

Tackling Health Workforce Shortages During Antiretroviral Treatment Scale-up—Experiences From Ethiopia and Malawi

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Abstract: In many sub-Saharan countries, the health workforce shortage has been a major constraint in the scale-up of antiretroviral treatment. This human resource crisis has led to profound adjustments of the antiretroviral treatment care delivery model in several countries in the region. It also inspired some governments to take swift measures to substantially increase human resources capacity. This article draws on the experience of Malawi and Ethiopia, which have been able to successfully increase their health workforce over a relatively short period, allowing scaling up of antiretroviral treatment. Additional international HIV funding and strong political commitment made possible this exceptional response. Both countries implemented a combination of measures to tackle the human resource crisis: the delegation of medical and administrative tasks to lower health cadres and lay workers, the introduction of new health cadres, the reinforcement of preservice training, and improving health staff remuneration. In particular, the involvement of community and lay health workers in HIV-related service delivery substantially increased the health workforce. The involvement of lay cadres has important long-term implications. To sustain results, continued political commitment, ongoing training and supervision to maintain quality of care, and strategies to avoid attrition among lay cadres will be essential. Although task shifting and involvement of lay cadres allowed bridging of the human resource gap in a short time, other strategies have to be considered simultaneously, and all interventions must be maintained over a longer period to yield results.

Key Words: human resources, task shifting, ART, community health workers, Malawi, Ethiopia

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INTRODUCTION

Despite significantly increased access to antiretroviral treatment (ART) over the past years, the gap is still wide between

patients in need of ART and those actually receiving it in most sub-Saharan countries.¹ Soon after ART scale-up began, it became clear that human resource shortages would be one of the major bottlenecks in many countries in the region.² At the end of 2006, World Health Organization (WHO) estimated that 57 countries worldwide, more than half in Africa, were facing a critical human resource shortage.³ The national and international brain drain of trained health staff and low salaries, arduous working conditions, and a high disease burden among health staff themselves all contributed to the crisis.

To allow the scale-up of HIV care and treatment services, several countries decided to adapt and simplify ART care delivery models based on a so-called “public health approach,” focusing on standardization and decentralization of care.⁴ Some countries reemployed retired health staff to overcome the human resource shortage, whereas others boosted preservice training of nurses and medical doctors. In many countries, medical and administrative tasks were redistributed among existing and newly created health cadres, with involvement of lower cadres in several HIV-related activities, including HIV testing and counseling, adherence support, treatment literacy, and defaulter tracing.³

This article describes the mix of solutions introduced in Malawi and Ethiopia to overcome the human resource shortage in the short term and highlights the opportunities and challenges of their respective approaches.

COUNTRY EXPERIENCES

For many years, Malawi and Ethiopia have faced a critical shortage of human resources for health. Due to the low number of medical doctors available, health sectors have traditionally relied heavily on midlevel health workers for clinical care—clinical officers, health officers, and medical assistants. The HIV epidemic substantially increased the workload, and many health workers were themselves affected by HIV/AIDS.⁵ In both countries, the vacancy rates in critical health care positions remain very high; many professionals have left the country.^{6,7} To reach universal ART coverage in Ethiopia with a doctor-based care model, the number of doctors would need to increase by a factor of 2.5.⁸

To enable ART scale-up despite the shortage, both Malawi and Ethiopia introduced a public health approach,^{9,10} implementing simplified, standardized treatment protocols and

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decentralization of ART services to the primary health care level (Table 1). With additional international donor funding available, governments and policy makers introduced several immediate and long-term measures to address health worker shortages, including task shifting and introduction of new cadres; increasing the capacity of preservice training; and higher health staff remuneration.

Task Shifting and Introduction of New Cadres

At first, due to the increased workload of midlevel clinicians, several clinical tasks were delegated to nurses, including ART initiation. Later, community health workers and lay providers were involved in specific HIV-related but nonclinical tasks—adherence counseling, defaulter tracing, and drug dispensing. Some of these cadres were already in place; others were newly created (Table 2).

In Malawi, health surveillance assistants (HSAs) are attached to the Community Primary Health Care service delivery and form a close network in the community. During the HIV epidemic, they have been assigned several additional HIV-related tasks, including HIV prevention, HIV testing and counseling, defaulter tracing, and adherence support.¹⁵ However, optimal HSA task description remains controversial and widely discussed.

In both countries, new health cadres were created to take up HIV-related tasks previously performed by higher professional cadres. Some of these new cadres are involved in general health care services, where others provide care only to people living with HIV/AIDS. In some districts in Malawi, patient support attendants (PSAs), or “expert patients,” were introduced, primarily assisting community HSAs with adherence counseling and defaulter tracing. Although recognized by the Ministry of Health, PSAs are not an established health cadre. Most PSAs receive incentives from nongovernmental organizations. In Ethiopia, health extension workers (HEWs) are primarily involved in general preventive care at health post and community level in rural areas. Due to the existing work burden and the lower HIV prevalence in rural areas, current HEWs involvement in ART delivery remains limited.¹⁶ Instead, other new lay cadres—among them community counselors, peer educators, and expert patients—are linked to a health facility and charged with specific HIV-related activities, such as patient education, adherence support, and defaulter tracking. Most lay workers are contracted by nongovernmental organizations or work on a voluntary basis.¹⁷

TABLE 1. HIV-Related Indicators, Malawi and Ethiopia, 2004–2009

	Malawi		Ethiopia	
	2004 ¹¹	2009 ¹²	2004 ¹³	2009 ¹⁴
HIV prevalence (%)	14.4	12	4.6	2.4
Total PLWHA estimated	900,000	1,100,000	1,500,000	1,200,000
ART need—CD4 < 200	170,000	305,805	242,453	336,160
ART provided	13,183	271,105	9000	241,759
Active and alive on ART	10,761	198,864	3880	176,632
% ART coverage—CD4 < 200	6	65	1.6	52.5

Preservice Training

The governments of both Malawi and Ethiopia boosted the preservice training of professional health cadres by providing student incentives and subsidizing school fees. In Ethiopia, the number of medical schools also increased considerably. In Malawi, between 2004 and 2009, the number of medical doctor and nurse graduates increased by 72% and 22%, respectively.⁶ Although expanding preservice doctor and nurse training capacity is no doubt essential, this strategy takes several years to yield tangible results. Meanwhile, training of community health workers and lay cadres is urgently needed to bridge the gap.

In Ethiopia, as of 2009, >30,000 new HEWs have been employed, together with >3000 additional health officers, who supervise the HEWs and provide specialist care for those needing referral. More than 5500 community lay counselors and peer educators have been trained in HIV adherence support and patient education.^{18,19} In Malawi, the number of trained HSAs increased from 4000 to >10,000 between 2004 and 2009.⁶

In both countries, regular support and supervision, although anticipated in the country's guidelines, is often not realized because of insufficient staff²⁰ or logistical constraints such as lack of communication and/or transportation.⁶

Remuneration

In Malawi, additional international donor funding allowed an average increase of salaries by 52% for all civil servants in the health sector, delinked from civil servants in other government sectors. In Ethiopia, the government introduced an incentive strategy providing financial and nonfinancial support, depending on the location of the health facility to which the health worker is appointed.²¹ In both countries, although some noncivil servants involved in ART care work as volunteers, others receive regular remunerations funded by international donors.

EVOLUTION OF HEALTH WORKFORCE CAPACITY

In Malawi and Ethiopia, the total number of health workers per 100,000 inhabitants increased significantly over a 5-year period, by 65% and 302%, respectively. The increase in the total number of health workers was mainly possible because of the involvement of community health and lay workers in ART care. Despite the accelerated preservice training of professional health cadres, both countries still counted far fewer doctors per 100,000 people than the 20 per 100,000 population advised by WHO standards and far fewer than the average 11 per 100,000 population in other African countries in 2009²² (Table 3).

THE WAY FORWARD

In Malawi and Ethiopia, a mix of measures has been successful in overcoming human resource shortage constraints within HIV programs over a relatively short period.²³ This exceptional response to the human resources crisis was made possible partly through additional HIV funds. The expansion

TABLE 2. Health Cadres Involved in ART Care, Malawi and Ethiopia

Cadre	Training	Tasks	Base	New Cadre	Civil Servant
Ethiopia					
Health officers	3 years	PHC and ART care	Health facility	No	Yes
Health extension workers	1 year	Preventive health (16 health packages), including hygiene and environmental sanitation, family health services, disease prevention and control, and health education and communication. Limited involvement in HIV/AIDS	Community	No	Yes
Community counselors	6 weeks	HIV counseling and testing	Community	Yes	No
HIV-infected peer educators	1 week	HIV awareness raising in communities	Health facility	Yes	No
Expert patients	2 weeks	Adherence counseling	Health facility	Yes	No
Malawi					
Clinical officers	3 years	PHC and ART care	Health facility	Yes	Yes
HSAs	6 weeks	Preventive health: disease surveillance, vaccination of under-5s, growth monitoring, supervision of traditional birth attendants, sanitation and water treatment, health and nutrition advice, family planning, and follow-up of tuberculosis patients. HIV-related tasks: HIV prevention, HIV testing and counseling, defaulter tracing, and adherence support	Health facility and/or community	Yes	Yes
PSAs	5 days	ART adherence support and defaulter tracing	Community	Yes	No

of the health workforce and its positive effect on ART delivery has been acknowledged by most actors, including policy makers, donors, health workers, and patients. Although not all human resource problems have been solved during the past 5 years, the lessons learned in both countries can be useful for other countries.

The deliberate choice of community health workers and lay cadres has important implications for the long term. Health workforce policies need to be adapted, and lower cadres of lay workers need to be formally recognized.²⁴ A key issue is whether these lay workers will be an official part of the current health system in general and, in particular, whether they will be part of the regular staff of health facilities and/or community outreach teams. The answer to these questions will determine remuneration and possible career paths. Obviously, lay worker's official role will also allow for rational planning. Political commitment and multisectoral involvement to address the issue with a long-term perspective are essential.²⁵

Support and supervision are key to maintaining quality of care; regular assessment of the performance of these lay workers and their contributions to patient and population

outcomes is required.²⁶ Professional preservice training should be further encouraged and incentivized as a good balance between professionals and lay workers seems crucial to maintaining quality of care.

Attrition among lay workers remains a sad reality.²⁷ In Ethiopia, 9 of every 20 community health workers left their jobs during the past 4 years.²⁸ Strategies to reduce high health care worker turnover and attrition need to be put in place: career planning for lower health cadres, a positive working environment, and good communication and transport systems between the different levels of care, including a good referral system, and good support networks. Resources for regular retraining and recruitment will also be needed.²⁹⁻³¹

In the coming years, HIV programs' human resource needs will further increase: The number of patients eligible for ART is expected to double, partly because of the implementation of new WHO ART guidelines.³² If further scale-up is to be enabled without overwhelming the entire health system, ART care delivery models that are even more innovative will have to be considered, simplifying the follow-up and decentralization of the care of stable patients closer to or into the community. These approaches will probably require the

TABLE 3. Number of Health Workers per 100,000 Population, Malawi and Ethiopia, 2004–2009

Human Resources for Health per 100,000 Population	Malawi ⁶			Ethiopia ¹⁴		
	2004	2009	% Increase	2004	2009	% Increase
Total number of health workers*	87	144	65	30.7	92.7	302
Number of medical doctors	1.1	2	82	2.8	2.8	0
Number of nurses	25	37	48	17.8	20.4	15
Lay health worker, including HSAs and health extension workers	41	80	95	4.2	41	976

*The difference to meet the total number of health workers is made up from other health worker cadres—nurse assistants, clinical officers, medical officers, laboratory technicians, and so on—which are not specified in the table above.

mobilization of extra workforce, including lower cadres and expert patients.

Further documentation of experiences in different countries is needed. In particular, defining a “fair” workload and a suitable range of tasks for lower health cadres is important, because quality of care can easily be jeopardized if these cadres are overburdened. Which one is better: a polyvalent lay worker or a lay worker specialized in one health problem? Or would it be better to delegate a limited number of tasks to community health workers who perform their duties under close supervision of a community nurse?

CONCLUSIONS

In Malawi and Ethiopia, the HIV/AIDS crisis highlighted the longstanding health workforce crisis. A swift response was needed and implemented. A renewed role for the community in prevention and care delivery tasks and the creation of new health cadres were among the measures taken to rapidly scale-up ART care.

The measures that allowed bridging the gap in a short time—task shifting and involvement of community health and lay workers—can provide only a partial solution to the human resource shortage. Complementary strategies should be considered simultaneously to overcome the human resource crisis for the long term. Strong political commitment is vital to the success of these novel human resource policies.

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