked adequate drugs storage and computerised inventory and ordering systems (*ibid*). One reason for the province's inability to improve and upgrade information systems was a shortage of funds earmarked for this budget line item.

In the context of changing budget priorities, it is notable that from 2005/06 to 2008/09 there was a marked shift in the source of the province's over expenditure on health, from goods and services to compensation for employees.

In June 2007, government began to implement the Occupation Specific Dispensation (OSD), a revised salary structure for public service workers. The aim of the OSD was to improve remuneration for public service workers. However, the Free State's implementation of the OSD was beset by fiscal disorganisation. A lack of co-ordination between National Treasury, the National Health Department and the Free State Health Department meant that the additional amount that National Treasury allocated to pay for the OSD was based on a calculation from the equitable share, rather than the province's own human resource figures. This resulted in severe under-funding of the wage increase in the province.

The lack of funds to pay salaries, combined with obstructive recruitment processes, meant that the Free State Health Department faced staff shortages which became more acute due to increasing service demands in the financial year 2007/08. In this year, the Health Department's takeover of forensic services from the police and the provincial roll-out of termination of pregnancy services were implemented without the creation of new posts (Barron *et al*. 2009: 62). Staff shortages therefore had a negative impact on service delivery in the province. Clinics were overcrowded, and lacked basic equipment and amenities, from fridges and telephones to electricity (*ibid*: 82).

Weak M&E systems

M&E systems can provide aggregate data to inform and guide the delivery of HIV prevention, care and treatment programmes, in addition to assessing the efficacy and impact of these (Nash *et al*. 2009: 58 – 62). The National Department of Health and Treasury had supplied provinces with an extensive list of reporting indicators for their ARV programmes, but gave no guidelines regarding the provincial design and implementation of information systems to manage and monitor these (Schneider et al. 2010: 9). The report of the Integrated Support Team indicated that the Free State's M&E and information management systems lacked were weak and unco-ordinated. The national report by the Integrated Support Team found that, with the exception of the Western Cape, every other province faced similar inadequacies and structural weaknesses within its M&E systems. (Barron *et al*. 2009: 74 – 9).

Ineffectual monitoring and information systems across national and provincial Health Departments and Treasuries resulted in poor formulation of targets and recording of the size of patient ARV cohorts (Barron *et al*. 2009: 76). As a result, the Free State initiated more patients onto treatment than planned, which led to an overspend of approximately R3.5 million per month (*ibid*: 41). When the ARV moratorium was implemented, provincial health officials therefore

argued that it was caused by the Free State's excellent performance in scaling up ARV coverage, because this had drained the province's funds from the Comprehensive HIV and AIDS Grant (Ramela 2008). While these weaknesses in M&E systems are not unique to the Free State, when combined with the provincial Health Department's poor financial management, human resource shortages and bureaucratic malfunctioning, the result was the collapse of healthcare delivery in the province.

Bureaucratic malfunctioning

From 2005 – 2008, a number of important positions within the Free State Department of Health remained vacant or were filled only by acting managers, including the integral position of the Head of Department. To cope with this lack of managerial capacity, functions performed traditionally by accounting officers were centralised within the office of the Health MEC, and managers were unable to make decisions appropriate for their level of authority without deferring to this office. In spite of this, the Free State Health Department remained unable to curb its overspending. The Integrated Support Team recorded evidence of financial mismanagement, particularly regarding the reduction of variance across budgets. Rather than implementing changes at the operational level, the Health Department appeared to reduce variance amounts for different over- and under expenditure items through reallocating budgets. There was no clear alignment between annual performance plans, and budgets and performance plans were not updated once conditional grants and equitable share funds had been allocated, demonstrating the inflexibility of the Health Department's budgeting practices (Barron *et al*. 2009: 41).

In the financial years prior to 2008/09, the Provincial Treasury had funded the Health Department's overspending through supplying additional cash flow. But in November 2008, the Department's overspending provoked the Provincial Treasury to withdraw delegations for the financial year 08/09 (mentioned above in the section on financial mismanagement). This change in the cash supply policy reduced the financial autonomy of provincial health officials, who could no longer access funds to pay for outstanding accruals. The Provincial Department of Health responded by curtailing services, including ARVs. This evoked protests by HIV advocacy groups, the Treatment Action Campaign and AIDS Law Project foremost among them, and generated negative news coverage. However, despite the assistance of the National Health Department, and the pressure of HIV advocacy groups to have the moratorium lifted, the province was unable to resume its delivery of routine healthcare until four months later in March 2010.

The Auditor General found that the Free State Department of Health did not have an audit committee in operation for the financial year 2007/08; that the internal audit function did not work according to an approved internal audit plan; and that it did not fulfil its responsibilities set out in Treasury Regulations. The Integrated Support Team also found that the previous year's external audit recommendations had not been implemented substantially, pointing to an acute lack of financial capacity within the provincial Department of Health and Treasury (*ibid*: 45).

The pharmaco-vigilance and medical depot staff who were responsible for drugs management in the province worked in different clusters. This impeded their co-ordination of drugs procurement, delivery and monitoring. The process for distribution of ARVs is outside of the normal drug supply chain. Pills are required to be packed specifically for individual patients onsite at the hospital or clinic. Lack of communication between the provincial medical depot and the chief pharmacist had compromised drugs distribution and resulted in drugs shortages and misorders. The Support Team found that the provincial Department of Health had not prioritised drug budgets. The moratorium on replenishing drug stocks was therefore implemented as a cost curtailment measure, despite adverse effects on patients. By 2008/09, the medical depot was losing proficiency in drugs procurement. Orders which were supplied within 2 weeks in 2005/2006 were taking from 6 – 8 weeks to be supplied and that orders were only made once supplies had reached critically low levels rather than in advanced anticipation of need.

ARV interruptions and extended waiting lists

Late access to ARVs and poor adherence to treatment regimens are associated with increased mortality and drug resistance (Nachega *et al*. 2006: 78 – 84). Spacek *et al*. (2006: 252 – 259) demonstrated that interrupting treatment for four days or more was associated with virologic failure, while Oyugi *et al*. (2007: 965 – 971) found that treatment interruptions of more than 48 hours allowed drug resistance to develop. The lengthy waiting lists and treatment interruptions which characterised the Free State moratorium therefore provided the circumstances for patients to develop resistance to their treatment regimens, or to die before they were able to initiate treatment.

Francois Venter, head of the HIV Clinicians Society of South Africa, explained in a letter to Health Minister Hogan that delays in treatment would have a 'cumulative negative effect on the roll-out', with little chance that all backlogged patients would survive the wait (Venter 2008). Venter also estimated

that the moratorium was resulting in the additional deaths of 30 people from AIDS every day in the Free State.

In an email to TAC, one Free State doctor explained that his clinic was set to run out of the drug lamivudine (3TC), by 15 December 2009. As lamivudine is one of three drugs in the public sector first-line ARV treatment regimen, a stockout of the drug would have impacted the majority of patients. The doctor, who wished to remain anonymous due to fears of victimisation by the Department of Health, told TAC that he had turned away thirty patients in urgent need of ARVs on a single morning on 10 November 2009 (private correspondence with Treatment Action Campaign). That same day, the Free State's chief ARV pharmacist notified the province's ARV pharmacists via email that she was unable to procure stocks of Kaletra. 'To make matters worse', she wrote, 'there is no alternative for Kaletra'. Lopinavir/ritonavir (brand name Kaletra) is the protease inhibitor constituent of South Africa's second-line ARV treatment regimen, and is a mainstay of paediatric antiretroviral regimens.

In journalists' profiles of Free State patients who had been turned away from clinics empty-handed, patients described their hopelessness and confusion about whether or not ARVs would ever be accessible consistently. One *Health-e* article recounted how a woman who had presented at Pelonomi Hospital after the ARV moratorium had officially been lifted was still unable to access treatment. She had been on the waiting list since October 2008. The nurse at Pelonomi told her to return in April 2009, but that ARVs would only be available by then if funds were sufficient. The woman told *Health-e* reporters, 'Now I am ill. I want treatment. If I don't hear anything different after April, I will then give up' (Magamdela 2009).

Access and adherence to ARV treatment is complex, and there are several determinants which affect a patient's success on treatment, including the patient/healthcare worker relationship, the clinical situation and the drug regimen (El-Khatib and Richter 2009: 412-413). In a letter to the South African Medical Journal about the Free State, El-Khatib and Richter wrote: 'The moratorium will increase morbidity and mortality, but the loss of trust in the health system and the potential impact of the ARV crisis on existing patient adherence also need to be considered' (2009: 412). Studies calculating the costs to patients of obtaining ARVs in South Africa have shown that patient access to ARVs entails considerable opportunity costs, and that this is an important factor in adherence (Rosen *et al*. 1997: 524 – 29, Veenstra *et al*. 2009: 12). During the ARV moratorium, many patients were not put onto the ARV waiting list. They were instead told that they would only be added to the list once the moratorium was lifted, with a strong likelihood of loss to follow-up (AIDS Law Project 2009: 8 – 9).

Conclusion

Poor co-ordination between Provincial and National Health Departments and Treasuries resulted in the haphazard implementation of the moratorium and its continuation for four months. Due to South Africa's legislative requirements that National Departments oversee service delivery in the provinces, responsibility for the impacts of the ARV moratorium reside partly at the national level. At the provincial level, financial mismanagement, bureaucratic malfunctioning, human resources and equipment shortages, and inadequate M&E systems were the root causes of the ARV moratorium and the broader cost curtailment measures.

The Free State ARV moratorium points to the structural deficiencies in South Africa's public health system. The province interrupted the procurement and provision of treatment due to a complex array of factors, primarily concerning the planning of budgets and their integration with accurate targets of patient demand for ARVs. In South Africa's provinces with the highest HIV prevalence and fewest health resources, long waiting lists continue to obstruct patient's access to ARV treatment (Fairall et al. 2008: 86 – 93, Ford et al. 2009, 1808 – 1810). Direct political obstructions to South Africa's public provision of services for the prevention, testing and treatment of HIV are a thing of the past. Today, obstructions to ARV treatment and the delivery of comprehensive healthcare services are caused more broadly by health systems and infrastructural problems. These include a lack of financial capacity and weak oversight and co-ordination of budgets, human resources shortages, poor M&E systems, and deficient infrastructure. The improvement of these components is crucial to South Africa's continued expansion of ARV treatment programmes, and its sustainable delivery of other health and social services.

Table 1: National Conditional Grant to the Free State Province (Barron et al. *2009: 36)*

Financial year	Total Conditional Grant to all Provinces (in thousands)	Free State Provincial Allocation (in thousands)	% Allocation of National Conditional Grant
2005/06	R1 150 108	R100 874	8.8%
2006/07	R1 616 214	R142 265	8.8%
2007/08	R2 006 223	R153 646	7.7%
2008/09	R2 885 400	R189 630	6.6%
2009/10	R3 476 200	R235 792	6.8%

Table 2: Allocation of the Free State's Provincial budget to health (excludes Conditional Grants) (ibid: 35)

Financial year	Adjustment Provincial Budget (in millions)	Adjustment Health Budget (incl. Grants) (in millions)	% allocation to health
2005/06	9 359	3 118	24.8%
2006/07	10 076	3 369	24.2%
2007/08	11 281	3 744	24.5%
2008/09	13 313	4 469	25.0%
2009/10	14 822	5 198	26.0%

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