Human Resources for Health Implications of Scaling Up For Universal Access to HIV/AIDS Prevention, Treatment, and Care: Zambia
Rapid Situational Analysis

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Dr. Gijs Elzinga, The Capacity Project
Dr. Susan Tembo-Zimba, World Health Organization
Mr. Isaac Kakumbi, Ministry of Health, Zambia

GLOBAL HEALTH WORKFORCE ALLIANCE TECHNICAL WORK GROUP
SECRETARIAT: INTRAHEALTH INTERNATIONAL
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**EXECUTIVE SUMMARY**

Zambia has a population of 12.2 million with a growth rate of 3.1% per year. The country has one of the most rapid scale-up treatment programs on the African continent; ART coverage rose from 0.6% to 51% in the period 2003-2008, and is currently 66%. The HIV/AIDS prevalence of 14.3% in 2007 has declined from 15.6% in 2001, overall incidence rate has remained steady at 1.6%. Although an HRH information system is still under development and numbers are not entirely reliable, the size of the present health workforce is 33,000 while the governmentally approved target is 52,000. Moving more fully toward universal access to HIV services will require HRH solutions.

The following are a summary of the Key Messages resulting from this Rapid Situational Analysis:

1. **Scale-up leadership action for HIV prevention at all levels.** HIV incidence has not receded, and the critical shortage of health workers in Zambia means that coverage needs will not be met. If Zambia hopes to implement the eight core areas listed in the National Strategy for the Prevention of HIV and STIs, additional leadership and action is needed to massively scale up efforts at all levels.

2. **Immediately formulate and implement a clear strategy, policy, and structure for community health workers (CHWs).** CHWs offer critical support for universal access efforts. The Community Health Worker National Strategy of 2009 lays out options for a clear and effective CHW strategy, policy and structure. This strategy should be implemented as soon as possible. More CHWs must be trained in order to successfully implement this strategy, and Zambia would do well to consider a policy similar to the one in Ethiopia, in which they are trained over a period of six months.

3. **Include health services for all preventable deaths within the CHW package.** Life expectancy at birth, under five mortality, and maternal mortality numbers in Zambia are sobering. The CHW package should include those priority conditions that may be prevented, handled, or supported at the community level.

4. **Institute an HIV/AIDS workplace policy and free medical services for all HRH workers and family.** Health workers are more motivated and productive when their own health and that of their family is stable and well provided for. This is flagged already in the HRH strategic plan of 2006, but it now must be pushed to a higher level of priority.

5. **Develop the payroll-based HRH database into a full HRH information system.** Proper management of overall HRH performance depends largely upon accurate and reliable information on the health workforce as a whole (including the private sectors).

6. **Resolve HRH communication and management shortcomings inherent in a centralized system.** Centralization of hiring and firing has caused communication gaps and additional bureaucracy. It can take as long as a year to fill a position. This deprives facility managers of a pivotal management tool to take full control and create solutions. Responsibility or hiring and firing should be delegated to the district/facility level.
7. **Promote development and implementation of an HRH advocacy plan.** Neither politicians nor the public at large seem to understand that the health system is by definition very labor intensive, and that a strong health workforce is needed for a healthy and productive population. An advocacy program that promotes awareness of the value of the health worker can help.

8. **Develop with all partners “what if” scenarios for a sustainable Health Workforce.** Develop for the HRH Strategic Plan 2011 at least two costed “what if” scenarios. Scenario A could show the implications for universal access and population health when the health workforce stays at about the same numbers. Scenario B could show the positive impact on health if the health workforce reached grew to reach the 52,000 target.

9. **Push for SADC collaboration in HW strengthening.** All countries in the SADC region face comparable HW problems. To oppose counterproductive migration and to make use of the advantages of scale and harmonization regional collaboration regarding HW strengthening is a promising way forward.

**BACKGROUND AND INTRODUCTION**

The global shortage of human resources for health (HRH) is a major obstacle to scaling up HIV services for universal access and achieving the health-related Millennium Development Goals. In recognition of this, the Global Health Workforce Alliance (GHWA) established the Task Force on HRH Implications of Universal Access to HIV Prevention, Treatment, Care and Support.

The main purposes of the Task Force are to:

- Develop evidence-based recommendations for a global strategic direction to guide the processes and approaches needed to meet country-level HRH requirements to achieve national targets for scaling up toward universal access
- Make strategic recommendations that will inform, contribute to, and influence political and policy discussion and action at global, regional, and country levels to address the HRH crisis, and assist countries in implementing those recommendations.

Six countries accepted GHWA’s invitation to participate in this initiative: Cote d’Ivoire, Ethiopia, Haiti, Mozambique, Thailand, and Zambia. Rapid situational analyses conducted in each country obtained up-to-date information on:

- Country-specific promising practices that promote scale-up toward universal access to HIV/AIDS services
- Gaps and challenges that relate to country goals/targets for HIV/AIDS
- Critical interventions that will address challenges and lead to effective scale-up
- Leadership action and partner support required to enable critical interventions.

Ministries of Health (MOH) and country offices of the World Health Organization (WHO) joined with GHWA international HRH specialists to carry out the work in the six countries.
Results of this fieldwork will form the content of a final report published by GHWA that will provide global strategic direction to guide decision-makers for how to address the HRH challenges to scale up HIV/AIDS services.

This report outlines the findings and key messages resulting from the rapid situational analysis in Zambia.

**Methodology for Rapid Situational Analysis**

The technical working group (TWG) developed the following common protocol followed in each country:

1. Specific, focused information at the country level will be collected on HIV epidemiology, HIV program indicators, actual strength of the health workforce, national HRH system including HRH plans and strategies, and progress on implementation of task-shifting policies.

2. Key informant interviews will focus on these four questions:
   a. What promising practices exist that have a positive impact on scale up?
   b. What are the HRH gaps/challenges that relate to country goals/targets for HIV services?
   c. What are the most critical interventions that if implemented would address these challenges and lead to effective scale-up?
   d. What leadership action and partner support are required to enable implementation of HRH scale up?

3. A small—four to five member—steering group will be formed from national HRH and HIV experts, representatives from the MOH and other appropriate ministries or stakeholder groups, selected key informants, and international partners. This group will meet with the field team to provide guidance and input into the rapid analysis and will continue to engage the government and partners to use the key messages and recommendations coming from this fieldwork to strengthen national responses to the HRH crisis that impedes universal access to HIV/AIDS services.

4. A final concise report of the rapid situational analysis for each country will be made available in the country and will be provided to the TWG. Two members of each country team will be invited to attend the final TWG meeting in Geneva on March 23 and 24, 2010, to present their findings.

**Findings**

**Promising Mechanisms and Practices**

Zambia has a population of 12.2 million with a population growth of 3.1% per year. The HIV/AIDS prevalence of 15.6% in adults aged 15–49 reported in 2001 has declined slightly to 14.3% in 2007. Zambia has one of the most rapid scale-up treatment programs on the
African continent. ART coverage rose from 0.6% to 51% in the period 2003-2008, and is 66% currently. The number of individuals receiving care has similarly increased.

According to the World Health Report of 2006, Zambia is one of the 57 countries with a critical shortage of health workers. Although an HRH information system is still under development, thus numbers are not sufficiently reliable, the size of the present health workforce (including the private sector) is estimated at around 33,000. Payroll data show that 27,524 of those work in the public sector. This falls quite short of the governmentally approved number of 51,411 established positions.

In many remote, rural areas that lack facilities and have poor living conditions, the health worker shortage is more acute. The disparity between these rural areas and staffing in more urban regions is great. In the rural North Western province, for example, 21 doctors and 265 nurses are on staff; for a similarly sized population in the Lusaka province, 188 doctors and 666 nurses are employed.

In 2006 the Zambia Health Workers Retention Scheme was piloted for doctors. It brought a doctor to every district and has been expanded to include nurses, midwives and clinical officers. Currently 825 health workers are enrolled, and the target is set at 1500.

A combination of factors made rapid scale up of ART possible:

- ART has changed the life perspective of patients while providing health workers with an effective tool to keep patients alive instead of effectively signaling impending death.
- The Government of Zambia decided in 2005 to make ART drugs and services freely available, and declared HIV/AIDS a National Disaster. A sector-wide approach was developed, and all sectors addressed HIV/AIDS in their strategies and policies.
- Cooperating partners provided substantial funding. GFATM and PEPFAR alone increased public per capita expenditure for health in 2008 from US $11 to approximately US $34.
- PEPFAR and GFATM rolled out directly financed vertical programs using direct earmarked funding with target-linked incentives. Implementation on the ground was handled by nongovernmental organizations (NGOs). Zambia has about 600 registered NGO’s.

Due to the rapid spread of ART, the clinical landscape and HRH implications of the HIV epidemic has changed. The complex nature of the services required during the rapid rise of the epidemic (1990-2005) caused an exploding demand for highly developed skills that were largely unavailable. At the same time, numbers of health workers declined for two reasons: 1) the World Bank and IMF were discouraging countries from spending scarce resources on employing additional workers, and 2) health workers themselves were affected by the epidemic. During this early phase the increasing and complex disease burden had to be dealt with by an ill prepared, diminishing, and weakened workforce. This resulted in long queues of patients, usually very ill, awaiting counseling, diagnosis and treatment.
Today’s picture is different. Since ART is rolling out rapidly in Zambia, patients may now still have to queue for renewal of their medication, but the wait for diagnosis and treatment has decreased significantly. A nurse at one facility said that she used to see four or five wheelbarrow patients per day, but now only sees this once a week or so.

Handling medication requires less sophisticated skills compared to treating acutely ill patients. Lower cadres, who can identify the patients for referral to a higher-level service provider, can also adequately deal with medicating patients. There is a formal HIV/AIDS workplace policy covering the treatment of the health workers themselves, and while this policy has not yet been widely implemented in the health facilities, it is an important HRH improvement. At this point in time, the world realizes it faces an HRH crisis, and this acknowledgement continues to slowly change the position of governments as they recognize the importance of a well-developed and trained health workforce.

Gaps and Challenges
Although ART is rolling out rather rapidly, prevention still lags; HIV incidence remains virtually unchanged. The adult annual incidence rate is currently 1.6 %, and has been close to that since 1996. The absolute number of newly infected adults, estimated in 2009 at 82,681, is expected to rise through population growth to over 100,000 in 2012. Infection continues to fuel the epidemic at a steady rate keeping estimated adult and maternal prevalence at around 15 %. This will rise if no effective prevention is implemented, and the HIV/AIDS burden will continue to overburden the limited health workforce.

The World Health Report of 2006 noted that Zambia is one of the countries in sub-Saharan Africa with a critical shortage of health workers, but this does not take into account the disease burden of each country, which contributes significantly to the shortage experienced on the ground. Although the clinical focus shifts from extremely ill patients to patients needing check-ups and medication, the number of patients on ART will go up with increased coverage while new cases will continue to come in at a similar rate.

Indeed, the burden on health workers may not diminish, and more staff will be needed. The country is faced with the challenge of increasing the number of health workers to reach in the public sector the government’s approved target of 51,411 in a situation where over 50% of the total health sector budget comes in from outside the country. The governmental budget for health has even decreased for 2010 due to the economic recession. The impacts could be dire. For example, staff from the mission hospital in Nangoma indicated that they would have to close the hospital in two years’ time, and that they might need to downgrade to health centre status because the target-linked top-up support they received from the HIV/AIDS funds could not be used to attract additional health workers or for handling operational costs.

Increasing HRH production would be an option, but again, the means to do so are lacking. Initial estimates of the Annual Training and Development Plan of 2008 showed a total investment of US $60M and approximately 360 additional teaching staff are required to scale up government schools to meet quality standards and increase the annual number of student intakes from the current 1,900 to 3,700 by 2012. As of yet, that kind of funding has not been made available, so little has changed. Even if those funds were made available...
soon, it would take many years (model calculations in the report indicate between 20-30 years) before the public sector target of 51,411 would be reached.

At many health facilities, health worker motivation is flagging and remains an issue. On the one hand, health workers providing ART feel rewarded by what they do because of the life-saving aspects and possibilities of the job. But the workload is high, compensation modest, living conditions often minimal, and supplies to function effectively are short. These factors drive the health workers to look around for a better life for themselves and their families. A health worker productivity study found that implementing the HIV/AIDS workplace policy and boosting motivation could lead to substantial gains in HRH productivity.

The Clinton Foundation in collaboration with the Ministry of Health (MOH) and the Public Services Division have taken steps to improve HRH information. However, those efforts based on payroll verification are limited to the public sector health workforce, and do not include the information needed for managing performance, productivity or in-service training. It is therefore difficult to adequately recruit, deploy, retain, and manage the performance of health workers.

Since 2006, the hiring and firing of all health workers in the country has been centralized under the purview of the Cabinet Office facilitated by the MOH. Communication lines are long, fuzzy, and bureaucratic, frustrating overburdened staff and causing such long delays in recruitment that posts are not filled in time and positions have to be returned to the Ministry of Finance and Cabinet Office.

Community health workers have contributed greatly in the rapid expansion of ARV delivery. However, a comprehensive community health policy and strategy does not exist. With increasing pressures and funding from outside in particular for HIV/AIDS control, CHWs were asked to perform new tasks with different training and incentive packages, which ultimately caused fragmentation as existing structures and policies became obsolete. The Community Health Workers Strategy report of June 2009 presented three strategic options to harmonize and structure the CHW contribution to health. Unfortunately, there has been no follow up because funding for implementation is lacking. However, given the limitations on the numbers of formal health workers, and the reality that more and more tasks for HIV/AIDS treatment are shifted downwards, the lack of an organizational structure to present a unified front will become significantly counterproductive.

Although HIV/AIDS is an unprecedented national disaster, it is not the only health problem the country faces. Life expectancy at birth is 48 years for men and 52 years for women\(^1\), infant mortality rate is 70, under-five mortality rate is 119, and the maternal mortality ratio is 591\(^2\). Although these rates show downward trends, they remain troublesome. The root causes are multifold and complex, and HIV/AIDS figures into this equation. Additionally, the numbers also signal serious deficiencies in prevention and care. With the target-linked

\(^1\) Source: Central Statistical Office, Zambia, 2002
\(^2\) Source: ZAMBIA, Demographic and Health Survey 2007, March 2009
Incentives for scaling up ART, the attention of health workers and CHW is drawn towards HIV/AIDS.

**Critical Interventions to Address Challenges**

A broad array of strategies and actions, both in and beyond the health sector, are necessary for prevention programs to work effectively. Interventions aimed at individual sexual behavior often don’t work, since many factors that impact the HIV epidemic are rooted in social and cultural norms that are not easily changed. Changing societal norms requires very clear, consistent, and credible leadership.

It is easy to note that we must increase the health workforce, but it is exponentially more difficult to implement plans that will effectively expand the workforce in resource-poor environments. Politicians and the public must understand the impact that a faltering healthcare workforce has on the well being of individual citizens and the entire country. Champions with strong political influence can help increase public awareness that “years of life” are diminished when the workforce is compromised. This can boost the political will to follow the Abuja Declaration stating that 15% of the national budget should go to health.

The role of the private sector, not for profit as well as for profit, is becoming increasingly important for addressing HRH issues, especially given the financial constraints of the public sector. Therefore the government should support and regulate this important part of the health sector, and should simultaneously work to reduce prevailing inequities in access to health services.

In the short-term, the capabilities of CHWs must be bolstered and improved with training. Shifting tasks to other cadres for diseases other than HIV/AIDS can enhance the overall healthcare workforce. When funds are available, the most direct way to increase the health workforce is through additional pre-service training. But it must be understood that there is a substantial time lag between the decision to increase this training and the time at which the newly trained workers are ready to enter the workforce. Often there is a shortage of teachers and trainers in pre-service institutions, which will need resolution before more students can be accommodated.

With such a shortage of health workers, it is key that each available worker remains fully productive. A number of relatively low cost interventions can help to motivate health workers and to increase productivity:

- Ensure that medical supplies (drugs, instruments, etc.) and basic infrastructure (housing, clean water, transportation, electricity) are made available. This avoids frustration and allows health workers to do their job.
- Empower managers in the health system by delegating the management responsibilities needed to get the job done. It motivates and stimulates innovation and creativity.
- Implement the HIV/AIDS workplace policy and provide free medical services for health workers and their core family. This has proven to be highly attractive and motivational.
Accurate and reliable information on the health workforce, such as composition, distribution, skills, etc., is necessary for effective decision-making and policy reform. Developing a human resources information system (HRIS) should be a high priority. The experiences of several countries in sub-Saharan Africa—including Uganda—should serve as examples of how to build an effective HRIS.

Developing a comprehensive HRIS often takes a substantial amount of time. Sometimes changes in personnel and other sustainability issues may even cause failure. It is therefore key to establish an effective HRIS by immediately starting the process of data collection on some key dynamics such as staff turnover, absorption of new graduates, etc.

While the contribution of CHW in rolling out ART, care, and support has been substantial, in many situations the CHW effort remains uncoordinated and fragmented. Building on the CHW National Strategy 2009, it is urgent that the country chooses and presents a unified strategy and develops and implements a clear and convincing policy.

While the government rightly declared HIV/AIDS a national disaster, the health of the Zambian people has been impacted by a number of other preventable conditions. Although it would be unwise to take the focus fully away from HIV/AIDS, the other devastating conditions require attention as well. Problems and solutions to other preventable conditions need to be addressed consistently in exchanges, strategies, policies and regulations.

**Leadership Action and Partner Support**

**Leadership Action**

Health sector leaders have the responsibility to mobilize leadership at the health facility, local, and national political levels. This active leadership is particularly important in the following four areas:

- **Implementing effective prevention methods.** HIV/AIDS leadership action in the recent past has been effective in the rapid scale up of ART. The same type of active leadership must now focus on prevention. As stated previously, effective prevention requires changes in societal norms and practices and is much more difficult.

- **Strengthening CHW programs.** Active leadership is also needed to bring clarity, structure, effectiveness and efficiency to CHW programs. Steps have been taken in the preparatory analytical process behind the Community Health Workers Strategy of 2009. Now key decisions must be made and the strategy must be implemented.

- **Envisioning how the MOH should and will work with collaborating partners.** All collaborating partners must be aligned, harmonized, and coordinated in order to attain the best possible results from available resources. The MOH should think through how it wants to lead the complex process of health sector control in Zambia. MOH leadership should agree on their vision for how the various partners can work in harmony in Zambia. This vision should include a concise strategy for how collaboration will be achieved, and should provide two or three intermediate targets for measuring progress. The MOH should establish a timeframe and should follow through to ensure that all partners understand and have committed to working within this vision and strategy.
• **Taking steps to address the heath care workforce issues.** The health workforce in Zambia is under extreme pressure. Health workers are overloaded, management problems have increased since the changes made in the system in 2006, and the economic recession and the MOH governance issues in 2009 have all aggravated the funding problems for HRH in particular. Leaders must agree on the best solutions for the problems that health workers face on the ground, and make timely decisions to prevent further health worker erosion. It may prove worthwhile to consider moving the retirement age in the public sector from 55 to 60 years of age.

• **Promoting regional collaboration in HW strengthening.** Countries in the SADC region face similar HW problems related to migration, training, procurement, and production. It would also be of interest to pursue protocol harmonization at the regional level.

**Partner Support**

The Zambian health system would not have been able to provide ART to so many citizens without the enormous supportive efforts and contributions by partners. Over time, this support may not be sustainable. The MOH alone must be able to manage and control the health system and address the HRH issues it faces. Partners should promote professional development of MOH staff whenever possible.

The health worker is the most costly and most important component of any health system. The MOH will want to manage the health workforce for optimal productivity in order to meet the needs of the people. Due to the complexities of the Zambian situation, collaborating partners exert a strong influence on the formal and informal (CHW) workforce, which often makes it difficult for the MOH to play its role. Therefore partners should accelerate the process of alignment and harmonization.

Although more than 50 % of the funding of the health sector comes from abroad, very little of this is used to fund more posts for health workers. Service delivery is very labor intensive. Consequently in any functional health system, the cost of health workers is between 60% and 80% of the budget. Large-scale efforts to control the HIV/AIDS epidemic do not make the system any less labor intensive. Partners should seriously consider taking more budgetary responsibility for strengthening the healthcare workforce that will be required to move toward universal access.

**KEY MESSAGES**

Zambia has a critical shortage of health workers, and more than half of its health sector budget comes from abroad. To date, the ART roll out has been impressive; coverage levels currently stand at 66%. However, the remaining 34% are largely hard-to-reach patients. Attaining full coverage will likely go slower and the health sector budget required to reach that goal will likely rise. Since HIV incidence is not declining, adult HIV prevalence, which has diminished gradually since mid 1990s to 14.3%, will now actually rise again with the increase in ART coverage. Without new medicines in the pipeline to cure HIV/AIDS, this epidemic will continue to burden the Zambian health system for a long time to come.
A fair number of assessments, analyses, and plans addressing health and the health workforce problems in Zambia have been undertaken. Though there are many options, there is no shortage of actions that can and should be taken, nor is there much uncertainty about what steps to take. Major challenges preventing implementation are the lack of funds for HRH, lack of coordination and governance issues.

This 10-day rapid situational analysis looks at the HRH implications of Universal Access upon HIV prevention, treatment, care and support. It is only possible to weigh those implications by looking at the health workforce as a whole, including other components of the health system needed to make effective service delivery possible. In making the recommendations below, we have tried to identify actions that could have a significant effect on the problem but can be implemented at relatively low cost. Many of these suggestions have been made by others and may be widely supported.

**Immediate Course of Action**

1. **Scale up leadership action for HIV prevention at all levels.** It is difficult to imagine how to sustain a health workforce in Zambia that can cope with a lasting high inflow of new cases and life-long treatment of a high percentage of the HIV patients, and simultaneously still hope to tackle a number other very serious disease burdens. The incidence of new infections must be brought down. Prevention of HIV/AIDS is complex and difficult, and requires that people must change their behavior. The key drivers of the epidemic have been clearly listed in a high-quality recent analysis of the situation\(^3\) that includes a set of recommendations. The National Strategy for the Prevention of HIV and STIs (April 2009) was based on this analysis.

   The recommendation to scale up leadership action at all levels is an important addition to the strategy because it is an effective and low cost component of promoting social change. The Zambian government does strongly support HIV/AIDS prevention, and various ministers do speak out about it in public and new interventions, rules and regulations address underlying issues. However, since sufficient health worker coverage for HIV/AIDS prevention remains difficult to attain, it may be worthwhile to consider an even more massive mobilization of leaders might take shape.

**Short- to Intermediate-Term Course of Action**

2. **Formulate and implement a CHW strategy, policy and structure.** CHWs play an important role in supporting and contributing to universal access. Unfortunately, an increase in HIV/AIDS activities within the community and the ever-increasing complexity of the large number of NGOs working on overlapping areas and projects has caused fragmentation, overlap of tasks, and even competition within the community. The Community Health Workers National Strategy of 2009 addressed the situation and offered a number of strategic options. However, little action has resulted due to a lack of funding.

   In view of the necessity to move more aggressively in prevention activities while ART coverage rises, it is unlikely that the existing, already overloaded regular health workforce

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\(^3\) ZAMBIA, HIV Prevention Response and Modes of Transmission Analysis, UNAIDS, World Bank, June 2009
can fully cope. Considering the budgetary limitations, the best way forward may well be to increase the use and effectiveness of the CHW cadre. Accordingly, a clear and effective CHW strategy, policy and structure are required. This requires training, no doubt, as is described in the National Strategy document. It should be seriously considered whether or not the Ethiopian example (a CHW cadre trained for 12 months) would work in Zambia equally well.

3. **Include in the CHW package, health services for all preventable deaths.** Regular health workers are overwhelmed by the numbers of HIV/AIDS clients reaching out for help. In addition to these demands, Zambian health workers care for a country whose people suffer from low life expectancy at birth, a high infant mortality rate, a high under-five mortality rate, and a high maternal mortality ratio. The CHW package should include a number of priority conditions that may be prevented, handled or supported at the community level.

4. **Fully implement the HIV/AIDS workplace policy, and free medical services for all HRH and family.** A healthy and motivated health workforce is critical when the workload is so high and the population so dependent on its productivity. An HIV/AIDS workplace policy has been developed but insufficiently implemented. This should be done at once, since it is estimated that approximately 40% of absenteeism is HIV/AIDS related.

   To increase the desirability of working in the health sector, we recommend interventions that motivate the existing health workforce, promote its health status, and reduce its tendency to move to more attractive places elsewhere. Health care for all medical services health workers and their closest family should be provided for free, as suggested in the HRH strategic plan of 2006.

5. **Develop the payroll based HRH database into a full HRH information system.** The Government of Zambia, through the MOH, is responsible for the health sector at large. The MOH manages not only the public sector, but also carries responsibility for the private not-for-profit and the private-for-profit sectors through rules, regulations, and standards, with the objective to promote and protect the health of the people. Accurate and reliable information on the health workforce as a whole (including all sectors) is necessary to allow effective and efficient controls.

   Based on a clear definition, the functions such a human resource information system (HRIS) should support, reliable data sources should be identified and linked to the system, which is currently being developed right by the Clinton Foundation. It would be worthwhile to see how this HRH information can be linked to the regional Observatory, which might benefit the Zambian Health Workforce, politically.

6. **Resolve HRH communication and management shortcomings of centralized system.** In 2006, hiring and firing of workers became centralized. This centralization has rendered communication between facilities and decision-makers dysfunctional. Hiring and firing is perhaps the most important activity that enables managers to take full responsibility and resolve issues at the facility level.

   In addition to the communication problems, the level of bureaucracy has also increased. It now can take months to a year to get a management decision needed to fill a vacancy. On one of our visits, we spoke to a nurse who, upon reaching retirement age, was suddenly taken off the payroll without the appropriate follow-up by payments from her
pension scheme. It took several years to correct this situation. This and other such mistakes and shortcomings impact the motivation and productivity of the health workforce.

In line with the 2002 National Decentralization Policy Towards Empowering the People, we recommend, the management function to hire and fire be delegated to district/facility managers.

Longer-Term Course of Action
7. **Promote development and implementation of an advocacy plan for HRH.** Any health system is by definition very labor intensive, and a strong health workforce is essential to prevent, care for, and promote the health of the people. This fact is, unfortunately, not deeply embedded in the minds of politicians, nor is it well understood by the public at large. Building awareness and recognition of the importance of the workforce does not take a lot of funding and could have a very positive impact. Preferably, the initiative and drive should arise from patient groups, and support can be provided through various channels. The HRH Action Framework (www.capacityproject.org/framework/) may provide a sound conceptual basis for shaping such an HRH advocacy plan. Programs already on radio and TV—such as “Your Health Matters”—may provide a productive platform.

8. **Develop with all partners ‘what if’ scenarios for a sustainable Health Workforce.** Ambition was high when the first HRH Strategic Plan for 2006-2010 was completed. Many activities, most of them labeled ‘immediate’ and a few ‘longer term’ were listed. Monitoring and evaluation activities were regarded as very important, and the plan clearly stated that a “strategy for communication, marketing the plan and attracting additional funds will be needed.” Unfortunately, thus far, many of the activities listed in the plan that required funding have not been implemented.

In 2011 the second HRH Strategic Plan is expected. The overall aim will probably not differ much from that of the HRH Strategic Plan 2006-2011, which reads, “To ensure an adequate and equitable distribution of appropriately skilled and motivated health workers providing quality services.” It goes without saying that this will not happen without sufficient resources. We recommend that the new HRH Strategic Plan contain at least two costed “what if” scenarios. Scenario A could show the implications on universal access and population health when the growth of HRH does not exceed the 3.1% growth of the population. This scenario would likely show that further erosion of the health workforce may be unavoidable.

Scenario B should show what could happen if the health workforce were able, sometime in the future when funding can be made available, to attain its governmentally approved size of 52,000. It may also be useful to portray intermediate scenarios as well.

Ambitious system consequences for scenario B should encourage efforts for full alignment and harmonization of the four funding mechanisms—basket funding, earmarked-on-budget funding, GBS/SBS, and direct earmarked funding—with government systems. This would imply that, over time, all funding mechanisms would contribute to the development of the workforce. During the preparation of this strategic plan, it would be useful and productive to engage governmental units with responsibility for budgetary management and control to respond to the fiduciary issues that arise.
This final key message is not easily implemented, but subscribing to a plan without the resources to make it happen will achieve little. Turning a blind eye to a health workforce that cannot cope with the increasing universal access demands in the years to come is no solution either.

9. **Push for SADC collaboration in HW strengthening.**
   All countries in the SADC region face comparable HW problems. For at least two reasons intense collaboration at that regional level is a promising way forward: 1) developing collaborative policies at that level can effectively oppose counterproductive migration, and 2) HW performance can be enhanced effectively through collaboration at that level by harmonizing protocols, resolving gaps and challenges in HRH training, procurement of medical supplies and production of medical supplies.
## Appendix A: List of Key Informants Interviewed

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<th>Name</th>
<th>Position</th>
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<tr>
<td>Dr. O. Babaniyi</td>
<td>Country Representative</td>
<td>WHO</td>
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<tr>
<td>Dr. Chama Chanda</td>
<td>Program Manager TB</td>
<td>NAC</td>
</tr>
<tr>
<td>Dr. B.U. Chirwa</td>
<td>Director General</td>
<td>NAC</td>
</tr>
<tr>
<td>Dr. Paul Kalinda</td>
<td>Health Advisor</td>
<td>EU</td>
</tr>
<tr>
<td>Dyness Kasungami</td>
<td>Human Development Advisor</td>
<td>DFID</td>
</tr>
<tr>
<td>Dr. M. Libetwa</td>
<td>Deputy Director Nursing Services</td>
<td>MOH</td>
</tr>
<tr>
<td>Priscilla Likwasi</td>
<td>Consultant</td>
<td>JICA</td>
</tr>
<tr>
<td></td>
<td>Program Manager M&amp;E</td>
<td>UNAIDS</td>
</tr>
<tr>
<td>Prof. Y.F. Mulla</td>
<td>Dean School of Medicine, Lusaka</td>
<td>Univers. Zambia</td>
</tr>
<tr>
<td></td>
<td>Chair Medical Council</td>
<td>ZMC</td>
</tr>
<tr>
<td>Grace Mumba-Tembo</td>
<td>HIV/STI Counseling &amp; Taskshifting</td>
<td>MOH</td>
</tr>
<tr>
<td>M. Mutetekam</td>
<td>Program Manager Treatment, Care, Support</td>
<td>NAC</td>
</tr>
<tr>
<td>Dr. A. Mwango</td>
<td>ARV Program Coordinator</td>
<td>MOH</td>
</tr>
<tr>
<td>Dr. J. Mwila</td>
<td>Director HRH and Administration</td>
<td>MOH</td>
</tr>
<tr>
<td>Dr. M. Nalubamba-Phin</td>
<td>Pediatric HIV</td>
<td>MOH</td>
</tr>
<tr>
<td>Mr Nteteka</td>
<td>Program Manager Treatment, Care &amp; Support</td>
<td>NAC</td>
</tr>
<tr>
<td>Laurie Rogers</td>
<td>1st Secretary Development</td>
<td>CIDA</td>
</tr>
<tr>
<td>Dr. M.R. Sunkutu</td>
<td>Senior Population, Health &amp; Nutrition Spec.</td>
<td>World Bank</td>
</tr>
<tr>
<td>Mercy Ullaya</td>
<td>Program Manager PMTCT</td>
<td>NAC</td>
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### Site Visits

<table>
<thead>
<tr>
<th>Name in Charge</th>
<th>Centre</th>
<th>Catchment Area</th>
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<tbody>
<tr>
<td>Staff in Charge</td>
<td>Kanyama Health Centre, Lusaka;</td>
<td>135,000</td>
</tr>
<tr>
<td>Staff in Charge</td>
<td>Kalingalinga Health Centre, Lusaka</td>
<td></td>
</tr>
<tr>
<td>Staff in Charge</td>
<td>Chawana Health Centre, Lusaka</td>
<td></td>
</tr>
<tr>
<td>Staff in Charge</td>
<td>Nangoma Mission Hospital, Nangoma</td>
<td></td>
</tr>
<tr>
<td>Staff in Charge</td>
<td>Mumbwa District Hospital, Mumbwa</td>
<td>214,000</td>
</tr>
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APPENDIX B: LIST OF STEERING COMMITTEE MEMBERS

<table>
<thead>
<tr>
<th>NAME</th>
<th>ORGANIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olusegun Babaniyi</td>
<td>WHO</td>
</tr>
<tr>
<td>Ben Chirwa</td>
<td>NAC</td>
</tr>
<tr>
<td>Michael Gbourn</td>
<td>UNAIDS</td>
</tr>
<tr>
<td>Paul Kalinda</td>
<td>EU</td>
</tr>
<tr>
<td>Dyness Kasungasy</td>
<td>DFID</td>
</tr>
<tr>
<td>Randy Kostad</td>
<td>USAID</td>
</tr>
<tr>
<td>Priscilla Likwasi</td>
<td>JICA</td>
</tr>
<tr>
<td>Jere Mwila</td>
<td>MOH</td>
</tr>
<tr>
<td>Laurie Rogers</td>
<td>CIDA</td>
</tr>
<tr>
<td>Rosemary Sunkutu</td>
<td>World Bank</td>
</tr>
</tbody>
</table>
APPENDIX C: BACKGROUND DATA COLLECTED

1. HIV epidemiology
   - HIV prevalence and trends:
     o 15.6% (2001-2)
     o 14.3% (2007) Urban 19.7%, Rural 10.3%
   - Number of PLWHA: 1.1million
   - Number of HIV+ pregnant women per year: 65,072 (2008)
   - HIV prevalence in TB patients: 50-70%
     o 97,494 Adults-2007
     o 8,283 Children Paediatric HIV Deaths
     o 23,554 WOMEN
     o 17,693 MEN (AIDS-2009)
     o TB/HIV Deaths all cases 3, 672/49471 (7%)
   - HIV prevalence in most-at-risk populations: CSW, IDU, MSM, other CSW-7%, IDU-Unknown, MSM-33% (Based on one study)
   - HIV prevalence in health workers, mortality (Unknown)

2. HIV program indicators
   - Universal/National targets for care/ART (adult and paediatrics), counseling and testing, PMTCT, TB/HIV, male circumcision, OVC, MARPS (CSW, IDU, MSM, other): 80%
   - Number (%) provided counseling and testing last year: (511,266) 2008, 15.4% DHS 2007
   - Provider-initiated counseling and testing policy, guidelines, status of implementation: policy and guidelines are in place. Currently implemented in private sector and tertiary provincial hospitals
   - Percent who understand modes of HIV transmission: >90%
   - Percent who used condoms with casual partner: 21% (2001-20022) to 37% (2007)
   - Number (%) of pregnant women tested, HIV+ women/infant pairs who receive ARV drugs: 364, 331
   - Number (%) of TB patients tested for HIV: 30,654/47,333 (64%) 2008
- Number of HIV patient in care/ART per health worker (doctor, nurse, health officer, etc.) in representative health facilities and trend;
- Resources available (host government, PEPFAR, GF, other) for ARV drugs: $50,784,104, 36% (2005); $109,630,004, 52% (2006)
- Resources available (host government, PEPFAR, GFTAM, other) for HRH (in-service training, preservice, salaries, contracts, incentives, other): data not collected
- Impact of HIV scale-up on reduced hospitalizations, mortality: marked impact with reduced hospital bed occupancy, number of admissions, duration of hospital stay and mortality: data not collected

3a. Actual strength of the health workforce: 27,524
- Number of workers delivering HIV services (planned and actual):
  - 51,414 (planned), 27,524 (actual)
  - Geographic distribution; ratio of patients to providers (snapshot): doctors: 0.07, Nurses: 0.52, Midwives 0.20 Overall 1.04 Staff/Population Ratio-2008; different cadres; information about CHWs. From various surveys, no clear information is available on the number of active CHWs. The facility-based survey (January 2009-90% completeness, 65/72 districts) provides the number of CHWs active in the various programs.
- General/environmental health CHWs were estimated to be 5,334 (100%=5,927)
- Maternal health/TBAs were estimated to be 7,414 (100%=8,238)
- The highest number of CHWs were found to be active in HIV programs (although not exclusively) 8,868 (100%=9,853)

Skills, competencies documented to provide HIV services: yes, describe
- Trained to provide counseling and testing; management of HIV/AIDS including diagnosis, treatment, and follow up of patients among others OIs, STIs, TB/HIV coinfections; ART management; PMTCT; monitoring of HIV patient including data management and adherence counseling.
- Vacancy rates by cadre; distribution, especially to remote and rural areas; perceived retention issues ... The vacancy rate by cadre is difficult to tabulate now with the Restructuring exercise still on-going.

3b. National HRH system, including HRH plans and strategy
- Costed-plan developed and disseminated: yes, document available since December 2005. Implementation is on course especially for activities which require less financial resources.
- HRH plan takes universal access into consideration: yes. In the HRH plan there are plans to increase training output through the expansion of available training institutions and establishment of new training facilities. Furthermore, there is a rural retention scheme in place meant to improve the deployment and retention of health workers, specific HRH requirements for HIV scale-up. Increased number of trained
and equitably distributed staff and improved productivity and performance of health workers.

- HRM units exist in the MOH, staffed by people who are professionally qualified in the discipline of HRM; strategically aligned within MOH; able to negotiate effectively with the Ministry of Finance, PSC, Ministry of Education, etc: yes, the newly Restructured Ministry of Health is staffed with professionally qualified staff, who are able to effectively negotiate and manage various HR issues.

- Specific plans to scale-up HR cadres; describe current status of plans, especially focusing on degree of implementation and current actions
  - Opening up of new training institutions to increase the number of trained staff
  - Increasing the intakes of the existing TIs
  - Opening Direct entry training programs, i.e., for midwives
  - Revising training curriculums to include HIV programs
  - Extension of the rural retention scheme to include other cadres like clinical officers and nurses

- Link between service delivery needs and production including HRH preservice training and trends for HIV (and which cadre); plans and reality: the above highlighted are meant to directly address service delivery needs and issues related to HIV trends

- National budget for HRH preservice training and trends: data not collected

- Specific steps taken to increase capacity for preservice training by cadre (doctors, nurses, laboratory, pharmacy, other): approval of the new expanded establishment by the government which includes medical, training, and support staff; encouraging private sector participation in preservice training of health cadres.

- Specific approaches for retention and productivity, workplace safety, improved morale by providing services (ART), including financial and non-financial incentives and work climate improvement interventions; any evidence such strategies are working or not-working; support from partners, e.g. CIDRZ in providing supplementary payment for staff who work overtime as well as paying additional staff

- Bonding post-training present: yes, staff who undertake training are bonded to serve the government upon completion of their training, for the period equivalent to the duration of the training

- Human resource information system: yes, currently HRH indicators are collected through HMIS, however, a specific HRH information system is being developed with the support of the Clinton Foundation

- HIV/AIDS policy/strategy for health workers, access to prevention, care, and ART: yes, the policy and strategy are in place and due to be fully implemented. However, components of the policy like PEP and ART provision are already in place.

4. Task-shifting
- National policy/guidelines in place: no, however a draft health worker strategy is in place, yet to be approved and operationalized
- Training curricula and materials by program area and worker available: yes, training curricula and materials are available for training, e.g., nurse prescribers and lay counselors
- Supportive supervision in place: yes, there is support supervision and mentorship for clinical officers and nurses; however, there is no supervision for lower cadres such as lay counselors
- Types of cadres included, government and nongovernment, health and non-health care providers: clinical officers, nurses, midwives, and lay people
- Mapping of task-shifting at facility level: currently task-shifting at every facility in the country however mapping is difficult because it is fragmented

### Tasks Permitted By Cadre

<table>
<thead>
<tr>
<th>Task</th>
<th>Task-shifting allowed (yes/no)</th>
<th>Cadres included (e.g., nurse, health officer, lay counselor, community health worker, etc.)</th>
<th>Existing number of cadres trained to perform the task</th>
<th>Number needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prevention</strong></td>
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<tr>
<td>Counsels pregnant women</td>
<td>Yes</td>
<td>Clinical officer, nurse, lay counselor</td>
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<tr>
<td>Performs rapid HIV testing for pregnant women</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>Prescribes ARVs</td>
<td>Yes</td>
<td>Clinical Officer, Trained Nurse</td>
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<td></td>
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<tr>
<td>Dispense ARVs</td>
<td>Yes</td>
<td>As above, Pharm, Dispenser</td>
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<tr>
<td>Provide education and support (name target groups)</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Provide targeted education and support (name target groups)</td>
<td>Yes</td>
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<tr>
<td><strong>Care/Treatment</strong></td>
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<tr>
<td>Performs rapid HIV testing</td>
<td>Yes</td>
<td>C.O., nurse, lay counselor</td>
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<tr>
<td>Provides PICT</td>
<td>Yes</td>
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<tr>
<td>Provides pre/post test counseling</td>
<td>Yes</td>
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<tr>
<td>Collects specimen for DBS</td>
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<tr>
<td>Orders CD4 test</td>
<td>Yes</td>
<td>M.O, C.O</td>
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<tr>
<td>Performs CD4 test</td>
<td>No</td>
<td>Laboratory technologist</td>
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<tr>
<td>Orders other lab tests for bioclinical</td>
<td>Yes</td>
<td>M.O, C.O</td>
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<tr>
<td>Task</td>
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<td>Cadres included (e.g., nurse, health officer, lay counselor, community health worker, etc.)</td>
<td>Existing number of cadres trained to perform the task</td>
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<tr>
<td>monitoring</td>
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<tr>
<td>Performs lab tests</td>
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<td>Laboratory technologist</td>
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<td>Prescribes cotrimoxazole</td>
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<td>Prescribes isoniazid</td>
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<tr>
<td>Prescribes STI drugs</td>
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<tr>
<td>Prescribes other OI drugs</td>
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<tr>
<td>Initiates ART (adult/peds)</td>
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<td>Prescribes ART refills</td>
<td>Yes</td>
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<tr>
<td>Changes ART regimens</td>
<td>Yes</td>
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<tr>
<td>Initiates TB treatment</td>
<td>Yes</td>
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<tr>
<td>Prescribes therapeutic nutrition</td>
<td>Yes</td>
<td>As above</td>
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<tr>
<td>Performs male circumcision (that is prevention)</td>
<td>Yes</td>
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<td>Refers to specialist for...</td>
<td>Yes</td>
<td>As above, nurse, lay counselor</td>
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<td>Refers to support groups</td>
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<td>As above</td>
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<td>Refers for nutritional support</td>
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<td>Pharmacy technician, nurse</td>
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<td>Dispense ARV drugs</td>
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<tr>
<td>Dispense CTX, OI drugs</td>
<td>Yes</td>
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</table>

5. Intended consequences (specific examples)

- Evidence that GHI and national AIDS responses have improved HRH
- Increased number
- Better distribution
- Increase retention
- Evidence that HRH improvements have improved coverage towards Universal Access
- Evidence that HRH improvements have benefited other aspects of health system delivery – MCH, FP/RH, chronic disease management, etc.
- How have TB, HIV, and malaria resources worked synergistically to advance HRH?

No data collected on above question

6. **Unintended consequences (specific examples)**
   - Evidence that GHI have diverted HRH from other priorities
   - Evidence that GHI have created HIV exceptionalism, e.g. different salaries, free-of-charge services as opposed to user fees, e.g. for MCH services
   - How have TB, HIV, and malaria resources worked in competition with or against one another?

No data collected on above question

7. **Preservice training:** No data collected

8. **In-service training: higher education and labor market policies:** No data collected
APPENDIX D: KEY DOCUMENTS REVIEWED


ZAMBIA, HIV Prevention Response and Modes of Transmission Analysis UNAIDS, World Bank, June 2009.


ZAMBIA, Taking forward action on Human Resources for Health with DFID/OGAC and other partners, March 2009, In the Press.


Workforce Audit. Results of Payroll Verification Exercise Ministry of Health, Republic of Zambia, November 2009.