

# Integrating HIV services in Zambia: effectiveness, efficiency and equity?

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## Transition from horizontal to vertical

Like many low and middle-income countries, Zambia initially adopted a vertical ART programme structure to respond to the urgent need to provide treatment to the large number of people living with HIV/AIDS. The vertical approach was also partly driven by the growth of disease-specific funding, such as that offered by the Global Fund to Fight AIDS, tuberculosis and malaria (GFATM) and the US President's Emergency Plan for AIDS Relief (PEPFAR). Now that 2 million people in Africa are on ART, a critical health systems issue is how best to move ART from the phase of emergency scale-up to a long-term chronic care programme. There is a wide consensus that these efforts will only be sustainable if ART is integrated into the existing health system. However, the most appropriate forms of integration will depend on the epidemiology of the health issue in question, the structure of the underlying health system, and the resources available.

Conceptualizing and planning the integration of vertical programmes is complicated by the fact that integration can be defined in different ways, and there are different domains and levels in which programmes can be integrated (see box 1). Moreover, given the newness of ART in low and middle income settings, there is limited evidence of the effects of the structure of ART delivery on a health system or on how the underlying health system affects the organisation of ART services. This policy brief draws on research assessing the current status of integration of ART across the health

system in Zambia, and identifies priority areas for integration in the domains of health information, health workforce, and health service delivery.

## HIV treatment scale-up in Zambia

According to the 2007 Zambian Demographic and Health Survey, the HIV prevalence amongst adults in Zambia is around 14.3%. ART became available in the private sector in 1995, and the government started an ART programme in 2003. By the end of 2008, almost 220,000 people living with HIV were receiving treatment. ART is now available at government health care facilities in all of Zambia's 72 districts, and there is ongoing expansion to smaller clinics and health posts to increase accessibility. The Ministry of Health has worked with several donors to achieve this remarkable accomplishment. The World Bank and GFATM have contributed considerable resources through the Ministry of Health and Ministry of Finance. PEPFAR, currently the largest funder, channels most of its funding through partners who provide technical assistance and infrastructure for ART scale-up. These include Family Health International, the University of Alabama, Johns Hopkins University, Medecins sans Frontieres, and several Faith Based Organizations.

Zambia's 2006-7 report on the multi-sectoral AIDS response identified three major priorities for strengthening the AIDS response:

1. Better coordination of the national response (including the actions of development partners and civil society)
2. Improved vertical coordination

between national, provincial and district levels

3. A harmonised and well functioning monitoring and evaluation system

## Key Points

- The establishment of a vertical system for delivering ART in Zambia enabled the rapid scale-up of antiretroviral therapy (ART)
- The ART programme has strengthened some aspects of the health system, while also drawing attention to weaknesses which need to be addressed
- Significant progress has been made towards integrating ART into the health system. However, long-term sustainability of chronic care for people living with HIV in Zambia will require further integration. Priority areas include:
  - **Health information** - increase efficiency of information system and strengthen quality assurance
  - **Health workforce** - harmonise incentives and improve coordination of training
  - **Health service delivery** - strengthen linkages with other services and assess strengths and weaknesses of different delivery models

All of the above relate to integration of ART within the wider health system.

### Integration in Zambia: Challenges and Opportunities

This section draws on research conducted in August 2008 on successes, challenges and opportunities for integrating ART delivery within the Zambian health system. The research included visits to 8 health facilities providing ART in 3 of Zambia's 9 provinces, and 35 key informant interviews with Ministry of Health officials, health care providers, donors, technical partners and researchers.

#### Health information

##### Non-integration of health information systems

The National HIV/AIDS/STI/TB Council (NAC) was established to coordinate the national multi-sectoral response to HIV/AIDS. The NAC is composed of representatives from the public, NGO, FBO and private sectors, and is responsible for resource mobilisation as well as monitoring and evaluation. The Ministry of Health (MoH) is responsible for providing national leadership, implementation of policies, forging partnerships with key players, and coordination of the ART programme at the national level.

The NAC has designed a national monitoring and evaluation framework to harmonise data collection and reporting for HIV services. However, despite these efforts, a wide range of data collection methods and reporting formats are still being used across ART sites by different supporting partners. This creates extra work for frontline health workers who have to collect the data. Moreover, an array of different indicators can complicate the comparison of performance across sites. The NAC has requested that the routine collection of non-NAC monitoring and evaluation indicators be phased out, although this was not yet evident at the time of the study.

Apart from the integration of systems within ART programmes, there is also the question of integrating ART

### Box 1: Types of integration

- i. multi-purpose service delivery points
- ii. package of preventive and curative health interventions for a particular population group
- iii. integration over time for chronic conditions or different stages of a person's life cycle;
- iv. linkages between a vertical programme with other specialised health services
- v. vertical integration of different levels of service (including primary, secondary and tertiary care and private-public linkages)
- vi. integrated policy-making and management
- vii. inter-sectoral integration for funding, regulation or service delivery

Adapted from WHO (2008). *Integrated health services – what and why? Technical Brief 1.*

information with the rest of the health system. Technically, the NAC data collection system should feed into the national Health Management Information system. However, data continue to be collected in parallel by both NAC and MoH in some instances. Although it is envisaged that ART data capture and analysis will ultimately be fully integrated within the National Health Management Information system, at the time of the study, there was not a clear plan or timeline for this objective to be achieved.

##### Sustainability

In most large donor-supported sites, data associates have been hired by externally funded agencies to collect data. This raises concerns about sustainability, as salary and data collection costs will need to be absorbed by the government in the long-run. Donor systems for data collection therefore need to be acceptable to and affordable for the Ministry of Health.

##### Quality Assurance

Health care providers in Zambia consider quality of care to be a priority area. There is a strong sense that poor delivery of ART care could jeopardise the success of the whole programme, which would be a national disaster. Rapid scale-up of ART services under

the pressure of achieving quantitative targets may well compromise the quality of service. The current challenges in quality control are; reduced work force to manage the increasing numbers of ART patients; weak pharmacovigilance (for example, monitoring of nephrotoxicity in patients receiving Tenofovir) and HIV drug resistance monitoring systems.

While the MoH and Medical Council of Zambia have established an accreditation system for ART sites, there is currently no standardised system for quality assurance of ART care, or for comparing the performance of different sites. This may contribute to sustained differences in quality of care between sites. This is a concern from the equity and effectiveness perspectives.

#### Health workforce

##### Drain of human resources from government sector at the highest level

A major constraint to scaling up ART and strengthening the health system is the shortage of trained health workers at different levels. Concerns have been voiced that ART draws health care workers away from other essential health services. However in non-tertiary government facilities in Zambia, ART is usually delivered by health care workers who also provide other health services. Most doctors

and nurses rotate between clinics, and laboratory staff are shared with other services. This means that the national ART programme is generally not recruiting staff away from other health services.

The most serious drain in human resources may be at the highest levels. Many highly qualified and experienced health professionals have moved from district, provincial and national administrative and management positions to HIV-related donor agencies and NGOs. This has been a major set-back to planning and managing capacity within the health system.

### Incentives

Donor practices have led to the creation of multiple incentive schemes for frontline HIV health workers. Some donors pay staff to work overtime shifts in ART clinics. Where supervision has been strong, this has increased health worker motivation as there has been an opportunity to earn more money and acquire training. If well planned, this could be a reasonable short and medium-term strategy to increase manpower for delivering health care.

A different form of incentivisation which requires some reflection is top-up payments for health care workers involved in providing HIV services, regardless of whether extra work is involved. Health care workers who are not receiving top-ups understandably feel resentful and demotivated. Some facility directors manage this problem by allowing health care workers to rotate through ART clinics, or pooling and distributing the incentive money across all clinic staff.

Ultimately, however, the top-up system presents challenges for equity and efficiency. Not all clinics receive top-up allowances and even in clinics where top-ups are paid, not all health workers receive them. This system is likely to lead to demotivation in some groups, with a potential impact on productivity and efficiency. Top-ups for providing HIV care are not likely to be sustainable if donor funding is discontinued. Moreover,

they are not in line with the national human resource strategy. This begs the question of why they are still in operation.

### Training

In the immediate time frame, the coordination of ART training schedules needs to be strengthened. Although ART training programmes have been standardized nationally, different funding sources mean that training programmes are conducted by both partners and MoH training bodies. At the facility level, concern has been expressed that partners may run trainings that have not been included in the annual district plans, causing disturbances when it comes to releasing health workers for training at short notice. On the other hand, at the time of the study, the province-organized trainings, which form part of the district health plans, were not yet being scheduled and run regularly; in some cases, this has resulted in gaps between training needs and availability.

The introduction of ART training at the pre-service level is a positive step towards increasing integration. In the medium to long-term, the integration of ART training with other continuing medical education needs should also be considered. To date, training for ART has been completely vertical in terms of content and format. Expanding the curricula to include basic training on other health issues (eg. TB, malaria, nutrition, child health) would help to strengthen the health system and promote integration.

### Health services

#### Integration at the point of service

In hospitals and large health centres, the ART clinic is often located in a separate room or building within the facility. This is partly because of space constraints in existing facilities. This approach has several potential advantages: more efficient systems for ART delivery, more privacy, and better quality of care for ART clients. Moreover, immunocompromised patients may be at greater risk of contracting infections

from other outpatients such as TB and pneumonia. Nevertheless, there are also disadvantages to the separation of ART from other services: stigma attached to being spotted at the ART clinic; duplication of services (such as registration, triage, data collection, pharmacy); and, patients needing to negotiate several clinics for different services.

One type of integration is the linkage between a vertical programme and other health services. Efforts are being made to link HIV programmes with other vertical initiatives, such as TB and PMTCT. HIV testing of TB and antenatal clinic clients has improved, but many patients diagnosed with HIV do not enrol in ART. There may be significant advantages to introduce screening and services for other conditions, (eg. diabetes, cardiovascular disease, family planning, mental health and nutrition) within vertical ART service delivery models.

Four urban health clinics in Lusaka are piloting a model of integrating ART services into the general outpatient clinics. This is only possible in medium and low burden facilities, as the ART patient load could crowd out other services at bigger ART clinics. Operational research is being carried out by the Centre for Infectious Disease Research of Zambia (CIDRZ) to evaluate the acceptability and scalability of this model. The findings will be invaluable for informing the debate on the benefits and drawbacks of a fully integrated model of service delivery.

### Conclusion

The ART programme in Zambia has helped to strengthen some aspects of the health system. The reduction in HIV-related morbidity has eased the workload in outpatient and inpatient clinics that were formerly overwhelmed with patients seeking treatment for opportunistic infections and palliative care for terminal illness. Nevertheless, to increase the benefits of ART and reduce negative impacts on the rest of the health system, further integration of the



ART programme is necessary.

- **Effectiveness** could be improved by strengthening integrated information systems and Ministry of Health standardised quality assurance procedures.
- **Efficiency** could be improved by streamlining health workers' incentive structures across HIV and non-HIV care provision, and strengthening the coordination and implementation of ART training.
- **Equity** could be improved by addressing concerns about incentives for working in HIV care, and regular review of the quality of care in different ART sites. Strategies should be put in place for supporting poorer performing sites.
- Finally, the integration of ART clinics with general outpatient care might have benefits for efficiency, equity and acceptability. However, further research is needed in order to make policy decisions on this subject.

### Policy Recommendations

- There is need for a plan and timeline for integrating ART data collection into the health information system, in conjunction with a standardized protocol for quality assurance.
- Efforts need to be made to address the pluralistic and unregulated human resource incentive structure for health care workers in the short term to improve equity amongst health care workers
- The coordination of ART training should be improved to increase efficiency
- The possibility of integrating quality assurance of ART with other specific disease programmes should be explored.
- In the medium term, possibilities for integrating continuing medical education with ART training should be explored
- Further research on the effectiveness, cost-effectiveness, and acceptability of different models of delivery will be invaluable to help inform national strategies for ART delivery.



### About Evidence for Action

Evidence for Action is an international research consortium with partners in India, Malawi, Uganda, UK and Zambia, examining issues surrounding HIV treatment and care systems.

The research is organised in four key themes:

1. What “package” of HIV treatment and care services should be provided in different settings?
2. What delivery systems should be used in different contexts?
3. How best should HIV treatment and care be integrated into existing health and social systems?
4. How can new knowledge related to the first three questions be rapidly translated into improved policy and programming?

### Partners:

International HIV/AIDS Alliance, UK  
Lighthouse Trust, Malawi

London School of Hygiene and Tropical Medicine, UK

Medical Research Council Uganda Research Unit on AIDS, Uganda

Medical Research Council Clinical Trials Unit / University College London, UK

National AIDS Research Institute, India

ZAMBART, Zambia

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### Recommended Readings

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