

**Equity and Health System Strengthening in
ART roll out:
An analysis from literature review of experiences from
east and southern Africa**

**Ireen Makwiza, Lot Nyirenda, Fastone Goma, Fatima Hassan,
Innocent Chingombe, Grace Bongololo,
Sally Theobald**



The REACH Trust, Malawi

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Executive Summary

The sub-Saharan region has been the worst hit by the HIV/AIDS epidemic. HIV prevalence rates are highest in the Southern Africa region with rates of over 30% in some countries. With action from multiple players ART scale up has begun. It is critical to analyse equity in ART scale up in the context of health systems. This requires not only the assessment of how decisions are made around ART provision and who is able to access and adhere to ART, but also to analyse the impact of the provision of ART on the broader health system.

This review builds on earlier work conducted by EQUINET/ TARSC, which synthesised experiences of equity in ART provision in the context of health systems in east and southern Africa. Using EQUINET networks the REACH Trust commissioned mini-case studies from South Africa, Zambia, and Zimbabwe. The REACH Trust conducted the review in Malawi and synthesised the case studies and evidence available from the other country case studies and the international literature. Section 2 of this review illustrates how Kalanda, Makwiza and Kemp's (2004) framework has been adapted for monitoring equity in ART scale up in the context of health systems as its central organising conceptual framework. The adapted framework is as follows:

Two areas of equity, justice and accountability (discussed in Section 4 of the review):

- fair policy development, monitoring and accountability through fair processes; and
- equitable access to ART with realistic targets.

Seven areas of sustainability and efficiency: health systems issues (discussed in Section 5 of the review):

- holistic health financing;
- monitoring and evaluation systems;
- capacity for ART provision;
- strengthening human resources for ART;
- developing partnerships with communities and volunteers;
- drug procurement; and
- private sector provision of ART that enhances public health system capacity.

The aim of the review is not to systematically analyse the situation in each of the four country case studies against this framework, but rather to provide illustrative examples of findings and, where possible, examples of promising practice towards promoting a virtuous cycle of quality and equitable ART delivery and strengthened health systems.

Section 3 of this review contextualises the framework outlined above by introducing the key players involved in ART delivery in each of the countries involved. In each country there are a number of different players, including a wide variety of funding bodies, such as the public sector and the private sector, as well as for-profit, not-for-profit and non-governmental organisations. In Malawi and Zimbabwe, the Ministries of Health are the key players in delivery of ART programmes through the HIV/AIDS unit in Malawi and the AIDS and TB unit, a department of the Ministry of Health and Child Welfare (MOHCW) in Zimbabwe. The private and NGO sectors also play important roles in ART programmes, particularly in South Africa.

The findings related to equity, justice and accountability are laid out in Section 4 of this review. In terms of *fair policy development*, promising practices were identified in Malawi where an open consultative process involving phone in radio-programmes, consultative meetings and a commissioned study fed into the development of an equitable ART policy. There is a need to seek ongoing opportunities to identify the needs and priorities of different stakeholders, as processes of 'fair' policy development can make decisions more broadly acceptable and legitimate even when people disagree about how to scale up ART programmes.

Providing *ART free at the point of delivery* in the public health system greatly enhances access. Such an approach is intrinsically fairer and arguably very positive from an equity perspective, as evidence shows that even mean-tested user fees hinder access by poor people to treatment and care, and reduce long-term adherence. For example, in Zambia, 5,586 people were on ART by April 2004. The decision to make ART access free in public services was implemented in June 2005 and the number of patients accessing ART rose exponentially to 43,964 by the end of December 2005. Similar patterns were observed in Malawi following the government's decision to make ART free in public health facilities in June 2004. However, qualitative and operational research conducted in Malawi reveals that poor and vulnerable women and men can still face prohibitive opportunity costs to ART access and adherence, even when services are provided free. In addition, there is a need for ongoing approaches to try to bring services closer to communities.

Urban bias in service provision was noted in all four country case studies, which means that strategies must be developed to promote and strengthen service provision in rural areas.

Paediatric access to ART was also relatively low (as compared in adults) in all four country case studies. For example, in Zambia, National AIDS Council statistics in 2004 showed that only 4% of ART patients were children below 15 years. There is a need for further advocacy in this area and a simplification of paediatric ART formulations.

More women than men are accessing ART through the public health sector: Sixty percent of clients in the public sector in South Africa and Malawi are female. In contrast, in South Africa, men accessing ART through private sector workplace schemes significantly outnumber women. These *gender differences* need to be interpreted against an increasingly feminised HIV epidemic in Africa, especially among the younger age groups. There is a need to mainstream gender in responses to HIV to ensure that younger and older women and men have the opportunity to benefit from these different interventions.

Section 4 of the review highlights efficiency, sustainability and integration of ART scale up in health systems. In terms of *funding for ART provision* it was found that external funding is the main source of funding in Zambia, Malawi and Zimbabwe. Naturally, donor dependency raises certain challenges, and people in Malawi felt that the Global Fund process was problematic due to the bureaucracy involved in sourcing funding, which can result in delays and interrupted supplies of ART, HIV test kits and other equipment. There is also early evidence from Malawi that the Global Fund maybe undermining and complicating the newly launched Sector Wide Approach in Health and leading to a re-verticalisation of service provision.

Effective monitoring and evaluation (M&E) are important for coordinating and collaborating responses to HIV/AIDS in order to avoid duplicating and fragmenting available resources. Approaches to M&E varied by country. A major challenge is the lack of strong leadership and coordination in M&E, where multiple players are involved. For example, the challenge in South Africa is that there is no coherent or uniform M&E system in place. The need for open, transparent and accountable M&E has become a concerted area of activism among diverse strands of civil society in South Africa.

Scale up is taking place rapidly and therefore *the capacity of the health sector capacity needs to be boosted to ensure adequate ART provision*. This could involve the training of health personnel, ensuring a consistent drug supply and providing the appropriate infrastructure. For a site to be able to offer ART services in Zimbabwe, it has to undergo a comprehensive assessment conducted by the Ministry that looks at the different aspects that are relevant for the initiation of the ART programme.

Health sector capacity for ART delivery has to be placed within a broader analysis of *human resources for health*. Many health workers in Africa are over-stretched, under-paid and under-valued – a situation that is exacerbated by their increased workloads triggered by the HIV and AIDS epidemic. There is an urgent need for innovative strategies and action to

better support health workers – this will have positive spin offs for ART provision and health systems as a whole. Countries are developing some innovative approaches to address this issue and there is need for concerted action and support at different levels, as it will take time for the effects to be realised in practice. For example, DFID is supporting salary top-ups of 52% to health workers in Malawi.

There are some examples of promising *partnerships between the formal health sector and community members*. These partnerships can enhance communities' access to ART and address the stigma of HIV, which is particularly critical in the context of over stretched formal health workers. The Zambian National Implementation Plan highlights the importance of the community's role in the provision of ART, with regard to both the right to treatment and the importance of community oversight in ART programmes. From equity and sustainability perspectives there is a need to consider ways in which to support, recognise and remunerate – frequently female – community members and volunteers who are involved in ART programmes.

There are different experiences with *drug procurement systems*. In South Africa, the availability of generics that form part of the first-line regimen has not been a problem and has been widely available. However, there are major concerns emerging about the affordability and sustainability of second-line regimens.

The *private sector* is actively involved in providing ART mostly at cost to the patient or through medical insurance in all four country contexts reviewed. Workplace treatment programmes are common in South Africa. In this context, larger employers, sometimes with the assistance of donors such as the GFATM, are funding the free provision of ARVs in the workplace. Malawi presents an interesting example of a partnership with the private sector that is complementary and enhances public sector ART provision. Drugs for the private sector are procured with Global Funds. These drugs are then provided to patients at 20% of the real cost to the private sector. The decision was made to subsidise these drugs in the private sector in order to make them attractive to those who can afford them and thereby reduce pressure on the public health sector.

In conclusion, the review applies the framework for monitoring equity in ART scale up highlighted above to provide a snapshot of the situation in the four different country case studies. It is difficult to make a clear assessment of whether ART programmes are strengthening or undermining public health systems, as the reality appears complex and contested. This is not surprising as ART programmes include multiple players and multiple inputs, which are played out against complicated health systems.

This review needs to be seen as 'work in progress'. There are some emerging examples of promising practices in both of these areas and a number of real challenges ahead that need concerted and coordinated action at district, national and international levels. ART scale up, and its associated challenges and tensions, is being played out against health systems RIGHT NOW. There is a need for ongoing dialogue, the exchange of experiences and an approach of 'learning while doing'.

1. Introduction

The Research for Equity and Community Health (REACH) Trust was commissioned by the Regional Network for Equity in Health in East and Southern Africa (EQUINET) to conduct a review of evidence from published literature on approaches that strengthen health systems and address equity in antiretroviral therapy provision in east and southern Africa. The aim of the review was to outline the current evidence from published literature, information from secondary evidence and key informant interviews in four countries in east and southern Africa (ESA) within the region on the dimensions of equity and approaches that strengthen health systems in the expansion of antiretrovirals and treatment for HIV and AIDS.

The REACH Trust conducted a case study in Malawi and commissioned case studies with the aim of reviewing evidence on issues of equity and health systems in antiretroviral therapy roll out in three countries: Zimbabwe, Zambia and South Africa. The country case studies were selected according to several factors, which included the burden of HIV, the scale up of ART and the availability and interest of the country-based teams to conduct the analysis. The countries and the researchers who were responsible for producing the mini-case studies were identified with input and guidance from the EQUINET Steering Committee and are listed as co-authors of this review. Researchers from the REACH Trust conducted the review in Malawi and synthesised the studies from the different country specific reviews within the information identified through the international literature review.

All available information on equity and ART in the different countries was reviewed (See Appendix 1). The aim of the report is not to systematically analyse the situation in each of the four country case studies, but rather to provide illustrative examples of findings and, where possible, examples of promising practice towards promoting a virtuous cycle of quality and equitable ART delivery *and* strengthened health systems. A framework of key themes for monitoring equity (discussed in section 2.3) guided the country case studies.

The literature review did not follow strict inclusion or exclusion criteria. Literature that contained information relevant to the central theme of this report was included, such as grey/unpublished literature, as well as published literature, scientific research papers in peer-reviewed journals and research reports that did not give a comprehensive overview of their methodological approach. The literature search was limited to documents available on the internet or those passed on by colleagues undertaking the country case studies. Not all relevant reports or data are available on the internet and the review could be strengthened in future by in-country literature collection.

This review is building on and contributing to work fostered by EQUINET on equity monitoring in ART in the context of health systems, which is on-going in east and southern Africa region (see section 2.3). The review aims to produce evidence in assessing the equity dimensions in ART programmes and health systems and will attempt to identify the best practices in the region for cross-learning between and across different countries. The target group for the review are policy makers and activists in east and southern Africa region, with the intention of influencing policy and programme implementation.

The review consists of five key sections:

- Section 1 is the introduction.
- Section 2 highlights background and context information including the analytic framework used
- Section 3 gives an overview of the four country case studies and highlights the key players in ART scale up in each case.
- Section 4 gives an overview of the areas of equity, justice and accountability
- Section 5 reviews efficiency and sustainability through highlighting health system issues related to ART provision
- Sections 6 and 7 synthesise the challenges for scaling up treatment and provide the conclusions and lessons learnt.

2. Background Information

2.1 Overview of the HIV/AIDS pandemic in east and southern Africa

HIV/AIDS has been described the 'most destructive epidemic ever recorded in history, killing over 25 million people' (UNAIDS, 2005). New infections were still increasing in 2005.

The sub-Saharan region has been hardest hit by HIV. Even though it is home to only 10% of the world's population, more than 60% of all the people living with HIV are from this region (UNAIDS, 2005). In 2005, 3.2 million people were thought to be newly infected with the virus and about 2.4 million children and adult deaths were due to HIV/AIDS. Seventy-seven per cent of all women infected with the virus are in the sub-Saharan region (ibid).

The southern Africa region has highest HIV prevalence estimates in the sub-Saharan region, with national prevalence rates at over 30% in some countries. *Table 2* below gives estimates of the levels of HIV/AIDS prevalence in the southern Africa region.

Table 2: Estimated prevalence rates of HIV/AIDS in southern African countries among adults (15–49 years)

Country	Estimated number of people living with HIV/AIDS	Estimated prevalence rates (%)
Angola	240,000	3.9
D R Congo	1,100,000	4.2
Tanzania	1,600,000	8.8
Mozambique	1,300,000	12.2
Malawi	900,000	14.2
Zambia	920,000	16.5
Namibia	210,000	21.3
South Africa	5,300,000	21.5
Zimbabwe	1,800,000	24.6
Lesotho	320,000	28.9
Botswana	350,000	37.3
Swaziland	220,000	38.8

(Source: Adapted from WHO, 2004)

Geographical differences

Estimated national prevalence rates in 2004 varied from 3.9% in Angola to 38.8% in Swaziland. Zimbabwe and South Africa have a particularly high prevalence, with more than 20% of the population living with HIV and AIDS. There is also variation within countries – HIV prevalence differs according to geographical areas and between urban and rural areas. For example, in Zambia, prevalence rates in Lusaka and the Northern Province are 22% and 8% respectively (ZDHS, 2004). In Malawi, prevalence is twice as high in the south than in the northern and central regions (NAC, 2004), and urban residents are twice as likely to be infected as rural residents. HIV prevalence among women in the urban areas was 18%, and was 13% in the rural areas according to the MDHS 2004 (NSO and ORC Macro, 2004). In South Africa, residents of urban informal locality had higher HIV prevalence than those living in formal urban or rural areas (Shisana et al, 2005).

Gender and age differences

HIV prevalence among women continues to increase faster than among men. On average there are about 13 infected women for every 10 infected men (WHO, 2004). This sex difference in HIV infection is more pronounced in the younger age group 15–24. The prevalence among females in this age group (15–24 years) is reported to be four times higher than among males (NAC, 2003, Shisana et al., 2005). It is estimated that women are

1.4 times more likely to be HIV-infected than men in Zambia (representing prevalence rates of 17.8% for women and 12.6% for men). This is similar to Malawi, where females are 1.3 times likely than men to be infected (MDHS, 2004). A population-based survey in South Africa showed a higher prevalence of HIV among women (13.3%) compared to men (8.2%) (Shisana et al, 2005).

Changing prevalence patterns

There has been a decline in the prevalence rates in Zimbabwe, though there is little evidence of decline in other countries in southern Africa (UNAIDS, 2005). The decline has been attributed to changes in sexual behaviour through the use of condoms and a reduction in the number of sexual partners. In Botswana, HIV infections appear to be stabilising since 1999, though national HIV prevalence among pregnant women has remained high at between 35% and 37% since 2001. It is expected that in other countries prevalence rates might continue to rise. For example, new data from South Africa shows an increase in prevalence rates among pregnant women (ibid). A marked decline in HIV prevalence rates has been observed in Uganda, from 15% in 1991 to 5% in 2001. The factors leading to this decline are not yet clear (UNDP, 2005).

The impact of ART

The introduction of life-prolonging antiretroviral therapy has meant reduced mortality and morbidity among HIV-infected individuals in developed countries. A study in South Africa showed that the use of ART was associated with slowed disease progression and deaths (Badri, Maartens, Mandalia, Bekker, Penrod, Platt, Wood and Beck, 2006). It was also found that associated reductions in morbidity and mortality had led to lower use of in-patient services (ibid.). Limited evidence from a multi-country research study on antiretroviral therapy in lower-income countries (ART-LINC) in low- and middle-income countries has shown increased survival rates for HIV-infected individuals with good immune and viral responses. The study also showed similar mortality reductions in low-income contexts when compared to high-income contexts, despite high early mortality rates in low-income contexts (WHO, 2006). In Malawi about 70% of deaths of patients on ART happen in the first three months of treatment (MoH, 2006).

However, despite considerable progress made under the 3 by 5 initiative in increasing access to ART in low- and middle-income countries, there are still massive gaps in access, which raises critical equity issues. Only one person in 10 in Africa and one in seven in Asia in need of antiretroviral treatment were able to access these life-saving drugs in mid-2005 (UNAIDS, 2005; WHO and UNAIDS, 2005). However, there were marked increases in the number of people accessing ART by the end of December 2005. In the sub-Saharan Africa region more than 800,000 people accessed ART by December 2005. Compare this with the figure of only 100,000 people in 2003 (WHO, 2006).

2.2 Equity in ART scale up in ESA: A health systems approach

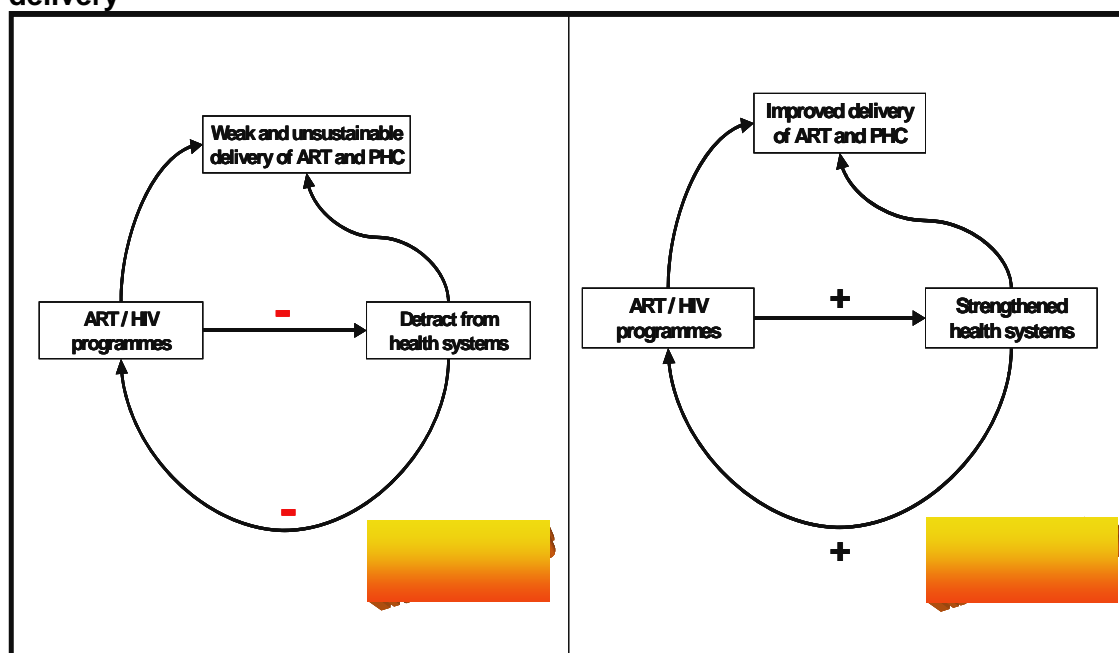
Pursuing equity in health reflects the need to address and reduce unequal opportunities to health (WHO, 2005). Equity in health implies addressing differences in health that are judged to be unnecessary, avoidable and unfair. 'These differences relate to disparities across socio-economic status, gender, age, racial groups, rural/urban residence and geographical region. Equity should therefore be achieved through the redistribution of the societal resources for health, including the power to claim and the capabilities to use these resources' (EQUINET Steering Committee, 2004).

Health systems have been defined as all activities the primary purpose of which is to maintain and restore health. A health system encompasses national health policies and programmes, laws and regulations, organisations and management structures, as well as financing arrangements. These elements combine to promote preventive, curative and public health services aimed at improving health. More specifically a health system includes aspects of drug and commodities procurement policies, financing, human resources,

information systems, logistical systems and the policy environment (ibid). Health systems can be important vehicles for reducing poverty and redistributing wealth in highly unequal societies. The potential for positive outcomes is reduced when health systems are inaccessible to, or too costly for, for low-income communities, when they are under-funded or under-staffed, particularly at the primary health care and district level (EQUINET, 2004).

In a health system where resources are severely limited, the analysis of equity in access to treatment requires not only an assessment of who will receive the drugs, but more importantly, what impact the provision of ART will have on 'equity' for the provision of essential health services within the broader public health system (Kemp et al, 2003). A body of work from EQUINET has argued that programmes aimed at delivering ART have the potential for strengthening health systems supporting the provision of essential health services and widening access to ART. On the other hand, programmes aimed at ART delivery divert scarce resources from the wider health system and undermine long-term access both to ART and to other public health interventions (EQUINET, 2004). *Figure 1* shows that ART provision, if incorrectly implemented, can result in a vicious cycle that undermines the delivery of essential health services, such as primary health care, and raises concerns about the sustainability of health programmes. In contrast, ART programmes that are correctly implemented could lead to a virtuous cycle that builds and strengthens the broader health systems, improves the delivery of primary health care and promotes equity in health.

Figure 1: The vicious and virtuous cycles of ART/HIV programmes on health delivery



(Source: EQUINET/TARSC, 2004a)

Globally, the demand to make ART more accessible to poor African people is gaining momentum. The lack of access to ART has been a focus for activism, which has been reflected in the campaigning in World AIDS conferences in Durban (2000), Barcelona (2002) and Bangkok (2004) (Theobald and Taegtmeier, 2005). The topic was at the forefront at the Toronto (2006) conference. Such unprecedented global advocacy has formed the backdrop to the recent agenda for access to ARVs (Lush, 2001). This led to dramatic promises to supply drugs, but little has actually happened.

Bodies and programmes have been established to deal with the provision of drugs, such as:

- the Global Fund for HIV/AIDS, TB and Malaria (GFATM);

- the Presidential Fund for HIV AIDS, announced by President Bush in December 2003;
- the World Bank Multi-Country AIDS Programme;
- the World Health Organisation's (WHO) 3 by 5 initiative, which aimed to have three million people on ARVs by 2005; and
- current programmes focusing on 'universal access by 2010' spearheaded by UNAIDS with the 2005 G8 meeting in Gleneagles, Scotland, which issued the first resolution on the subject.

The Global Steering Committee will agree upon the definition of universal access. The setting of targets will be a country-driven process through a consultative process (Theobald et al, 2006).

The 3 by 5 initiative has set the pace for wide-scale HIV treatment programmes and has provided evidence that large-scale ART programmes in resource constrained settings is achievable (UNAIDS and WHO, 2005). However, there are several challenges that have to be addressed in order to make progress towards universal access to treatment, such as the need for:

- sustainable financing from both donors and domestic sources;
- drug formulations that are easy to administer;
- paediatric formulations (ibid);
- a sustainable health workforce; and
- treatment provided free at the point of delivery to the poor in an equitable manner.

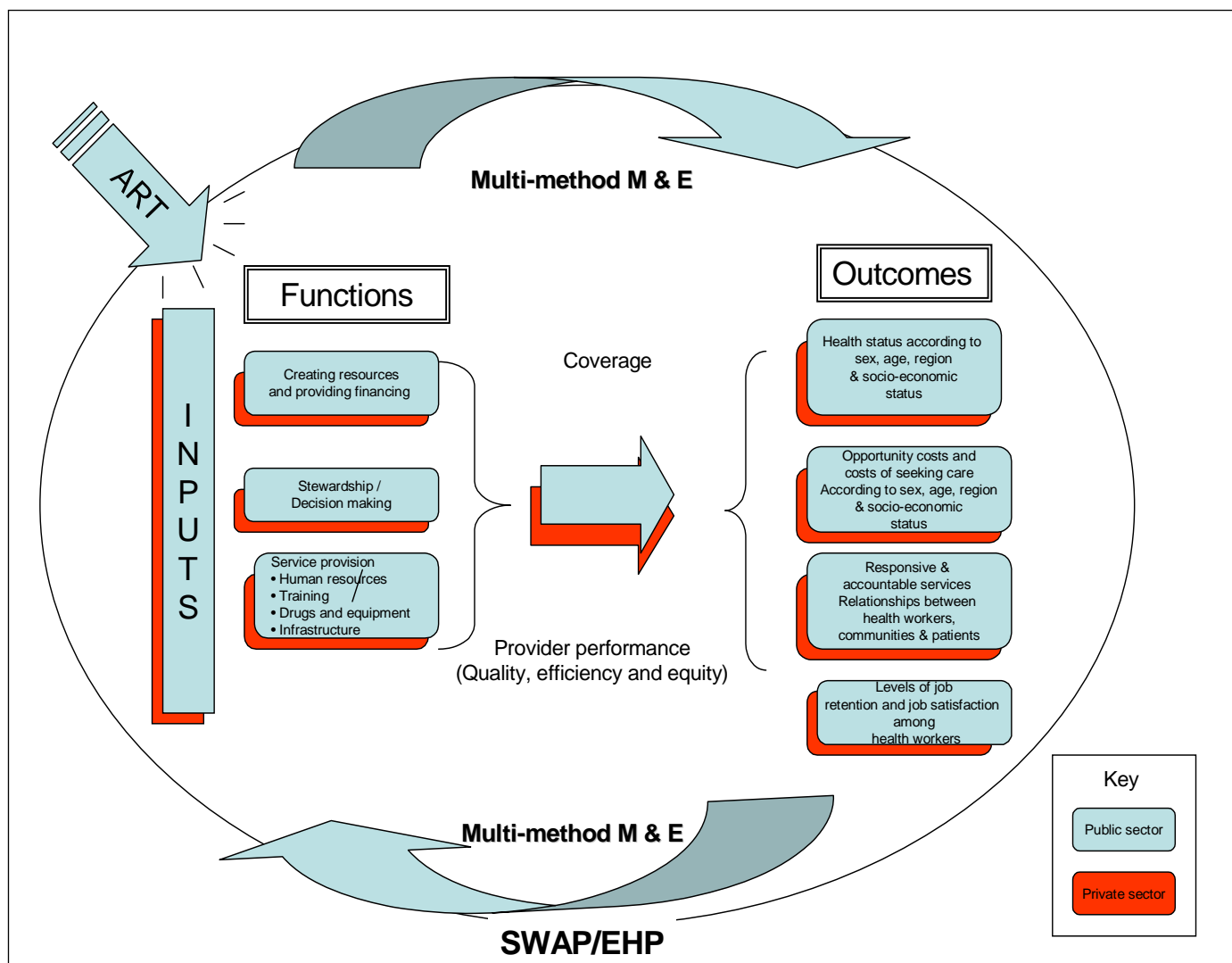
Global level action has been mirrored by advocacy and activity at national levels. ART is being scaled up in southern and eastern Africa, as shown in the country case discussed later in this review: Malawi, South Africa, Zambia and Zimbabwe. The process of scale up is complex and situation specific. The process of funding, securing and delivering of ART is taking place within a complicated and, in many cases, over-stretched and under-resourced public health system. ART scale up has to happen in a strengthened health system, and the need for life-long commitment to adhering to drugs makes the management of HIV complex and labour intensive (Schneider, Blaauw, Gilson, Chabikuli, Goudge, 2004). Schneider et al (2004) observed that HIV treatment and health systems require all stakeholders to take into account the following issues:

- the effective integration of HIV treatment into existing service delivery;
- the use of HIV treatment to improve local/district health systems;
- the integration of HIV treatment strategies with national financing, drug supply and monitoring systems; and
- in the long term, the need to develop human resources and change organisational cultures and incentives.

Figure 2 overleaf illustrates the basic structure of health systems. Note how health systems have a set of *inputs* and *functions*, such as creating resources and service provision, and a number of *outcomes*, such as health status, experiences of seeking care, relationships between providers and users, and health workers' job satisfaction. These inputs, functions and outcomes are also complicated by varied – and often contested – relationships between public and private health providers.

The impact of the arrival of ART on complex health systems needs further assessment and ongoing monitoring and evaluation. In any health system, ART programmes should be developed and expanded in ways that will not aggravate inequities or divert resources from other health interventions or from other parts of the health system (McCoy, 2003). Early monitoring and evaluation is needed to identify the impact that ART programmes have on the health system. This data is critically needed in southern and eastern Africa, where large-scale provision of ART must take place in a context of fragile public health systems and limited funding streams. Demand is outstripping ART supply in some countries due to limited capacity and over-stretched and under-resourced health workers.

Figure 2: An outline of health systems



(Source: Adapted from WHO Health Systems Performance <http://www.who.int/health-systems-performance/>)

Africa is at a pivotal moment in time because additional funding and resources are being made available to support ART scale up like never before in history. As Piot and Seck (2001) argue: 'Commitment to scaling up HIV prevention and care, and the capacity to do so, have never been stronger. A remarkable opportunity exists now for concerted action on all fronts.' These funding and resources for ART provision can *either* serve to strengthen health systems as whole and thereby produce a virtuous cycle of improved ART access and more equitable sustainable and efficient health systems, *or* they can undermine and negate gains made in broader health systems, resulting in a vicious cycle. This review highlights some of the tensions involved in ART scale up and indicates some promising practices for promoting equitable ART provision and strengthening health systems.

The next section shows how this report builds on a body of work that has been fostered by EQUINET and presents the central organising framework for the review.

2.3 Monitoring Equity in ART scale up in ESA: EQUINET work to date

In collaboration with OXFAM GB and civil society partners, EQUINET initiated a regional programme of work on equity in health sector responses in HIV and AIDS in 2003. This work concluded that monitoring equity in access and health systems issues should be an important, informative and integral part of ART programme expansion and should lead to the development of policy principles for improving equity and strengthening health systems

in ART access (EQUINET, 2004). This regional programme of work contained the following three key steps:

- (i) Agree on a framework for monitoring equity in access and health system issues in ART programmes in southern Africa.
- (ii) Review and refine the monitoring framework and proposed indicators.
- (iii) Draw up a final document with three core indicators and 13 shortlist indicators for monitoring equity in ART in the health system.

A framework for monitoring equity in access and health system issues in ART programmes in southern Africa, reflecting seven key areas for equity monitoring were agreed on, based on the key themes identified in the policy principles established by the regional process (Kalanda et al, 2004). These are summarised in the following box and provide the central organising framework for this report.

Box 1: Policy principles for equitable ART

Two areas of equity, justice and accountability (discussed in Section 4 of the review):

- fair policy development, monitoring and accountability through fair processes; and
- equitable access to ART with realistic targets.

Seven areas of sustainability and efficiency: health systems issues (discussed in Section 5 of the review):

- holistic health financing;
- monitoring and evaluation systems;
- capacity for ART provision;
- strengthening human resources for ART;
- developing partnerships with communities and volunteers;
- drug procurement; and
- private sector provision of ART that enhances public health system capacity.

In Malawi in October 2004, various stakeholders from Southern Africa met in a regional consultation hosted by EQUINET and Equi-TB Malawi (now REACH Trust) to review and refine the monitoring framework and indicators proposed (EQUINET, 2004). The principles for this framework were identified and it was agreed that the framework should:

- be simple, clear and use existing data;
- be owned by and useful to local, national and regional institutions;
- be integrated within a unified monitoring and evaluation system; and
- inform decision making and action.

A final document with three core indicators and 13 shortlist indicators for equity and health system ART monitoring was produced and circulated for review by different stakeholders, including WHO, SADC countries and other organisations (EQUINET, 2004).

This current review applies the framework identified in Step 1 to four country case studies in southern and eastern Africa – Malawi, South Africa, Zambia and Zimbabwe – and uses information available from the equity indicators identified in Step 3, where available.

3. Key players in ART provision

This section of the review sets the stage for the analysis by outlining who the key providers in ART delivery programmes in the four country case studies and the numbers of people accessing services. ART programme delivery is characterised by a number of different players, which includes the public sector, the private sector, for-profit and not-for-profit

organisations, and non-governmental organisations. Governments in the four case study countries have played a key role by developing policy guidelines and treatment operational guidelines.

In Malawi and Zimbabwe, the Ministries of Health are the key providers of ART services, managed by the HIV/AIDS unit in Malawi and the AIDS and TB unit, a department of the Ministry of Health and Child Welfare (MOHCW) in Zimbabwe. However, the private and NGO sectors play an important role in ART programmes, particularly in South Africa where more than 90,000 patients access ART through organisations in these sectors. ART scale up has only started recently, although ART has been available for some time through NGOs or the private sector in most countries. National commitments to active ART roll outs started in 2004 in Zambia Malawi and Zimbabwe, and in 2003 in South Africa.

An overview of ART provision, including key providers, is now outlined in each of the case study countries in turn.

3.1 Zambia

Zambia, one of the countries worst affected by HIV/AIDS, has a prevalence rate of 16% among people in the 15–49 age group (ZDHS, 2000). A total of one million people are estimated to be living with HIV/AIDS and 200,000 people are eligible for ART. Zambia aimed to put 100,000 people on ART by the end of 2005. ART in Zambia was pioneered by the private sector. It is, however, difficult to determine the number of patients accessing ART through them and the number of private facilities providing ART, as they do not report to government. It is estimated that by the end of 2003, about 3,000 people were already accessing ART through the public sector and the number of patients accessing ART rose to 5,586 by April 2004 (ZASF, 2006). Patient charges in the form of assessment costs plus a monthly service fee were said to be unaffordable to most patients and were therefore considered as barriers to treatment access. Recognising the benefits accruing from ART, in June 2005, the Zambian government made a decision to make ART available free of charge to all citizens requiring it and the number of patients accessing ART rose exponentially to 33,000 by September 2005. By the end of December 2005 the number had increased to 43,964 patients (ZASF, 2006)

A high-level cabinet committee of ministers on HIV and AIDS provides policy direction, supervises and monitors the implementation of the HIV and AIDS programmes. The national AIDS/HIV/TB/STI Council (NAC) is the national mechanism to coordinate and support the development, monitoring and evaluation of a multi-sectoral national response to HIV and AIDS

Among the key players in ART provision are the Zambian HIV/AIDS Prevention, Care and Treatment (ZPCT), the Centre for Infectious Diseases Research in Zambia (CIDRZ), the Churches' Health Association of Zambia (CHAZ) through the Catholic Relief Services (CRS) and AIDS Relief, and the Zambian government.

3.2 South Africa

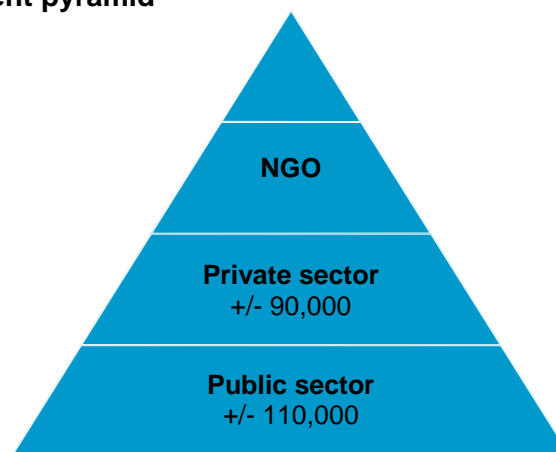
South Africa has the highest number of people living with HIV/AIDS – estimated to be over 5 million. On 8 August 2003, the government of South Africa made a commitment to provide antiretroviral (ARV) treatment in the public health sector. By January 2006, some two-and-a-half years later, the total number of people on treatment in both the public and private sector was between 200,000 and 220,000. About 110,000 to 120,000 people were accessing ART in the public sector, with an additional 90,000 to 100,000 receiving it in the private and not-for-profit sectors (Hassan, 2006).

Patient numbers are calculated as follows:

- Anyone receiving treatment at a state facility is considered a public sector patient, irrespective of who funds the patient.
- Anyone receiving treatment outside of a state facility is considered a private sector patient.

For the purposes of this review, the private sector in South Africa includes the not-for-profit sector, workplace treatment programmes, medical schemes (private health insurance) and the out-of-pocket funding. The tip of the treatment pyramid (Figure 3 below) comprises of a handful of trials that include the provision of ARVs (for example, in the defence force).

Figure 3: The treatment pyramid



In workplace treatment programmes (WTPs), larger employers and donors are funding the free provision of ARVs in the workplace. Some of the larger companies provide HIV/AIDS treatment for workers who cannot afford to belong to a medical scheme. But here too, donor support is critical. For example, the GFATM funds some workplace treatment programmes in the mining sector.

In the medical schemes and health insurance environment, by law, through risk pooling and cross-subsidisation, schemes fund the provision of ARVs for members. In such cases, many private sector programmes are administered by external disease management programmes (DMPs) such as Aid for AIDS, Lifesense, Aurum Health, QUALSA, Right to Care, Caliber Clinical Consultants, Discovery DMP, Lifeworks, Old Mutual, Prime Cure, Sizwe Yebo Life, Direct Health and Metropolitan Health.

3.3 Zimbabwe

In Zimbabwe, average life expectancy has dropped from 62 years in 1990 to 33 years in 2006. About 1.6 million people are living with HIV/AIDS in Zimbabwe. Cumulative AIDS deaths stood at 1.5 million 2004 and statistics indicate that an average of 3,000 people die from HIV- and AIDS-related illnesses every week (MOHCW/NAC, 2004). Approximately 340,000 people (240,000 adults and 70,000 children) are estimated to be in need of antiretroviral treatment (MOHCW, 2006).

In 2002, the government declared the lack of ART an emergency and in 2004 the national ART programme was launched (MOHCW, 2006). The ART programme in Zimbabwe is coordinated by the AIDS and TB Unit, a department of the Ministry of Health and Child Welfare (MoHCW). The Ministry, through an ART subcommittee of the National Drugs and Therapeutics Policy Advisory Committee (NDTPAC), has developed guidelines for implementing ART. These guidelines help both public and

private sector health practitioners to implement a standardised approach to treatment of HIV and AIDS using ARV drugs. The guidelines further suggest treatment regimes for both adults and children, as well as which drug combinations should be taken. In addition, the guidelines also indicate what monitoring is necessary for administering ART. Before the launch of the national ART programme, it was mostly the private sector, two research projects and one mission hospital that were offering ART. Currently, 48 health facilities are offering ART services in Zimbabwe (Chakanyuka, 2005). About 20,000 patients were on treatment programme by the end of December 2005, with about 13,000 in the public sector institutions and 6,000 in private institutions (Chakanyuka, 2005).

3.4 Malawi

Malawi has a population of 12.3 million people, and its GDP per capita is at US\$139 (WHO, 2005). Approximately 1 million people are living with HIV/AIDS with an estimated 170,000 people are in need of ART.

The Ministry of Health is the main implementer of ART services, in collaboration with health facilities of the Christian Health Association of Malawi (CHAM). The MoH oversees the ART programme. By the end of December 2005, there were 37,840 patients that had been or were still on ART in 60 facilities in the public health sector (MoH, 2006). Other players in ART delivery that are working very closely with MoH include NGOs, as well as and private not-for-profit and private for-profit organisations. The NGOs include Medicins sans Frontieres (MSF), Dignitas and Partners in Hope. Provision of ART in the private sector through MoH coordination started in 2005 with heavily subsidised ART costs. The ART scale up plan aims to reach 35,000 more by the end of 2006 and to reach 245,000 patients by the end of 2010 (MoH, 2005).

The next section reviews the extent to which processes of equity, justice and accountability are at play in ART delivery in the country case studies.

4. Fair policy development and ART access

Fair policy development was the motivation behind radio and television phone-in programmes, a special commissioned study and consultative meetings in Malawi. The opinions of members of the public were sought in different areas of the country.

4.1 Fair policy development

The number of patients who, according to WHO criteria, are in clinical need of ART and accompanying treatment greatly exceeds current resources and capacity in many countries (UNAIDS/WHO, 2004). The question of how, where and to whom to provide ARVs raises some particularly difficult moral, ethical and logistical dilemmas, which lie at the heart of equity debates and fair policy processes. The principles of fair policy development, which should always guide policy in all areas, is critically important in the case of ART because ultimately decisions are being made about the right to life. Fair policy development can make decisions more broadly acceptable and legitimate even when people disagree about how to scale up ART programmes (UNAIDS/WHO, 2004).

A team of five panellists conducted three live phone-in programmes on Malawi Broadcasting Corporation (MBC) Radio 1, FM101 Radio and Capital Radio 102.5 from 27 to 28 January 2004. The team also conducted two panel discussions on Television Malawi. A total of 76 listeners participated in the programmes, though most were from the major urban centres. The phone-in programmes ensured wide coverage both in the urban and rural areas among those with access to radios.

A special study mainly using focus group discussions was commissioned in seven districts of the country, which facilitated the soliciting of views from the communities at grass-roots level. Six consultative meetings were held with different groups of people: 33 people living with HIV, 102 young people, 10 different public institutions, 16 NGOs, 29 faith-based organisations and 15 different private organisations.

All the findings from the consultations were then interpreted in the light of the National HIV/AIDS Policy in order to draw up policy principles to promote equity in access to ART.

The following case study shows an example of how choices or rationing was carried out in an MSF clinic in the Western Cape, South Africa, prior to broader ART scale up through public health facilities in South Africa.

Box 2: Making difficult choices where ART is not provided free: Case study of Khayelitsha, Western Cape, South Africa, 2003

Khayelitsha is a slum area in Cape Town, where MSF have been working since 1999. Eligibility for ART is based on the following criteria:

- clinical criteria – someone at WHO stage III or IV and who has a CD4 count less than 200/mm;
- social criteria – someone who attends HIV clinics regularly and lives in Khayelitsha;
- an anticipated ability of the person to adhere to the ART programme – assessed against adherence to co-trimoxazole and tuberculosis treatment (where relevant); and
- disclosure to at least one person who will act as a treatment assistant.

The anonymous dossiers of potential candidates are presented to a committee of community members, people living with HIV/AIDS and non-MSF clinicians. Such a process that involves community representation and PLWHA in decisions has been seen to enhance 'fair process'. Preference has been given to the following groups:

- those with a number of dependents;
- those who are very sick;
- those perceived as very poor and unlikely to be able to afford treatment in the future; and
- those who are open about their status and involved in AIDS activism

(adapted from WHO, 2003).

4.2 Impact of free ART policy

ART has been provided free in the public sector on a first-come first-served basis since July 2005 in Zambia (Jones, 2005) and June 2004 in Malawi (Makwiza et al, 2004). Such an approach is intrinsically fairer (Jones, 2005) and arguably very positive from an equity perspective, as there is considerable evidence from different country contexts that strongly suggests that even mean-tested user fees hinder access by poor people to treatment and care and reduce long-term adherence (WHO, 2005a). In Zimbabwe adult patients pay Zim\$50,000 for a month's supply of ARV drugs (approximately half a US dollar, according to the exchange rate in June 2006). However, patients unable to meet the costs are exempted from payment through a 'medical order' from the social welfare department. This allows for a patient to access treatment at no cost (Personal communication, Godfrey Musuka, SAFAIDS). The mechanisms, ease and criteria through which medical orders are obtained warrant further investigation.

Cost-sharing schemes, such as user fees, are particularly detrimental to poorer groups and to women, who often have less ready access to cash than men (WHO/UNAIDS, 2005). Free

provision of ART at the point of service is therefore anticipated to result in increased enrolment and sustained adherence rates for the poor and marginalised, and women and children (ibid.).

This is arguably the case in Zambia and Malawi, and ART enrolment has increased exponentially since the policy of free delivery on a first-come first-served basis. For example, in Malawi ART access has increased from about 4,000 patients at the beginning of 2004 to more than 37,000 patients in 2005, while similarly in Zambia the number of people accessing ART increased from about 6,000 patients in April to over 43,000 patients in December 2005. The pro-equity elements of free service provision are also borne out by operational research conducted around access in Zambia and Malawi conducted at the time when ART was provided at cost. For example, operational research carried out in Zambia by Jones in 2004 highlights feelings of frustrations from 'ordinary' Zambians that ART was well beyond their means and biased in favour of well-off urban citizens. Indeed the costs of ART at this time meant that many poor and vulnerable were excluded: medication cost US\$9,000/month, a CD4 count cost US\$21,000, a liver count cost US\$15 and additional costs were incurred for HIV testing, as well as opportunity costs of travel etc. (Jones, 2004). Similarly in Malawi, qualitative research carried out in 2003 at the Lighthouse in Lilongwe, when ART was provided at cost, showed that showed ART-associated costs were the most critical barrier to access and adherence for all patients.

Thus free ART provision is fundamental to promoting equitable access and this is a very positive development in the country case studies. However, as Jones (2004) argues a first-come first-served approach needs to be complemented by additional targeted measures to promote access to the poor and vulnerable. 'Free' services do not mean that poor women and men do not face costs in access. Qualitative work carried out by the REACH Trust in Thyolo in Malawi at the time when ART was provided free highlights that transport costs due to long distances to health facilities and the need for an adequate diet at the time of taking ART were key barriers to access and adherence. Due to their illness the patients were unable to find their own food, either through buying or cultivating. Patients also shoulder food costs when they travel to the hospital. The challenges posed by transport constraints are illustrated in the following quote:

Imagine this is just my first month but I'm already tired. I'm supposed to pay out transport costs for two people whenever we come here. Now I wonder that if things will continue to be like this in future am I going to adhere to the drugs? I'm saying this based on the instructions attached to these drugs – that one has to take them for life, without skipping scheduled times. Thus one may fail to adhere to the drug due to transport costs. (In-depth interview with a 30-year old craftsman, Thyolo).

Box 3: Promoting an equity focus in a scenario of free access: The Malawi Equity in Access to ART Policy

The need for additional measures to promote access for the poor and vulnerable within a scenario of 'free access' has been spelt out in the Malawi policy on equity in access to ART through an acknowledgment of the need for targeted gender-sensitive ART-related health promotion to groups considered to be poor or vulnerable. This includes, for example, orphans, remote rural dwellers and prisoners (NAC, 2005). In addition implementers are also encouraged to make deliberate efforts to overcome geographical barriers to reach vulnerable people who are in need in rural and remote areas. Health promotion materials for community education are being developed. These will be complemented by leaflets to promote counselling, testing and adherence.

4.3 Lessons learned on fair policy development

The following lessons were learnt around the issue of fair policy development:

- Engaging multiple stakeholders in the policy making process on ART increases both legitimacy and accountability. The more participatory this process, the greater the opportunities for accountability.
- Providing ART free on a first-come first-served basis is fundamentally positive from an equity perspective. However, this does not mean that barriers to access and adherence completely dissolve. Additional attention and interventions are required to ensure access of the poor and vulnerable.

4.4 Access to ART

In this section we look at the country scenarios of access to ART followed by a commentary on equity in access by region/province/districts, and gender and age.

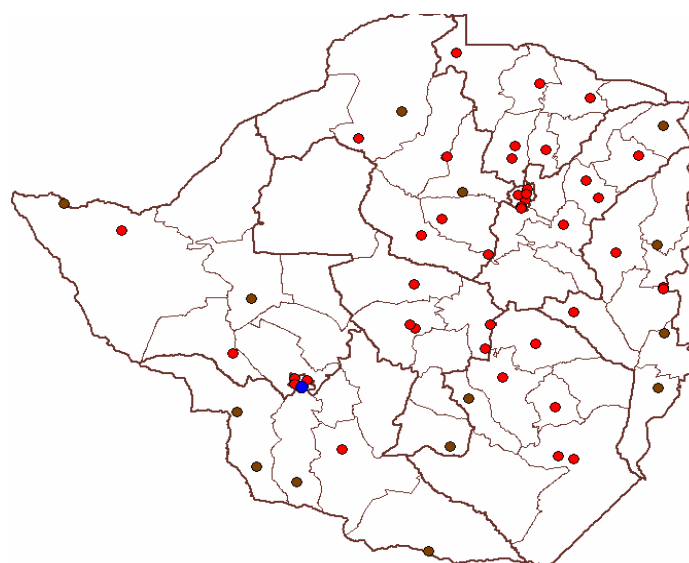
Zimbabwe's target was to have about 60,000 patients on ART by December 2005. However, by the set date, only about 20,000 patients were on treatment programmes, with about 13,000 in the public sector institutions and 6,000 in private institutions. All patients on the National ART Programme do not pay for the services. This has meant that the National ART Programme (NAP) is experiencing increasing pressure as persons who were previously accessing ART through the private sector are switching to the NAP because they are unable to cope with the ever-increasing cost of treatment available through the private sector. It is estimated that a combination of two drugs, Zidovudine and AZT costs around US\$15 per month per patient. Currently there are 48 facilities offering ART, as shown in *Table 3* below.

Table 3: Facilities providing ART in Zimbabwe

Number and types of facilities	Names of facilities
Two research projects	Development of Antiretroviral Therapy in Africa (DART) and Zimbabwe Aids Prevention Programme (ZAPP)
Five central hospitals	Harare Central Hospital, Parirenyatwa, Chitungwiza, United Bulawayo Hospital and Mpilo
Four local authorities	Harare City-Wilkins, Bulawayo City (Khami Rd), Gweru City and Mutare
Two follow-up clinics	Pelandaba Clinic and Nkulumane
Seven provincial hospitals	Mutare, Marondera, Masvingo, Gweru, Chinhoyi, Gwanda and Bindura
Nine district hospitals	Rusape, Mrewa, Kwekwe, Concession, Guruve, Kadoma, Chegutu, Karu and Tsholotsho
16 mission hospitals	St Alberts, Louisa Guidotti, Howard, Nhowe, St Michael's, St Theresa, Murambinda, Gutu, St Patrick's, Muvonde, Musiso Chidamoyo, Karanda, Luke's, Father O Hea, and Mutambara Mission
Two public-private	Triangle and Hippo Valley
Other providers	Connaught Clinic and uniformed forces

Figure 4 shows the geographical distribution of health facilities offering ART in Zimbabwe. As the map indicates, some districts with more sites while other districts have none.

Figure 4: Health facilities offering ART in Zimbabwe



Red dots :sites initiating ART

Brown dots: sites assessed but not yet ready to offer ART

Blue dots: clinics that are following up patients on ART and renewing prescriptions

(Source: MoHCW, 2005)

In South Africa the majority of the approximately 110,000 to 120,000 patients (both adults and children) receiving public sector care continue to be concentrated in three provinces – Gauteng, the Western Cape and KwaZulu Natal. A number of provinces have also dramatically increased adult patient numbers over relatively short periods of time. In the North West province, the increase is due to a number of factors including reorganising existing resources, the increased commitment of health care workers, and a system that permits a sustainable supply of ARVs. In some other provinces, good outcomes are now being documented and reported. This has led to a boost in health care worker morale and an even greater commitment by mid-level workers and communities to the programme.

In Zambia there are 106 centres providing ART, with higher concentration in the more urban areas of Lusaka and the Copperbelt, as shown in *Table 4*.

Table 4: Total numbers of patients on ART as at the end of December 2005 in Zambia

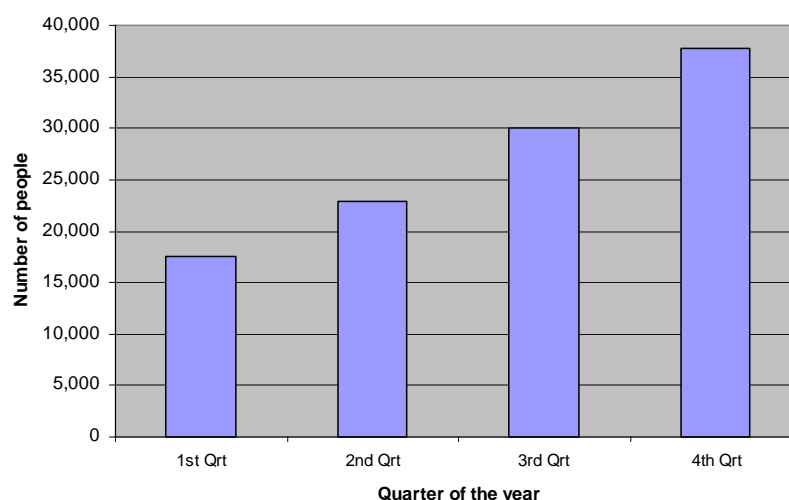
Province	Total no. on ART	Contribution to national total (%)	3 by 5 target for province	Achievement towards provincial target (%)	No. of ART districts/ Total no. of districts	Total no. of ART centres
Luapula	1,148	2.61	5,720	20	3/7	5
Eastern	3,710	8.44	9,430	39	4/8	5
Copperbelt	8,494	19.32	27,938	30	6/10	28
Central	2,186	4.97	9,517	23	6/7	8
Northern	941	2.14	7,762	12	7/12	11
North-western	690	1.57	3,343	20	4/8	4
Western	2,573	5.85	6,449	40	6/7	6
Southern	3,018	6.89	13,146	23	11/11	15
LUSAKA (Capita	21,204	48.23	16,595	128	4/4	24

(Source: National HIV/AIDS/ART Coordinator, 2006 MoH data)

In Malawi, by the end of December 2005, there were 37,840 patients who had ever started ART in 60 facilities in the public health sector (see *Figure 5*). This is a rapid increase from the 13,000 patients who were accessing ART by end 2004. Most patients on ART are from the southern region, as ART has been provided free in two districts, Chiradzulu and Thyolo with support from MSF since 2003. Through ART provision at cost, Lilongwe and Blantyre

have also had longer experience in ART provision, whereas in other districts, ART provision only began in 2004. Since June 2004 ART has been provided free in MoH and CHAM facilities. The predominance of patients on ART in the south can also be explained by the higher HIV prevalence and higher population in this region.

Figure 5: Number of patients accessing ART in 2005 in Malawi



(Source: MoH, 2005)

Table 5 shows the breakdown of patients, by sex, who are accessing ART by the end of December 2005.

Table 5: Total patients who have accessed ART by end December, 2005, by sex, district and region

District	Projected numbers HIV+ 2003 (NAC, 2004)	Total ART patients	Male ART patients	Female ART patients	% On ART	No. of sites per district
Northern region						
Mzimba	22,000	4,054	1,706	2,347	18.4	6
Rumphi	6,000	623	219	404	10.4	2
Chitipa	7,000	252	90	162	3.6	1
Nkhata bay	10,000	463	192	271	4.63	1
Karonga	16,000	468	191	277	1.7	1
Total		5,860	2,398 (40.9%)	3,462 (59.1%)		11
Central region						
Lilongwe	92,000	6,872	3,063	3,809	7.5	10
Dowa	21,000	933	409	524	4.4	2
Ntcheu	12,000	535	194	341	4.5	2
Mchinji	12,000	806	287	519	6.7	2
Kasungu	21,000	685	282	403	3.3	2
Dedza	16,000	360	149	211	2.3	1
Salima	24,000	800	316	484	3.3	2
Ntchisi	9,000	283	101	182	3.1	1
Nkhotakota	10,000	371	158	213	0.7	3
Total		11,645	4,959 (42.6%)	6,686 (57.4%)		25
Southern region						
Thyolo	46,000	3,732	1346	2386	8.1	2
Blantyre	128,000	3,832	1536	2296	3	3
Chiradzulu	18,000	7,562	2636	4926	42	2

Mulanje	42,000	952	316	636	2.3	2
Zomba	54,000	1,413	553	860	2.6	4
Phalombe	17,000	198	73	125	1.2	1
Balaka	22,000	454	128	326	2.1	2
Machinga	32,000	300	114	186	0.9	1
Chikwawa	33,000	613	279	334	1.9	3
Mangochi	54,000	662	250	412	1.2	1
Mwanza	12,000	253	85	168	2.1	1
Nsanje	17,000	364	146	218	2.1	2
Total		20,335	7462 (36.7%)	12873 (63.3%)		24

(Source: MoH 2005 data)

It is important to note that the projected numbers of people who are HIV positive by district in Table 5 above represent *estimates* of all PLWHA and are only calculated from the 15–49 age group (NAC, 2004). This does not include those under 15 or over 49 and hence it is an under-calculation. The actual percentage of those on ART is thus lower than those calculated above. The total population in need of ART in Malawi is estimated at 170,000 people, which translates to 22.3% of the eligible population having access to ART.

Geographical access to ART

According to data gathered, geographical access to ART is determined by access *across* districts and access *within* districts.

ART access is higher in urban areas than in rural areas in all the country case studies. This is because most countries started ART provision in the urban areas with the intention of decentralising to the peripheral centres. In Zambia, 58% of all ART sites are hospitals. The richer provinces such as Lusaka and Copperbelt account for more ART sites while the poorer provinces get less, with the North-western Province having the lowest actual numbers of people accessing ART. As of now all 72 districts are covered with at least one ART site and an increasing number of rural health centres (14% of current ART sites as at 31 December 2005 are rural health centres). More rural health centres are also being refurbished and readied for ART. Twenty-eight per cent of ART sites are through the urban health centres (UHCs) with most of them located in Lusaka and Copperbelt (MoH, ART report, 2006). Similarly in Malawi there more ART centres in Lilongwe, Zomba and Mzuzu, which are urban areas. Efforts are being made in most countries to reach the rural areas. MoH in Malawi has made considerable effort for every district to have at least one ART site. However, most of these sites are at the district level, and therefore still pose ongoing access challenges for the rural and remote populations. Round 2 of the ART scale up plan is to establish 38 more ART sites, mainly targeting rural hospitals and larger health centres, and to increase sites in the more burdened urban areas by April 2006 (MoH, 2005). Most patients on ARV treatment in the public sector in South Africa are also receiving care at academic hospitals and so-called 'main sites', with very few patients are accessing ARV treatment at rural and remote sites.

Within districts, there is also inequity in ART access. For example, Thyolo district in Malawi, a well-resourced district in ART provision with support from MSF-Belgium has decentralised ART services to rural health centres. However, sentinel analysis of data of people accessing ART from the district, shows that the highest numbers of ART clients are coming from the more urbanised traditional authorities (TAs) – Chimaliro (on the road to Blantyre – Malawi's biggest city); Nchilamwera (the site of the district hospital and the two main trading centres – Thyolo and Luchenza) and Bvumbwe. The lowest numbers are from Thomas, Nsabwe and Changata, which are the more rural and mountainous TAs. This could be indicative of more people from semi-urban areas accessing ART.

4.5 Gender differences in access to ART

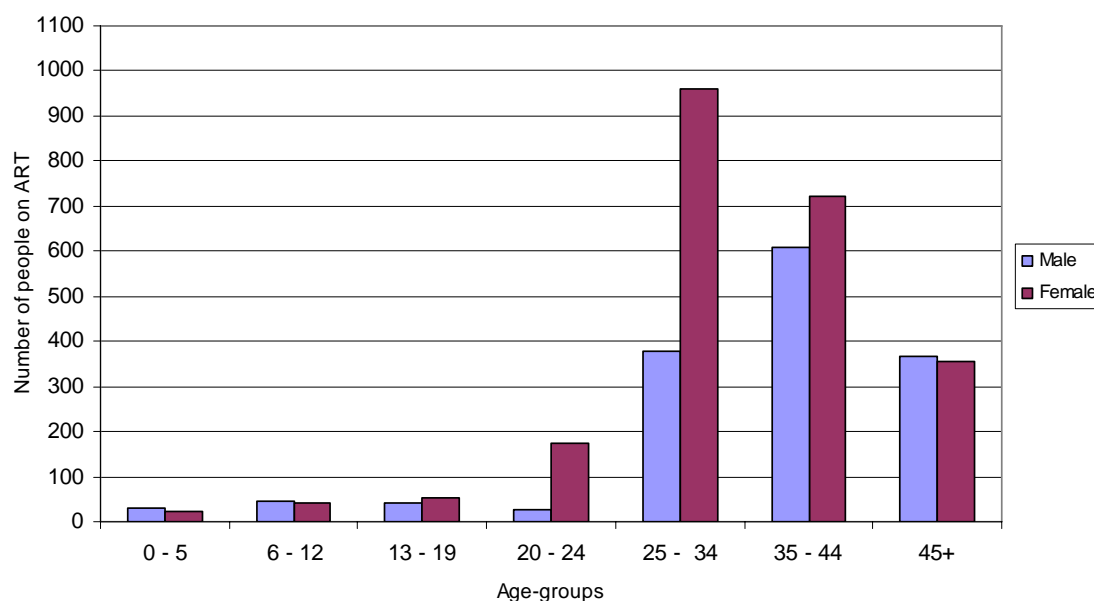
Data shows that more women than men are accessing ART from the public sector in Malawi, Zambia and South Africa. For Malawi and South Africa on average women present 60% of all patients. Similar patterns are emerging from Zambia: sex disaggregated data from ZPCT and AIDS Relief Sites in Zambia showed that 59% (7,609) patients were females against (41%) 5,274 male patients.

These gender differences reflect higher HIV prevalence rates among women. For example prevalence rates in Zambia are 17.8% for women and 12.6% for men. Infection rates among young women aged 15–24 are four times higher than those for young men in the same age group, the prevalence rates being highest in the age group 30–34 years.

In South Africa, very few men are accessing treatment in the public sector (Hassan and Bosch, 2006). In the private sector, because of workplace treatment programmes (given the historical skew in employment levels based on gender) men outnumber women.

An analysis of gender and age in ART access data, for all patients on ART up to March 2005 in Malawi, showed that in the younger age group (0–12 years), the number of male and female patients is relatively similar with slightly more boys than girls as shown in *Figure 6*. However from age 13, more females than males access ART, with more women in the age group 25–34, which could reflect higher seropositivity among this group.

Figure 6: Age and gender differences in national ART access



(Source: MoH 2005 ART data)

4.6 Children and access to ART

At the end 2005, about 245,000 to 300,000 children in South Africa were estimated to be living with HIV (Dorrington et al, 2004). Based on these figures, some experts suggest that about 50 to 60% need immediate access to ARVs. At present it is estimated that in South Africa only about 10,000 to 15,000 children are receiving ARV treatment (Hassan and Bosch, 2006). About 10 to 15% of the total patients on treatment in South Africa are children (in many smaller and less well-resourced provinces, the number of children on treatment is way below the national average of 10 to 15%).

In Malawi, it is estimated that of the total ART eligible population (170,000), only 10 to 15% are children, based on the WHO estimations. This translates to about 21,250 children in

need of ART. By the end of December 2005, 1,999 children were on ART, representing 5% of the total population accessing ART and 9.4% of all children eligible for ART.

There are few sites with the capacity to provide ART for children even where children are being treated; they are found mostly in urban centres where specialist paediatric centres exist.

Disaggregating the data on ART patients into paediatric and adult patients was not possible in Zambia during the period of the review because of the very low levels of reporting by paediatric patients at the sites visited. However, using data as at 31 December 2004, NAC statistics showed that 4% of ART patients were children below 15 years of age. Available data disaggregated by children and adults showed that only 7.8% (2,347) of the CIDRZ patients, and only 4.97% (198) of the AIDS relief patients on ART are children.

ART scale up for children has been an issue of great concern in resource-poor countries and emerged as a key issue within all the case studies commissioned for this paper. The unwillingness, fear and/or inability to treat children are factors that have contributed to fewer children being put on ARV treatment in South Africa. In addition, limited availability of paediatric formulations (for example, syrups or smaller tablets or appropriate drug combinations) makes it difficult for health care providers to treat children. In addition, the lack of widespread availability of PCR diagnosis tests for infants, coupled with the difficulties involved in drawing blood from infants is hampering the ability of health facilities to determine many infants' HIV status in the early stages of their infection.

4.7 Towards equity in access to ART

In order to make meaningful interpretation of equitable access to antiretroviral therapy by gender, age, and urban/rural residence, it is necessary to have prevalence data that is also disaggregated by similar parameters. For example, prevalence rates estimated by NAC in Malawi do not include children or age groups over 49 years. Other sources of estimating prevalence include using sentinel surveys of pregnant women attending ANC clinics are women only. So there is a need for prevalence and ART data to be disaggregated by basic social indicators such as sex. This would allow for calculation of the proportion of females and males accessing ART against projected sex disaggregated HIV prevalence rates to enable a thorough gender equity analysis.

There is also a need to monitor trends in adherence to ART. This is arguably more complicated and needs ongoing data collection and strong data collection procedures at implementing sites and cooperation with national monitoring and evaluation Bodies. Understanding which groups (by district, age and gender) are facing challenges to adherence will enable the development of sensitive, context-specific strategies to promote adherence. Maintaining good adherence levels will pose one of the greatest challenges in resource-constrained settings (Kim and Gilks, 2005). This is particularly critical in resource poor contexts where there is a limited supply of second-line drugs.

Data from Malawi at the end of December 2005 shows that 8% of the patients who ever started on treatment have been lost to follow up (MoH Malawi, 2005). However, for those still alive and on treatment, adherence levels based on pill counts showed 95% or more in 91% of the patients on ART (ibid.). Some well-resourced centres such as the Lighthouse and MSF-supported ART centres have, on their own initiative, developed strategies for following up on patients who do not adhere to treatment. Lack of resources hinders such initiatives in public health-supported facilities (MOH/CDC, 2005).

Lessons learnt

A number of lessons have been learnt from the collected data:

- There is still an urban bias in the country case studies in ART provision, although efforts are underway to rectify this, and need to continue.

- More women than men are accessing ART through the public health system in the four reviewed countries. This is difficult to interpret from an equity perspective where there is no reliable sex-disaggregated prevalence data.
- There is a need for further research to understand gendered barriers to access and develop strategies to address the increasingly feminised HIV epidemic.
- More women are accessing ART, but there is need to understand the entry points, i.e. whether they are accessing more through PMTCT or directly.
- There are particular challenges to paediatric access to ART. This needs further investigation and action.
- Simple monitoring systems that collate access data by sex, age and district are vital to equity monitoring.
- There is also need to develop simple strategies to collate information on adherence by sex, age and district.
- Setting targets for people in rural and urban areas that are informed by local epidemiology will help to promote equity and focus attention on the need for additional strategies to promote access to vulnerable and marginalised groups.

5. Health system issues in ART programmes

5.1 Health financing

Health financing is a major issue underpinning all ART scale up programmes. But how exactly does it affect ART scale up? Let's take a look.

It is clear that the recent advocacy, energy and action around ART provision have meant that new funds are becoming available. This has been supported by the implementation of the 3 by 5 initiative with support to countries to develop operational plans for ART scale up and with financial support from GFATM, MAP and bilateral initiatives, including the United States President's Emergency Programme for AIDS Relief (PEPFAR) (WHO, 2004). The 3 by 5 initiative launched in 2003 aimed to increase the global focus on HIV/AIDS care and treatment, to build necessary partnerships and to mobilise and financial support for scaling up ART. The 2005 United Nations General Assembly World Summit adopted a resolution to developing and implementing a package for HIV prevention, treatment and care, with the aim of coming as close as possible to the goal of universal access to treatment by 2010 for all those who are in need (UNAIDS, 2005). This is commendable; however, from an equity perspective this additional international funding needs to be situated within a global analysis that acknowledges flows from the south to the north (for example debt repayments, monies lost due to patenting restrictions and outflow of skilled personnel – such as nurses and doctors – without reparations). For further discussion on this global analysis see references on the EQUINET website under 'Health Equity in Economic and Trade Policy'.

There are multiple local and international financing sources for ART in the southern Africa region with some countries facing particular challenges. External funding (both bilateral and multilateral donors) presents the main source of ART financing. Private sector and domestic funding is also another source of financing for ART programmes. South Africa, however, is unique in the region as government resources finances the public sector ART programmes. The GFATM is the major funding source for prevention, treatment and care in Malawi and Zambia and provides some funding to Zimbabwe. GFATM also funds some workplace programmes in South Africa. Governments also contribute substantial amounts to ART programmes, for example by providing infrastructure and trained health personnel.

In order to illustrate the complexity of the scenarios, two countries will be presented in depth, Zambia – to highlight a scenario where donors are the key funders – and South Africa, where public sector funding is predominant.

Zambia

The main part of financing for the formal ART program in Zambia has been from the Global Fund, the Zambia National Response to AIDS (ZANARA) project under the World Bank, MAP, PEPFAR, the Zambian government and JICA. The implementation of the 2004–2005 national ART scale up programme was estimated to cost US\$148 million by the NAC, about US\$49 million being needed for 2004 and US\$99 million for 2005.

GFATM pledged \$92.8 million to Zambia over a five-year period with a substantial amount to be used for ART delivery. In 2004, an additional US\$253.6 million was approved under Round 4 ART proposal, again with a five-year time span focused on scaling up access to ART in Zambia. The GFATM grant agreements were signed with the Central Board Of Health (CBoH), CHAZ, ZNAN and the Ministry of Finance for amounts of US\$21,214,271, US\$6,614,958, US\$8,073,013 and US\$6,000,000 respectively for the first two years. Of these amounts about US\$2 million had been earmarked for purchasing ARV drugs for the first year (2004). It was anticipated that Global Fund resources would allow the country to put 12,500 PLWHA on treatment during 2005.

The World Bank awarded Zambia a grant of US\$42 million under the second multi-sectoral AIDS-MAP programme (MAP2) in 2001 under a programme known as the Zambia National Response to HIV/AIDS (ZANARA). Overall, from July 2003 to December 2005, the total disbursements were US\$22.9 million, with an expenditure of US\$20.7 million.

Zambia is also one of the beneficiaries of the US President's Emergency Plan for AIDS Relief (PEPFAR). The Zambian government is receiving increased funding for ART from this facility and is said to be the fourth most highly funded country, receiving 9.6% of the PEPFAR budget for the focus countries. The pledge for 2004 was for US\$57.9 million and this increased to US\$84.7 million in 2005 for prevention treatment and care. Of this amount, US\$20.4 million was anticipated to be available for ART roll-out. Overall, around 23% of the 2005 budget was for ART, 24% for prevention activities and 30% for care programmes.

Other partners supporting the ART program in Zambia include Japan International Cooperation Agency (JICA) and the Development Cooperation Ireland (DCI), who are supporting the building of capacity of laboratory services at the UTH, as well as at provincial hospital level, district hospital level and in the health centres.

The United States Centres for Disease Control and Prevention (CDC), NGOs and UN agencies are other sources of funding. For example, the Clinton Foundation, in collaboration with ZPCT and other partners, is funding, in part, the national CD4/hematology/clinical chemistry laboratory programme budget. WHO provided support for developing the national operational plan for scaling-up ART while UNDP, the United Kingdom Department of International Development (DFID), CDC, and other bilateral partners support the strengthening of the health system and some community-initiated activities.

South Africa

The government of South Africa has shown a major commitment to spending on HIV/AIDS. The costs of drugs (for the purchase of generic and brand name) in South Africa are borne by government through allocations made by National Treasury. Though donors are contributing to the AIDS response with PEPFAR, Global Fund, DFID and EU as the leading donors, especially in the Western Cape and KwaZulu-Natal. By the end of December 2005 about 53.9% of patients in the state sector were part funded by external donors (the largest being PEPFAR) (Natrass 2006). "In other words, disentangling the relative contributions of donors and the South African government for the public sector rollout is a complex business! Unfortunately, neither the donors nor the South African public sector provide sufficient data for the relative impacts to be unpacked at a national level" (Natrass 2006).

So while the National Treasury has allocated sufficient resources to the public health sector it “one of the main driving forces for the public sector rollout appears to be external assistance from donors” (Natrass 2006). The combined donor commitment is less than 1% of the annual government expenditure on health. With respect to resources set aside for the procurement of ARVs, US\$62 million was set aside for ART rollout in the 2004/5 national budget and more than US\$504 million has been allocated for the period up to the end of 2007. The total health budget has increased from R9.8 billion in 2005/6 to R11.2 billion in 2006/7 (a real increase of 10% from 2005/6 to 2006/7). The HIV/AIDS sub-programme budget has increased as a share of the total health budget from 13% in 2004/5 and 16% in 2005/6 to 18% in 2006/7. The Comprehensive HIV/ AIDS Grant for provinces has grown nominally from R1.1 billion in 2005/6 to R1.6 billion in 2006/7, representing a real growth of 32% (IDASA 2006).

In the not-for-profit sector in South Africa, donors also fund several community treatment programmes. Below is a list of some of the key donors involved in funding the provision of ARVs in both the public and not-for-profit sectors:

- *Médicins Sans Frontières* (MSF) supports two sites in the Western Cape and two sites in the Eastern Cape.
- *Absolute Return for Kids* (ARK) supports 19 sites in the Western Cape and 12 in KZN.
- *Catholic Relief Services* (CRS) supports three sites in the Free State.
- *One2One Kids* through *Kidz Positive* supports two sites in the Western Cape.
- *PEPFAR*: As of the end of December 2005, PEPFAR was providing direct support for the provision of antiretroviral therapy in 116 sites. Of the sites directly supported by PEPFAR, 46 are in the public sector and the rest are in the not-for-profit sector and/or are public-private partnerships.

Challenges of donor dependency

With the exception of South Africa, donor dependency is the norm for ART provision in southern and eastern Africa. Significant gaps in meeting treatment targets are still visible in most countries. Funding is also available for specified time scales, raising sustainability concerns for programmes beyond the stated period. Malawi’s available funds can only support 80,000 patients for a five-year period as compared to the estimated 170,000 people who need treatment at any given time, leaving a shortfall. The current GF process is felt to be problematic due to the bureaucracy involved in sourcing funding and can result in delays and risks interrupted supplies of ART, HIV test kits and other supplies (Theobald et al, 2006).

The uncertainty of future funding raises questions around ART programmes sustainability and/or whether universal access will be achieved. There is still need for innovative financing mechanisms both from donors and from domestic sources. An approach that Zimbabwe has adopted is introducing a levy of 3% on taxable income to government, which contributes to ART funding (MoH, 2006). This is a commendable development for the building of sustainable funding, as it is based on domestic sources.

Other countries, for example Zimbabwe, are facing particular challenges in mobilising funds for expanding the ART programme. The political, economic and social crisis experienced in Zimbabwe has now continued for six years, resulting in the withdrawal of much international aid, among other effects. OECD data indicates that foreign aid to the Zimbabwean health sector was reduced by \$43 million between 1994 and 2003 (Clemens and Moss, 2005). Currently Zimbabwe relies heavily on the government allocation from the Ministry of finance and the National AIDS Trust Fund (NATF) to support the mitigation efforts, including ART. In 2005 it had an allocation of US\$3 million, with the NATF adding US\$3 million towards the programme (Chakanyuka, 2005). Recently the GFATM released \$14 million for ART in 2005 to Zimbabwe and has also pledged a further \$60 million.

Global Fund inputs: Strengthening or weakening health systems?

The Global Fund is arguably one of the most important new funding sources for fighting HIV and AIDS. The Global Fund has entered the global health arena with a much-appreciated sense of 'can do' and urgency; recognition of this fact was expressed at the Bangkok HIV and AIDS Conference with a near-universal call from treatment activists for ongoing donor support (EQUINET, 2004).

As the success of HIV, malaria and TB services are clearly predicated against health systems, action and advocacy to address HIV and AIDS, TB and malaria cannot be seen outside of a focus on health systems. EQUINET's advocacy paper 'Expanding Treatment Access and Strengthening HIV and AIDS Programmes in Ways that Strengthen the Broader Health Systems Agenda: Issues for the Global Fund to Fight HIV/AIDS, TB and Malaria' outlines a number of key areas for action for the Global Fund (EQUINET, 2004). Central to these is the need to strengthen health systems and hence for explicit requirement to address and monitor broader health system and equity issues within GFATM proposals. Also critical is the need for alignment to current processes in country. Work under taken by the Systems Wide Effect of the Fund (SWEF) network in Benin, Ethiopia and Malawi highlights some of the complex and contradictory effects of the Global Fund on broader health systems (Stillman and Bennet, 2006). In Malawi it was found that the influx of new funding from the Global Fund was further complicating the Sector Wide Approach in Health. The Sector Wide Approach focuses on decentralisation and the integrated delivery of an essential health package. However, informants stated that Global Fund activities were leading to a re-verticalisation of service provision and also highlighted 'several examples of the GF Secretariat providing advice or requesting procedures that were in conflict with the Malawian view of national policies' (ibid: xix). However, it needs to be noted that countries determine what support they require from the Global Fund and there is need for advocacy in country to ensure that this complements pre-existing planning, management and service delivery structures such as SWAPs.

There is clearly a need for further advocacy on the Global Fund, and other large-scale donor activities, to be aligned to county priorities and processes and to prioritise strengthening of health systems.

Looking holistically at costs

From an equity perspective, there is a need to look holistically at costs. Patients face costs in the private and public sector, even when ART is provided for free – see the Thyolo case study in section 4.1 of this paper). Out-of-pocket expenses, though not properly quantified, are estimated to contribute significantly to ART financing through the private sector. Estimates of out-of-pocket spending in Zambia, based on government spending patterns using the National Health Accounts HIV/AIDS Sub-Analysis of 2002 (7) as the base year for the estimation, constituted as much as 43% of health spending. This estimation suggested that US\$22.3m, US\$24.2m and US\$27.9m in 2002, 2004 and 2005 respectively, were spent by households as out-of-pocket expenses.

Lessons learnt

A number of lessons were learnt while researching the funding of ART scale up:

- Activism around ART has seen an increase in funding available for ART provision.
- In most countries in the region – with the exception of South Africa – there is high donor dependency, which raises sustainability challenges. However it should also be acknowledged that for the mean time provision of ART in developing countries will have to depend on donor funding.
- There are a multitude of funders – a coherent approach to ART provision that will simultaneously strengthen health systems needs strong leadership and good coordination.
- Early evaluations of the effect of the Global Fund shows that its activities and focus are not always in line with national processes and priorities.

- There is a need for further advocacy on the need for large funding bodies to align with national processes and have a strong focus on strengthening health systems.
- There is a need to take a holistic look at funding, financing and expenditure – patients face costs in the private sector, and also in the public sector even when ART is provided free.

5.2 Monitoring and evaluation systems

The 'three ones' principle (namely, a framework, a national co-ordinating structure and a monitoring and evaluation system) is an effective and efficient way to use resources and ensure that results are fed into programme planning. Effective M&E is important for coordinating and collaborating responses to HIV/AIDS in order to avoid the duplication and fragmentation of resources. The Global Fund also recognises the importance of monitoring systems and suggests that 5% to 10% of programme resources be dedicated to such systems. However, it has been observed that few countries take advantage to access resources for this purpose (WHO, 2006).

Monitoring and evaluation systems have been developed in countries to capture most of the data, which is important for monitoring performance in achieving rapid scale-up of quality HIV-related services. However there are challenges in the operationalisation of the system, as well as well adhering to its requirements. A major challenge is the lack of a strong leadership and coordination in M&E where they are multiple players involved. For example, the challenge in South Africa is that there is no coherent or uniform M&E system in place. This failure in the early stages of the roll-out has resulted in provinces now being entrenched in a range of different solutions and approaches. While revised indicators are now available, many of these are not feasible without a facility-based system through which data can be aggregated. The indicators themselves are often confusing and do not follow principles of collecting a few things well that are likely to be used, and they request cohort type outcomes on a monthly basis, which clinicians argue are inappropriate. IT-heavy systems may also be appropriate for some of the bigger sites or where there are dedicated pharmacies, but they are not appropriate for all settings. There is also a shortage of mid-level management to oversee routine reporting.

However, it is encouraging that some provinces in South Africa such as the Free State are leading the way through providing regular public reports on outcomes. The Western Cape province also produces quarterly cohort reports on outcomes, but these are yet to be released publicly (Hassan, 2006).

A recent survey in Zambia reported that, while tools for collecting ART data were reportedly available in 92% of sites visited, guidelines for ART data collection and reporting were reported as being available in 89% of the sites, and staff trained in ART Information System (ARTIS) were identified at 89% of the facilities. Forty-three per cent of the sample facilities had computers and 22% had dedicated data collection and entry clerks (ZMoH, 2006). The unavailability of computers, the application of multiple (though in most cases this meant dual) reporting formats (and the related increased work load), the use of manual ART forms in some instances, the lack of dedicated ART data clerks, and the lack of feedback from the national level and cooperating partners on the quality and usefulness of ART data and reports were cited as the most significant constraints.

In Malawi, the HIV Unit at the MoH is responsible for monitoring and evaluating the ART programme. The unit is also involved in spearheading the provision of ART therapy, counselling and HIV testing and management of HIV-related diseases. Quarterly monitoring is conducted by the HIV/AIDS unit in the MoH, in conjunction with partners from the Lighthouse, MSF-Belgium and the WHO country office. Data collection for M&E has been increasingly merged with supervision. This is positive in that supervision, and feedback is built on actual M&E data and that this is done regularly, in other words, quarterly. The Malawian MoH has also deliberately included a number of partners (from the Lighthouse

and CDC) in these monitoring/supervision visits in order to build capacity among partner organisations.

Quarterly data collection and the situational analysis report are widely circulated within the country and internationally. This is good practice in terms of transparency and accountability. The HIV unit in the MoH also organises monthly meetings involving different stakeholders and organisations from all over the country to discuss issues relating to progress and challenges in ART scale up.

Systems for monitoring and evaluation of the National ART programme in Zimbabwe are currently under development. The National AIDS Council is coordinating the development of the M&E system, which is currently being pilot tested in a few districts of the country. It is hoped that this system will be scaled up to the whole country some time in 2006. In addition to this system, monthly facility return forms have been developed by the MoHCW for the ART programme.

Monitoring and evaluation are crucial in ART programmes so that challenges can be identified early on in the programme and addressed. Otherwise countries might face challenges in implementing a coherent M&E system that all players can conform to. In South Africa the Civil Society has taken on this challenging task of monitoring ART programmes implemented by different stakeholders.

Box 4: Civil society monitoring: The case of South Africa

The TAC and ALP, along with the Joint Civil Society Monitoring Forum (JCSMF), have been monitoring the implementation of the Operational Plan since its announcement in November 2003 and implementation by early 2004. To date, the TAC and ALP have issued two joint reports. Both reports highlight the successes and weaknesses of the current programme. In addition, the Joint Civil Society Monitoring Forum (JCSMF), an ad hoc body formed in 2004 and made up of several leading civil society and private sector organisations, including the TAC and ALP, is exclusively dedicated to monitoring the implementation of the Operational Plan. Since its formation, it has met on seven separate occasions in seven different provinces. The JCSMF has publicly issued seven reports containing resolutions and recommendations for improving the pace and manner of implementation. Each JCSMF meeting is theme based. So far it has focused on the availability of treatment in seven provinces, in addition to paying attention to the following issues:

- nutrition;
- paediatric access;
- budget and resource allocation;
- private sector provision of treatment; and
- donor-funded treatment programmes (Hassan, 2005).

The JCSMF's uniqueness lies in its ability to provide an opportunity for willing stakeholders to meet quarterly to share information about the programme. In doing so, it allows members and broader interested parties to be alerted to operational issues that require resolution as well as identifying the successes and limitations of the programme. Through such monitoring, members of the JCSMF have made some progress to campaign, lobby and litigate on certain issues affecting the implementation of the programme (access to information, drug procurement etc).

The JCSMF is the only forum of its kind in Africa. Significantly, it brings together reputable and leading providers and organisations working on health equity. As a result, government cannot easily dismiss its collective monitoring.

Lessons learnt

A number of lessons have been learnt from the collected data on monitoring and evaluation:

- Multiple players in the ART field present challenges for a uniform M&E system.
- A uniform, coordinated monitoring and evaluation system is important for tracking progress on who is accessing ART and the impact of ART provision on the broader health system.
- M&E systems need to be simple and collect data that is likely to be used.
- There is need for computers and dedicated data entry clerks to ensure the quality of data collected.
- There is a need to build capacity and willingness of the importance of M&E among different stakeholders. Providing positive examples of how this data can be used to improve the equity of service provision is important.
- Civil society also has a role in monitoring and evaluation of ART programmes so that there is accountability and transparency.

5.3 Capacity for ART provision

With the increasing commitments by donors and countries to scale up ART, it is clear that capacity for the health sector needs to be developed to be able to implement and manage the ART delivery in the context of complex health systems. Scale up is taking place rapidly and what is now urgently needed are capacity development of the health sector in terms of training health personnel, a consistent drug supply and an appropriate infrastructure. Below are examples of the responses of two countries – Zimbabwe and Malawi – to building capacity for ART provision.

Building capacity in Zimbabwe

In Zimbabwe, the Ministry of Health, through an ART subcommittee of the National Drugs and Therapeutics Policy Advisory Committee (NDTPAC), has developed guidelines for implementing ART (Chakanyuka, 2005). These guidelines are meant for both public and private sector health practitioners to implement a standardised approach to treatment of HIV and AIDS using ARV drugs. The guidelines further suggest treatment regimes for both adults and children, as well as which drug combination can be taken. In addition the guidelines also indicate what monitoring is necessary for administering ART. They also set the minimum standards that the MoHCW hopes will ensure efficacy, freedom from serious adverse effects, ease administration, and affordability of the drugs and their combinations.

For a site to be able to offer ART services in Zimbabwe, it has to undergo a comprehensive assessment conducted by the MoHCW that looks at the different aspects that are relevant for the initiation of the ART programme. The components assessed at the first assessment include: leadership at the facility, human resource capacity, training needs, laboratory services, pharmacy services, management of health information, how other programmes at the hospital are being run, follow-up mechanisms for patients and community participation and involvement, among others.

To get approval to offer ART, such facilities should have:

- leadership that is committed to take up the provision of ART services;
- knowledge of or experience with ARVs;
- a working document or draft for ARV initiation and follow up;
- adequate staff (managerial, monitoring and evaluation, administration, supply management and clinical care) or plans to fill staffing gaps if they exist;
- planned linkages with other sites to access HIV/AIDS related services not provided directly;
- a secure supply chain, including local storage and dispensing;
- most or all of its screening and monitoring laboratory capacity based on the World Health Organisation (WHO) recommendations;

- an identified initial source of funds, especially to buy ARVs; and
- an adequate supply of medicines for the management of HIV and ARV-related side effects.

(Source: Chakanyuka, 2005)

After the initial assessment, the health facility works on addressing the gaps identified. Thereafter another assessment is conducted. If the facility has managed to successfully address all the gaps identified in the initial assessment, it is approved to offer ART services.

Building capacity in Malawi

In Malawi, ART is only provided to health facilities if they are assessed as 'ready' to provide treatment. Formal site assessments have been carried out in 60 health facilities in the country and were accredited and are providing ART. Sixteen more health facilities have also been assessed for readiness with nine being accredited for ART (Malawi MoH, 2005). The assessments were conducted as follows:

- A health team attended a formal classroom training and pass their classroom exam.
- An ART clinician and nurse completed a satisfactory clinical attachment.
- A report assessing the site as satisfactory was submitted.

Two key resource materials (ARV treatment guidelines and the treatment of HIV-related diseases) were completed earlier in the year for training. Staff training has two major components: classroom training and clinical attachments. The HIV Unit at MOH is the major 'trainer' of health staff, assisted by the Lighthouse, the College of Medicine, Thyolo-MSF, Chiradzulu-MSF, the Malawi Defence Force and the Kamuzu College of Nursing. By the end of 2005, ten six-day ARV training modules and 12 five-day training modules for the public sector were developed (MoH, 2005). The number cumulatively trained in the public sector is shown in *Table 6* below.

Table 6: Total number of health workers trained in the public sector

Type of HCW	Numbers of staff trained and successfully examined		
	2004	2005	2004–2005
Doctors	71	47	118
Clinical officers	180	204	384
Medical assistants	0	23	23
Nurses	248	365	613
Total number	499	639	1,138

(Source: MoH 2005)

For private sector health personnel, the Ministry of Health provides a two-day training with an examination. By the end of 2005, eight training modules were conducted. A total number of 243 health staff (39 doctors, 57 clinical officers and medical assistants, and 147 nurses) have attended training.

The use of existing entry points through programmes such as tuberculosis, malaria, prevention of mother-to child-transmission (PMTCT) could serve build on pre-existing capacity and improve equity in access to ART services. It is estimated that about 80% of TB patients are co-infected with HIV (WHO, 2006). For example in Malawi, 77% of TB patients are also HIV positive. These patients are eligible for ART according to the WHO ART eligibility criteria. The TB/HIV joint activities have been adopted in many sub-Saharan African countries. As TB programmes are mainly decentralised, they have been seen as having potential to leading to the decentralisation of ART services closer to those in need. In Rwanda, 59% of TB patients were tested for HIV in 2004 (WHO, 2006).

As the sub-Saharan Africa region has a high incidence of both malaria and HIV, and people with HIV-related immunosuppression are vulnerable to malaria, it would be commendable to offer HIV testing and counselling to people with repeated episodes of malaria (WHO, 2006).

Lessons learnt

A number of lessons have been learnt regarding building capacity for ART:

- Providing guidelines, giving training and focusing on the ongoing capacity-building of health personnel in the public and private sectors are important for the implementation of a standardised treatment.
- The assessment of facilities before offering ART services is strategic because it ensures that the facility has capacity to deliver services. These facilities should be continually monitored to ensure that standards are not compromised.
- The use of existing entry points through programmes such as tuberculosis, malaria and the prevention of mother-to-child transmission (PMTCT) could serve build on pre-existing capacity and help improve equity in access to ART services.

5.4 Human resources for ART

The African region, particularly the sub-Saharan region, has the highest shortage of health care workers. Despite harbouring 24% of the global burden of disease, it has only 3% of health care workers (WHO, 2006). Shortage of human resource is the main challenge to implementing HIV and AIDS treatment programmes and to the achievement of the Millennium Development Goals. Attracting, retaining and training health care workers remain a formidable challenge for the delivery of ART programmes in the Southern Africa region. The need to develop creative approaches towards supporting, motivating and sustaining health workers in resource-poor countries was central to a high-profile consultation at the WHO in May 2006 on 'AIDS and Human Resources for Health' held in Geneva. The situation is complex – the human resources for health crisis is aggravated by the impact of HIV/AIDS as follows:

- Absenteeism of critical health staff due to their own illness or illness in the family has increased significantly.
- The occupational risk of HIV infection is perceived as high and serves to undermine staff morale.
- Increasing demand for health services and ART provision puts additional demands on an already over-stretched and frequently demoralised health workers. Shortage of health personnel such as doctors, nurses, clinicians, pharmacists and other skilled providers is hindering the scale up of ART services (adapted from Kober and Van Damme, 2005).

Thus ART provision has brought additional resources and challenges to already over-stretched public health systems. Hirchhorn, Oguda, Fullem, Dreesch and Wilson (2006) estimated that, in order to reach the 3 by 5 initiative targets, an equivalent of 20,000 to 100,000 physicians, nurses, pharmacists and other core clinical staff would be needed and the number would be higher if other staff cadres, such as counsellors and administrators, were to be included. It is estimated that Zambia needs twice as many doctors as it currently has if it is to scale up ART to all people requiring treatment in the next 10 years (Smith quoted in Van Damme, 2006).

Many critical positions for ART delivery are not filled at the facility level. Malawi has particularly high vacancy rates in those posts that are essential in ART delivery – doctors (82%) and nursing officers (77.4%). Clinical officers are also critical to ART delivery and have relatively high vacancy rates (24.5%). The staff: population for doctors is estimated at 1:100,000, as compared to the WHO recommendation of 1:12,000, while there is only one nurse per 3,500 population (MoHP, 2003, quoted in Aitken and Kemp, 2003).

In Zambia, the increased demand for the free ART services, coupled with static staffing establishments, have exacerbated the human resource crisis and may have compromised

the quality of service. This led to many sites only partially implementing the free ART policy. In some centres it was observed that, although patients received free ARVs, they had to pay for particular services as a cost-sharing measure, for example the laboratory tests for liver and kidney or CD4 counts. In some centres they continued with the fee for medicines, while the lab tests were free.

Without addressing the crisis in human resources for health – including poor working conditions, low salaries, concerns about career pathing, the lack of incentives and the international poaching of HRH – health programmes will suffer (Hassan, 2005). Salary levels impact on the motivation and retention of health workers and it might be necessary to consider salary increases when scaling up priority interventions and also including non-financial incentives (Wyss, 2004). Strategies for recruiting and retaining staff could include investments to produce new relevant health workers in initial and continuous training, creating new cadres, reversing the brain drain and importing staff from other countries with a surplus (Wyss, 2004; EQUINET, 2005; Van Damme et al, 2006). Decentralised model of care using lower cadre health care workers such as community health workers and nurses will have to be adopted in light of the massive human resource constraints facing most of the sub-Saharan region (Kim and Gilks, 2005).

In Malawi, DFID, the GFTAM, and SWAP are supporting an Emergency Human Resources Programme, which includes expanding training capacity and improving retention and re-engagement. This has led to government initiating a top-up of 52% on the top 11 cadres over five years (MoH, 2006). Verbal reports from DHOs suggest that top-ups have slowed the exodus of nurses, and are also helping attract back staff on month-to-month contracts. The Ministry of Health reports that the top-ups are helping attract new recruits (MoH, 2006). The Ministry of Health has developed a two-year recruitment plan, identifying 1,659 priority vacancies for 2005/06 and 2,347 for 2006/07. Over 570 staff were externally recruited between July and December 2005. Recruitment of nearly 600 further staff has been approved by the Director of Human Resources Management and Development and the Ministry of Finance. Special arrangements have also been made to re-engage up to 120 nurses and 80 clinical officers. Expansion of training capacity is also underway for example the College of Medicine has increased its intake from 36 to 53 medical students this year. An ART training module has also been introduced in seven of 15 pre-services training institutions in 2005 and it is hoped all training institutions will incorporate ART into their modules.

South Africa has just released a second draft of the country's HR plan, to be finalised by April 2006. It is felt that there has been very little consultation on this process. It therefore remains to be seen what strategies are put in place to address massive HR shortages (NDoH, 2006).

In Zambia, the government is working with partners in trying to address the human resource shortages. ZPCT and CIDRZ are working with the MoH to set up a mechanism to recruit and maintain staffing levels. This has been mitigated to some extent by employing medical officers and nurses dedicated to the programme under the different programmes that have better remuneration. Programmes such as CIDRZ and ZPCT have recruited their own staff (doctors, nurses, laboratory technicians and midwives) who work within the government clinics to provide ART. These staff are paid better than government staff and offered better salary packages. These salary packages and increased remuneration are real incentives to the staff and have helped retain human resources, but also arguably present equity challenges for the broader health system. For example, how do government members of staff not working on ART view these 'better' packages? Do they feel resentful and less motivated?

More non-medical staff need to be recruited as adherence support workers. Realising the difficulties that accompany taking multiple drugs, at various times, adherence was said to be a particular challenge. Adherence support workers who may be PLWHAs and community volunteers have been contracted to assist in the provision of adherence

counselling in the facilities and follow up in the community. This has greatly improved adherence and may also take some pressure off the overburdened health workers who also use some of their time on reinforcing adherence.

Programmes such as the CIDRZ programme have initiated specific modes of interaction among physicians and other medical staff that ensures ongoing mentoring of all medical staff in chronic care – this is very valuable 'on-the-job' training. It develops skills and builds capacity without taking staff away from their normal duties.

Lessons learnt

A number of lessons have been learnt regarding the importance of developing human resources for ART:

- The human resource crisis is a key challenge to the effective delivery of ART programmes.
- At the same time HIV/AIDS is contributing to the health worker crisis by increasing staff workload and morale and placing health workers at risk of occupational exposure to HIV/AIDS. More health workers are being infected and affected by HIV/AIDS.
- There is need for long-term donor commitments and innovative strategies for supporting human resources for health.
- Salary top-ups for some cadres or members of staff and not others working in similar sectors raises the critical question of employment equity and might have negative implications for other members of staff.

5.5 The role of communities and volunteers

ART delivery is presently intensive in the use of skilled medical staff. Despite the delegation of certain tasks to other cadres, there is still not sufficient capacity for scaling up services (Kober and van Damme, 2006). People living with the virus are also another pool of untapped resources for ART (Kober and van Damme, 2006). PLWHA have carried out certain tasks mainly in the areas of health promotion and prevention, home-based care, adherence support and treatment literacy activities. Community members in sub-Saharan Africa have also long played a critical role in supporting HIV and AIDS prevention and care programmes. Their role is particularly critical in making services accessible and appropriate to vulnerable and marginalised groups, especially in the light of sparse formal human resources for health. Care at the community, carried out by volunteers, most notably through home-based care programmes is largely carried out by women and girls. For example, in Zambia Macwan'gi, Sichone and Kamanga (1995) found that the brunt of caring for AIDS patients falls on women, and in home-based care programmes assessed in Zimbabwe, 84% of carers were women (Woelk, Hansem, Jackson, Kerkhoven and Manjorijori, 1999). A review of the role of carers and volunteers in HIV and AIDS in sub-Saharan Africa has argued for the importance of developing innovative strategies to recognise and support community members, volunteers and carers to alleviate the psycho-social and emotional stress that can accompany their role (Bali, 2003).

Community involvement continues to be important in ART programmes. Community members or volunteers can play a big role in health promotion and supporting patients on ART in treatment adherence and offering psychosocial support. Involving communities can also help in bringing services closer to communities. Bringing services closer to communities reduces the costs and opportunity costs of health care seeking. Clearly this is important from an equity perspective. What is also important, especially against the lessons learnt from HIV and AIDS programmes to date, is the need to recognise and, where possible, remunerate this important volunteer- and community-based activity.

The case study of Khayelitsha, South Africa presented above provides a good example of community involvement in ART programmes – in the case in discussions around eligibility. Similarly in a MSF programme in Chiradzulu, Malawi community involvement was

recognised as important from the outset and in 2002 an active programme of informing 85 community chiefs about disease progression, prevention and care was undertaken (WHO, 2004a). The Lighthouse – a Lilongwe-based centre providing HIV and AIDS Treatment and Care – also has strong links with the community and works in partnership with 200 volunteers. These volunteers refer patients directly to the Lighthouse Clinic and there are regular meetings between community home-based care nurses and the community care supporters (WHO, 2004b). The Lighthouse makes an explicit attempt to recognise its opening or to commemorate World AIDS day by running refresher training programmes (WHO, 2004b). This focus on working positively with volunteers, and developing strategies to recognise their work, has been sustained into 2006 and is seen as critical to demand for services at the Lighthouse.

The Zambian National Implementation Plan highlights the importance of the community's role in the provision of ART and this relates to both the right to treatment and the importance of community oversight in ART programmes. This is strategic, as consultations in Zambia in both rural and urban settings showed that community engagement is part and parcel of tackling stigma and supporting individuals to uptake and adhere to ART (International HIV/AIDS Alliance, 2003). There are some good examples of creative working with community groups. In Zambia, for example, the ARV Community Education and Referral (ACER) project reaches communities through church programmes, traditional healers and support groups. ACER is also developing a two-way referral system between the health system and other sources of help for people on treatment, which enhances access for poor and vulnerable groups (UNESCO/WHO, 2006).

Lessons learnt

A number of lessons have been learnt regarding community and volunteer involvement in delivering ART:

- Involvement of community members and PLWHA in service delivery has the potential for making services accessible to the poor and the marginalised. This is particularly critical in the context of the current crisis in HR.
- Community involvement/volunteerism in HIV and AIDS programmes has traditionally been largely carried out by women and girls, due to gender roles. It is important to not overburden women and girls, who are already major carers in households.
- There is need to appropriately recognise and remunerate volunteers for their work.
- Community involvement is an important catalyst for addressing the stigma of being HIV+ or having AIDS.

5.6 Drug procurement

Different scenarios exist in countries for drug procurement. In South Africa the award of the drug tender was announced on 2 March 2005; however, this was already after the drug procurement process had commenced and more than 16 months after the operational plan was adopted (Hassan, 2006). A tender was awarded to the seven pharmaceutical companies for the supply of ARV medicines to public health facilities countrywide. The tender will expire in 2007. *Table 7* below provides some of the details.

Table 7: Brief tender analysis

Company	Nature of company	Share of tender (in value)
Aspen Pharmacare	Local generic manufacturer	32%
Abbot Laboratories	Multinational importer	31.5%
MSD	Multinational importer	25.5%
Ingelheim Pharmaceuticals	Multinational importer	6%
GlaxoSmithKline	Multinational importer	2%

Bristol-Myers Squibb	Multinational importer	1.66%
CIPLA Medpro	Local generic importer	1.33%

(Source: Mellors, 2006)

According to the NDoH department, suppliers and provincial health procurement officials will meet four times a year to ensure adequate planning to meet the demand for ARV medicines at public health facilities. There have been several reports regarding problems with drug availability in various parts of the country, for example in Gauteng, KwaZulu Natal and Mpumalanga. The supply of Efavirenz, (marketed by MSD as Stocrin[®]) in particular has been beset with problems of repeated stock-outs, while the availability of generics that form part of the first-line regimen has not been an a problem and they have been widely available. There are major concerns emerging about the affordability and sustainability of second-line regimens.

Zimbabwe traditionally depends on two channels of procurement of drugs, including ART drugs: private distributors and Natpharm, a state-owned company that was formed in 2001 to take over the functions of the former Government Medical Stores (GMS). It uses an open tender system to procure mainly public sector drugs, a system that allows it to maintain lower prices. In contrast, private distributors also procure local and international drugs for sale to both the private and public sectors. They are usually well stocked; however, foreign currency shortages have made under-stocking common even among private distributors. Their mark-ups are usually high, which makes their drugs unaffordable to the public sector.

In Malawi, ARV procurement is through UNICEF, which signed a memorandum of understanding (MOU) with the government for the procurement of drugs funded through the Global Fund. According to the MOU, UNICEF is supposed to collaborate and build the capacity of the Central Medical Stores (CMS) so that later it can hand over the distribution and procurement process. The HIV/AIDS unit in the Ministry of Health closely works with UNICEF and CMS in drug procurement. Drug orders are now routinely placed every six months to arrive in Malawi in March and October (MoH, 2005). Apart from the first-line regimen the drug, the drug order for March 2006 included alternative first-line regimen for central hospitals, and second-line regimen for centres four major ART Lighthouse, QECH, Thyolo and Chiradzulu. Procurement through UNICEF and not through the national procurement systems was intended as a temporary solution whilst strengthening the capacity of CMS.(Stillman & Bennet, 2006). However it is arguable that the establishment of parallel external procurement systems will lead to inefficiency and duplication of efforts (ibid.).

Lessons learnt

The following lessons were learnt regarding the procurement of ARV drugs:

- Developing sustainable and effective drug procurement systems that reach across entire countries is critical to ensuring equitable access. This is an opportunity to try to strengthen drug procurement systems per se rather than setting up parallel structures.
- Donor flexibility in supporting drug procurement systems is important.

5.7 Private – public mix in provision of ART

Medical schemes fund the provision of ARVs through member contributions in the private sector. In Zimbabwe, for example, the Commercial and Industrial Medical Aid Society (CIMAS) has developed a 'Chronic Diseases Add-on' scheme, starting July 2003, where companies contribute an additional amount of money to cover HIV- and AIDS-related illness. In South Africa, by 2007, a Risk Equalisation Fund (REF) will be set up to equalise the risk and costs of providing ARV treatment to all members of all schemes (currently each scheme bears the same costs irrespective of how many members they have on ARV treatment).

Workplace treatment programmes (WPTPs) are common in South Africa. In this context, larger employers, sometimes with the assistance of donors such as the GFATM, are funding the free provision of ARVs in the workplace. Some of the larger companies that provide HIV/AIDS treatment for workers who cannot afford to belong to a medical scheme include Eskom, Anglo American, Ford Motor, Daimler Chrysler, BP, Engen, Sasol, Tiger Brands, Cape Town municipality, Mtel, BMW and Unilever. But here too donor support is critical. In addition, the GFATM funds some workplace treatment programmes in the mining sector.

Machekanyanga, Mpofu, Masvikeni, Nyazema and Sithole (2002) state that in Zimbabwe almost 80% of the 73 private companies who responded to a questionnaire have HIV prevention programmes, focusing on awareness and peer education. However, less than 20% had an explicit HIV and AIDS policy. It is unclear currently what proportion of private companies provide ART. Machekanyanga et al advocate for the possibility of tax relief breaks for company with an effective AIDS programme, a concept that could be extended to ART provision as a way to further promote access.

The private sector has an important role in providing and increasing access to ART. The private sector was providing ART in all the four countries in this report. ART provision in the private sector can be used to reduce pressure off the overburdened, resource constrained public sector. Malawi is a good example where deliberate efforts have been made for enhancing private sector ART provision through a memorandum of understanding between the government and private sector providers. ART is provided to the private sector at the subsidised rate of 20% of costs, inclusive of the costs of drugs, logistics and monitoring activities. Patients therefore pay MK500 for a month's supply of ARV drugs. However a site has to be formally certified by the site readiness assessment, which is conducted by the Ministry of Health. By the end of 2005, a total of 243 health personnel from the private sector had been successfully trained and had passed their exam.

The drugs for the private sector in Malawi are also purchased using the Global Funds. Drugs for private sector were ordered and they arrived in November 2005. Due to the limited capacity of the HIV/AIDS Unit in the MoH to take on board the roll out of ARV therapy in the private sector, the Malawi Business Coalition to Fight HIV/AIDS (MBCA) is taking a lead in the roll-out of ARV therapy in the private sector. The MoH will thus develop a proposal with MBCA to help manage the management, and monitoring and supervision in the ART roll out programme in the private sector. Currently there are 20 private and eight privately owned companies providing ART to 932 patients by the end of December 2005 (MBCA, 2006). The private clinics are mostly located in the two cities of the country.

Lessons learnt

The following lessons were learnt regarding the involvement of the private sector in ART:

- The private sector, including private practitioners, companies and medical schemes, are supporting ART scale up in countries.
- The Ministry of Health is providing support to the private sector for ART provision in some countries. This encourages collaboration and coordination between the government and private sector – for example in the area of monitoring.
- There is need to encourage workplace ART programmes, which will help take pressure off the public sector.

6. Challenges for ART scale up and conclusions

Conceptual and empirical work conducted by EQUINET has highlighted the necessity, from equity, justice, accountability, efficiency and sustainability perspectives, for ART programmes to build on and strengthen broader public health systems. The delivery of ART programmes requires additional financial and human resources, as well as drug procurement systems, monitoring and evaluation processes and strategies for community engagement.

As outlined in section 3, in each of the country case studies discussed here, there are various players involved in the funding and provision of ART. These additional multifaceted inputs are entering pre-existing, complex and over-stretched public health systems and have the potential to either strengthen these – and hence create a virtuous cycle of quality ART programmes and more resilient public health systems. Alternatively, they could undermine them through resource distortion and hence create a vicious cycle of weaker public health systems.

This review builds on the work that EQUINET has done up until now to apply an equity and health systems approach to ART scale up in four countries in southern and eastern Africa: Malawi, South Africa, Zambia and Zimbabwe.

It adapts a framework for monitoring equity in ART scale up in the context of health systems (Kalanda et al, 2004) to organise and structure this report:

- The first part of this framework examines equity, justice and accountability perspectives: namely, processes for fair policy development and to establish who is accessing ART (as discussed in section 4).
- The second part of this framework explores health systems issues in ART programmes, and from the evidence emerging from the country case studies, including health financing, monitoring and evaluation systems, building capacity for ART provision, building human resources for health, the role of communities and volunteers, drug procurement and the private sector (discussed in section 5).

The aim of the review was not to systematically apply the framework to each of the countries, but rather to look for inspiring or positive examples from an equity perspective and highlight tensions and challenges for ongoing scale up against a context of broader health systems.

With respect to *fair policy development*, the equity and access policy in Malawi provides a positive example (see section 4.1). However, it needs to be stressed that the development of 'fair policy' is not a once-off discrete event; for equity and justice to prevail; countries need to seek ongoing opportunities to engage and act on the views and priorities of different stakeholders in ART scale up.

The *provision of ART free at the point of delivery* in the public health services is arguably very positive from an equity perspective. The implementation of this approach in Malawi and Zambia has translated into significant increases in people able to access ART. However, it needs to be noted that even where ART is provided 'free at the point of delivery' poor and vulnerable women and men may face prohibitive opportunity costs, and ongoing action to increase accessibility of services is needed.

Another challenge that is faced is *urban bias* in ART provision was noted in all the country case studies, and action to strengthen provision and community uptake in rural/remote areas is urgently needed.

There are also challenges for *paediatric access*, as underscored by the recent launch of the WHO/UNICEF Global Initiative on Children and AIDS. There is a clear need for further

action to simplify paediatric ART dosages and for further training of providers and community engagement on children's access.

Linked to ART scale up is the need improve HIV prevention services, counselling and testing, treatment of opportunistic infections and prevention of parent-to-child transmission (Harries, Schouten and Libamba, 2006). Given the *increasing feminisation* of the HIV epidemic in Africa, it is critical to engender all HIV services across the prevention to care continuum and ensure that they are accessible to all. This is not a straightforward process and empowering younger and older women and vulnerable men to be able to negotiate sexual relationships on their own terms requires joined-up action both within and beyond the health sector. *Box 5* summarises the main challenges regarding policy development and ART access.

Box 5: Equity and accountability challenges in policy development and ART access

In summary, some of the main equity- and accountability-related challenges to policy development and ART access include:

- establishing and maintaining processes to ensure wide consultation and discussion around policy development;
- supporting/advocating the provision of ART free at the point of delivery;
- collating information on ART access that is disaggregated by different groups (gender, age, area of residence) and assessed by need; and
- supporting processes/capacity development to respond to those groups who are facing barriers to ART access, such as children.

With respect to the efficiency and sustainability approaches through highlighting ART integration with health systems, the findings were again complex and varied. In terms of *health financing*, the norm was the involvement of many different players and funders resulting in a largely donor-dependent ART programme with potentially negative implications for sustainability. South Africa provides the exception to this norm, with ART being funded in the public sector through government resources. Different countries have had varied approaches and success in M&E. There is clearly need for further action to develop approaches that complement the 'three ones' approach. To enable an equity analysis data collected needs to be disaggregated by basic parameters, such as sex, age and place of residence. It is also important to demonstrate to different players (within the public and private sectors and civil society) the practical value of collating this information – for example how it can be used to improve the equity and efficiency of service provision and to set realistic targets. This should increase both the ownership and sustainability of data collection and reporting.

ART scale up brings numerous challenges from a *human resources for health perspective*. There is a need to support and develop capacity for ART provision within country and action in this area has taken place in Zimbabwe and Malawi with ongoing site assessments of 'readiness' to provide ART and in Malawi a focus on mainstreaming ART training in pre and in-service training. Human resources for health is an area that requires urgent attention as health workers in many contexts in southern and eastern Africa are over-stretched, under-remunerated and under-valued. This has severe implications for the delivery of public health systems and ART programmes. Malawi and Zambia have developed interventions to try and support and retain health workers and there is clearly need for further innovation and action given that the effects of schemes, such as training and salary top-ups can take time to be realised in practice and effect change in staff numbers and morale. With the reality of the international 'brain drain' of health workers this is an area that requires action and advocacy at multiple levels: national, regional and global.

There are concerns that people living with HIV/AIDS are not seeking treatment early enough. This might lead to early mortality of people on ART as patients present at advanced stages (ART-LINC and ART-cc Groups, 2006). Patients in some cases also stop treatment because of an influx of ambiguous and confusing messages about the safety and efficacy of ARVs and costs and opportunity costs associated with care seeking. For this reason, stronger treatment literacy campaigns and community mobilisation campaigns are needed to increase awareness of the drugs among communities and to increase the number of people on treatment.

There are some interesting examples of *developing strategic partnerships at community level* in Zambia. Involving community members and PLWHA in promoting both access and adherence to ART can enhance access for poor and vulnerable groups and have positive implications for HIV-related stigmas. To ensure that community/PLWHA involvement is both equitable and sustainable, it is important to ensure that these vital contributions are recognised and, where possible, remunerated and not just taken for granted.

ART scale up brings new challenges for *drug procurement* and there is need for further action and dialogue around the 'how to' of sustainable procurement of nation-wide systems for both first and second line drugs. With respect to *collaboration with the private sector*, there are some positive examples from Malawi and South Africa. In South Africa the number of treatment programmes at workplace has increased access to ART among employees of different firms. Whereas, in Malawi, the Ministry of Health is providing support, training and drug procurement to the private sector, which has positive-spin offs in terms of joint monitoring and evaluation strategies, as well as taking some of the pressure off the already over-stretched public sector.

This report has applied this framework for monitoring equity in ART scale up to provide a snapshot of the situation in four different country case studies and evidence from literature on the region. It is difficult to make a clear assessment of whether ART programmes are strengthening or undermining public health systems, as the reality appears complex and contested. This is not surprising as ART programmes include multiple players and multiple inputs, which are played out against complicated health systems.

For example, in Malawi, the arrival of ART has arguably both strengthened and weakened the public health system. On the positive side, for example, the high profile debate on equity, which informed the development of the equity and ART policy, has strengthened equity perspectives across the delivery of the broader essential health package. However, Malawi's progress in developing and implementing the new Sector Wide Approach in health, which involves new partnerships with a focus on decentralisation to deliver the essential health package to *all* Malawians, has arguably been undermined by the significant influx of resources from the Global Fund (Stillman and Bennet, 2006). Similarly in South Africa, on the positive side, the development of treatment work place programmes has arguably strengthened relationships/interactions between private providers (employers) and the public health system. Whereas the lack of coherent or uniform M&E systems for ART has arguably led to fragmented systems and frustrated workers. However, this M&E scenario has triggered new activism from many different sectors of South African civil society to advocate for transparent and accountable M&E.

Box 6 summarises the main challenges around the efficiency and sustainability of ART provision.

Box 6: Efficiency and sustainability challenges in ART provision

In summary some of the main health system-related challenges around efficiency and sustainability include:

- coordinating resources and money flow and exploring different options for sustainable domestic financing;

- the implications of new global funding initiatives on SWAPs – for example, the Global Fund;
- retaining, recruiting and prioritising human resources for health;
- coordinating all the different sub-delivery mechanisms (including drug procurement) in both the private and public sectors;
- coordinating monitoring and evaluation; and
- developing and evaluating strategies to enhance community engagement in ART delivery and adherence support.

Box 7 lists the main areas that require further research to ensure equitable ART provision.

Box 7: Areas requiring further research to ensure equitable ART provision

It also needs to be noted that there are a number of gaps in the evidence base. Key areas that require further research and attention include:

- the assessment of access to ART by need (in other words, based against gender/age disaggregated HIV-prevalence data and an assessment of eligibility criteria);
- mechanisms to promote fair policy development in ART – the who and how of engaging different stakeholder groups and holding the private and public sector accountable for their ART programmes;
- concrete evidence on the impact of ART on the functioning of the broader health system (for example on health workers' work loads); and
- how to best engage and motivate community groups and volunteers in promoting access and adherence to ART.

This review needs to be seen as 'work in progress'. The clear message is the need for ongoing explicit attention, dialogue and monitoring and evaluation on the equity implications of two intersecting areas:

- who is able to access and adhere to ART; and
- what the implications of ART provision are on the functioning and equity of the broader public health systems.

As the review has highlighted there are some emerging examples of promising practices in both of these areas and a number of real challenges ahead that need concerted and coordinated action at district, national and international levels. ART scale up, and its associated challenges and tensions, is being played out against health systems *right now*. There is a need for ongoing dialogue, exchange of experiences and 'learning while doing'. In the words of the Malawi HIV/AIDS Coordinator it's about "sailing the ship while building it" (Schouten, 2006).

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List of Acronyms

AIDS	Acquired immune deficiency syndrome
ALP	AIDS Law Project
ARK	Absolute return for kids
ART	Antiretroviral therapy
ARTIS	ART information system
ARV	Antiretroviral drugs
AZT	Zidovudine
CDC	The Centre For Disease Control
CHAM	The Christian Health Association of Malawi
CHAZ	The Churches Health Association of Zambia
CIDRZ	The Centre for Infectious Diseases Research in Zambia
CIMAS	The Commercial and Industrial Medical AIDS Society
CRS	Catholic Relief Services
DFID	The Department for International Development
DMP	Disease management programmes
EQUINET	The Southern Africa Regional Network for Equity in Health

GFATM	The Global Fund Against AIDS, Tuberculosis and Malaria
HIV	Human immunodeficiency virus
HR	Human resource
JCSMF	The Joint Civil Society Monitoring Forum
JICA	The Japan International Cooperation Agency
MAP	Multi-country AIDS programme (of the World Bank)
M&E	Monitoring and evaluation
MoH	The Ministry of Health
MoHCW	The Ministry of Health and Child Welfare
MSF	Medicins sans Frontieres
NAC	The National AIDS Commission
NAP	National ART Programme
NATF	The National AIDS Trust Fund
NDTPAC	The National Drugs and Therapeutics Policy Advisory Committee
NGO	Non-governmental organisation
NTP	The National Tuberculosis Programme
PEPFAR	The United States President's Emergency Programme for AIDS Relief
PLWHA	People living with HIV and AIDS
STI	Sexually transmitted infections
SADC	The Southern African Development Community
TA	Traditional authorities
TAC	The Treatment Action Campaign
TARSC	Training and research support centre
TB	Tuberculosis
UNAIDS	the Joint United Nations Program for HIV/AIDS
UNDP	The United Nations Development Fund
UNICEF	The United Nations Children Fund
US	The United States
WHO	The World Health Organisation
WPTP	Workplace treatment programmes
ZANARA	Zambia National Response to AIDS
ZPCT	Zambian HIV/AIDS prevention care and treatment
ZW	Zimbabwe

Appendix 1: Sources of evidence

Key informant interviews were conducted with appropriate stakeholders in the all the four countries. The key informants who were interviewed were the following:

- In Zimbabwe:
 - Mr Amon Mpofu, M&E Manager, NAC, via personal communication; and
 - Dr J Nyenwa, Chief Medical Officer, CIMAS, via personal communication;
- In Malawi:
 - Dr Erik Schouten, HIV/AIDS Coordinator, Ministry of Health;
 - Dr Andrew Agabu, The National AIDS Commission;
 - Mindy Hochgesang, The Centre For Disease Control, Malawi;
 - Sam Phiri, Director, The Lighthouse, Lilongwe;
 - MANET;
 - David Nyirongo, Programme Manager, National AIDS Association of Malawi;
 - Mavuto Bamusi, Acting Director, Malawi Economic Justice Network;
- In Zambia:
 - Dr Stewart Reid, Director, Centre for Infectious Disease Research in Zambia (CIDRZ);
 - Dr Kwasi Torpey, Clinical Director, ZPCT;
 - Dr Simon Mphuka, Director of Programmes, Churches Health Association of Zambia;
 - Mr Beyant Kabwe, Monitoring & Evaluation Specialist, Zambia National AIDS Network (ZNAN);
 - Dr Sansan Myint, ART Specialist, WHO, Lusaka;
 - Dr Albert Mwangi, ART Coordinator, Ministry of Health;
 - Dr Velepi Mtomga, Clinical Care Specialist, Central Board of Health (CBoH);
 - Mrs Naomi Banda, Policy Analyst, Clinical Care, Ministry of Health;
 - Dr Jean-Claude Kazadi, Catholic Relief Services, Lusaka;
 - Mr Paul Chitengi, Monitoring & Evaluation Specialist, National AIDS Council (NAC);
 - Mr Ceasar Cheelo, Economist, University of Zambia (author of the draft document on financing); and
 - Dr Alex Simwanza - Director programs, NAC; and
- In South Africa:
 - Dr Ashraf Grimwood, Medical Director, ARK;
 - Dr Eric Goemaere, Mission Head, SA MSF;
 - Celitia Serenata, CDC (PEPFAR);
 - Dr Francois Venter, HIV/AIDS Clinician, SAHCS and JHB Hospital;
 - Dr Tammy Meyers, Pediatrician, Harriet Shezi Hospital;
 - Dr Brian Eley, Pediatrician, Red Cross Hospital;
 - Dr Harry Moultrie, Pediatrician, Harriet Shezi Hospital;
 - Harry Munnings, Manager, ACTS, Mpumalanga;
 - Dr Hugo Templeman, NDLOVU HAART, Mpumalanga;
 - Brad Mears, CEO, South African Business Coalition Against HIV/AIDS (SABCOHA);
 - Prof Heather McLeod, Actuary (Consultant to The Council for Medical Schemes);
 - Nihlanhla Ndlovu, Senior Researcher, AIDS Budget Unit, IDASA;
 - Leigh Johnson, Actuary, Centre for Actuarial Research (CARE), University of Cape Town;
 - Professor Nicoli Nattrass, Actuary, Centre for Actuarial Research (CARE), University of Cape Town;
 - Dr Brian Brink, Chief Medical Officer, Anglo-American; and
 - Dr Andrew Boule, School of Public Medicine, University of Cape Town.

The international literature and additional published literature from the country case studies was collated through searching the following websites:

- EQUINET;
- the HIV Department, WHO;
- the Institute of Development Studies, University of Sussex;
- the Health Sciences Research Council;
- UN sites: UNAIDS; Millennium Development Goals; UNDP
- the Health Systems Trust;
- Google scholar and Medline, using the following search terms: antiretrovirals, health systems, equity, southern/eastern Africa, Malawi, South Africa, Zambia and Zimbabwe.

Equity in health implies addressing differences in health status that are unnecessary, avoidable and unfair. In southern Africa, these typically relate to disparities across racial groups, rural/urban status, socio-economic status, gender, age and geographical region. EQUINET is primarily concerned with equity motivated interventions that seek to allocate resources preferentially to those with the worst health status (vertical equity). EQUINET seeks to understand and influence the redistribution of social and economic resources for equity oriented interventions, EQUINET also seeks to understand and inform the power and ability people (and social groups) have to make choices over health inputs and their capacity to use these choices towards health.

EQUINET implements work in a number of areas identified as central to health equity in the region:

- Public health impacts of macroeconomic and trade policies
- Poverty, deprivation and health equity and household resources for health
- Health rights as a driving force for health equity
- Health financing and integration of deprivation into health resource allocation
- Public-private mix and subsidies in health systems
- Distribution and migration of health personnel
- Equity oriented health systems responses to HIV/AIDS and treatment access
- Governance and participation in health systems
- Monitoring health equity and supporting evidence led policy

EQUINET is governed by a steering committee involving institutions and individuals co-ordinating theme, country or process work in EQUINET:
Rene Loewenson, Rebecca Pointer, Fortunata Machingura TARSC; Mwajumah Masaiganah, Peoples Health Movement, Tanzania; Itai Rusike CWGH, Zimbabwe; Godfrey Woelk, University of Zimbabwe; TJ Ngulube, CHESSORE, Zambia; Lucy Gilson, Centre for Health Policy South Africa; Di McIntyre, Vimbai Mutyambizi Health Economics Unit Cape Town, South Africa; Gabriel Mwaluko, Tanzania; MHEN Malawi; A Ntuli, Health Systems Trust, Scholastika lipinge, University of Namibia, South Africa; Leslie London, UCT, NomaFrench Mbombo, UWC Cape Town, South Africa; SEATINI, Zimbabwe; Ireen Makwiza, REACH Trust Malawi.

For further information on EQUINET please contact the secretariat:
Training and Research Support Centre (TARSC)
47 Van Praagh Ave, Milton Park, Harare, Zimbabwe
Tel + 263 4 705108/708835 Fax + 737220
Email: admin@equinetafrica.org
Website: www.equinetafrica.org

Series Editor: R Loewenson
Issue Editors: TJ Ngulube, Pierre Norden