Commentary

Designing a Resilient National Health System in Ethiopia: The Role of Leadership

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CONTENTS
What is a Resilient Health System?
The Ethiopian Experience
Successes
Remaining Challenges
Reasons for Success
References

The global community has recently agreed on a number of health targets in line with the United Nations’ Sustainable Development Goals adopted in 2015 to be achieved by 2030.1 Among the most important of these are achieving universal health coverage, ending preventable child and maternal deaths, ending the HIV/AIDS epidemic, and controlling the emergence of chronic diseases, most notably cardiovascular diseases, diabetes, and mental illness.

The recent Ebola outbreak affected Guinea, Liberia, and Sierra Leone in many aspects. Not only did thousands of people, including hundreds of health workers, lose their lives but the economies of the region took a nosedive and the costs to the rest of the world for controlling this epidemic were astronomical. The devastation of the Ebola epidemic exposed the lack of resilience of the health systems in these countries and the need for strong leadership. It also highlighted the potential for similar crises from infectious disease outbreaks in other settings where systems are weak. Security from global health threats is now reaching a level of importance on par with security from military threats throughout the world.

Hence, resilient health systems and effective leadership are needed now more than ever to meet the challenges that lie ahead over the next decades. For Ethiopia, this will require continuing to improve our primary health care system by: expanding services provided by health extension workers (HEWs) at the community level; establishing higher-trained personnel at primary health centers; and improving access to basic and essential surgical services at first-level referral hospitals.

WHAT IS A RESILIENT HEALTH SYSTEM?

What is a resilient health system and how can effective leadership contribute to establishing one if it does not already exist? Resilient health systems are systems that can detect and control infectious disease outbreaks quickly, continue to function effectively, and prevent shocks to the health system from impacting other sectors of society.2 But they are also systems that are themselves healthy. This means they are...
health systems that are balanced in their emphases on (1) medical care provided at hospitals and at primary health centers, (2) disease control programs, and (3) community-based primary health care services readily accessible to all. They are also balanced in terms of the contributions that communities, service providers, and professional associations make to defining priorities and making health system improvements. Accountability to communities and accountability to professional standards of care based on current evidence are both essential for resilient health systems. Too often, health systems have compromised accountability in favor of responding to the narrow interests of professional associations of doctors, nurses, and other professional groups. Resilient health systems are accountable to all of their stakeholders—government, communities, patients, service providers, as well as professional associations.

Beginning in 2003, Ethiopia worked hard to strike the right balance by giving priority to expanding services at the community level. This has meant the creation of a new cadre of 38,000 HEWs who receive one year of training. These HEWs work in the communities they serve and at health posts. We worked in collaboration with communities to construct 20,000 health posts, where HEWs can treat acute illnesses as well as provide family planning and immunization services. At the same time, we have greatly expanded the number of our medical and nursing schools and the production of physicians and nurses to work at higher-level facilities.

Resilient health systems are forward thinking, focused on systematic approaches to identifying problems and implementing solutions that are results oriented and that will enhance the capacity of the health system to be more effective. Resilient health systems are able to achieve ever-increasing value for money and to obtain increasing value from data about health systems functioning. By expanding our community-based primary health care system, we have been able to both expand the capacity of the health system to improve the health of the population at modest cost and, at the same time, expand the capacity of the health system for surveillance and for detecting unmet health needs.

Of course, few health systems have fully achieved these goals. Most national health systems in low- and middle-income countries are woefully lacking in resilience and “healthiness” for various reasons, including lack of resources, inability to steer resources to priority needs, and lack of strong surveillance and information systems. In most high-income countries, health systems still struggle to reach underserved populations, reduce health disparities, and adequately address prevention and health promotion.

Strengthening health system resilience goes beyond supporting the health system through provision of resources or programs that fit within the traditional building blocks of the system. It also requires the establishment of flexible and adaptive structures, policies, regulations, and relationships that can anticipate and handle unpredictable events in both the short and long term. These cross-cutting, system-wide components require health system leaders to have the skills necessary to work with all stakeholders so that they can take ownership of the system. The Ethiopian experience demonstrates the impact of leadership because positive changes have been possible through political will at the highest levels of government together with a focus on building the system from the ground up through primary care by involving community-level stakeholders.

THE ETHIOPIAN EXPERIENCE

Ethiopia’s tumultuous history of conflict, war, and famine over the past half century has, among other things, undermined many of the attempts of past governments to improve the health of the Ethiopian population. There has been a struggle to achieve equity in the health system and shift budgetary priority away from urban hospitals and curative medical care provided by doctors to provision of locally available essential health care services provided by appropriately trained local health staff.

In response to the failure of previous efforts to adequately address the health needs of our rural population, the government of Ethiopia launched two programs in 2003: (1) the Accelerated Expansion of Primary Health Care Coverage and (2) the Health Extension Program. Multiple stakeholders, including the federal ministries of Health, Education, Labor, Finance, and Capacity Building, were all engaged through coordination by the prime minister’s office, which provided strong political leadership to the effort.

These two programs were designed to expand coverage of essential services, particularly in rural areas. Two cadres of locally available human resources were developed: HEWs, who complete one year of training and are paid as full-time regular government employees; and Health Development Army volunteers (HDAVs), who are women selected for their high level of performance on healthy behaviors.

The HEWs provide preventive and basic curative care in the health post and spend one half of their time in the community carrying out promotional work. Since the beginning of the Health Extension Program, the primary goal of the program was training and graduation of model households. Model households are families that have adopted healthy
beaviors such as having children vaccinated, constructing and utilizing toilets, and sleeping under mosquito nets. There is now a critical mass of nearly three million model households that have graduated over the years by fulfilling the model family criteria.

The Health Development Army (HDA) is a massive program aimed at participatory engagement of women’s groups to disseminate health information and facilitate uptake of critical health services. This solidarity movement consists of three million HDAVs who are from model families and complement the work of HEWs in each village and augment the engagement and leadership of community members in improving their own health. The HDA mobilizes one woman from every five households and these women are trained by HEWs to promote healthy behaviors as well as to strengthen and sustain community engagement and ownership. There are approximately 75 HDAVs for every HEW. However, as their name implies, their focus is not only on health but on other aspects of women’s development as part of a broader national social and political agenda to which they are closely connected. The activities of the HDAVs are guided and regularly monitored by the minister of health and the prime minister’s office.

Two HEWs are based at a village health post that serves 5,000 people, and there is one HDAV who serves every five to ten families. HEWs spend approximately one half of their time in the health post and the remaining time in the communities for which they are responsible. HEWs alternate their time in the community, leaving someone to daily attend to patients at the health post.

Every family is registered. The health information system at the health post is based on a number assigned to each family in a census. Family health folders contain information about each family member. HDAVs support the work of HEWs, promote appropriate utilization of health services and appropriate household behaviors, and support national health campaigns. One health center serves 25,000 people and supports the work of HEWs. Each health center is networked with five surrounding health posts and is responsible for supporting and monitoring the activities of the HEWs and HDAVs working there. This network of HDAVs, HEWs, five health posts, and a health center forms a primary health care unit.

These efforts have led to a stronger health system that is also more resilient because of the progress we have made toward achieving universal health coverage, ending preventable child and maternal deaths, and ending the HIV/AIDS epidemic, as described below. It is also a more resilient health system because it is a healthier health system in the sense that it is more balanced in its emphases on (1) medical care provided at hospitals and primary health centers, (2) disease control programs, and (3) community-based primary health care services readily accessible to all. It is also more balanced in terms of the contributions that communities, service providers, and professional associations make to defining priorities and implementing health system improvements. Finally, it is a healthier and therefore more resilient health system because of its engagement with communities, its accountability to communities, along with its accountability to professional standards of care.

**SUCCESSES**

Ethiopia is proud of the progress that has been made since 2003 in putting the national health system on the right track to becoming a more resilient health system. As the second-largest country in Africa with a population approaching 100 million people, we have, over this short period of time, implemented a well-developed and well-functioning cadre community health worker program of HEWs and HDAVs. In addition, we have made major efforts to implement integrated community case management (iCCM) of childhood illness (for pneumonia, diarrhea, and malaria) provided by HEWs, with a high level of implementation strength as determined by quality of care provided, level of supervision, and supply of needed medicines.6

The country has also invested heavily in strengthening its health system: there have been improvements in human resource development, the health information system, supply chain management, infrastructure, health care financing, and governance of the health system. All of these are important for improving access to and quality of health services. Moreover, strong disease control programs for HIV/AIDS, tuberculosis, and malaria as well as child survival have emerged.

Now, 99% of our population has access to primary health care.5,7 Ethiopia is a leader in Africa in reducing under-five and maternal mortality, one of the few countries in Africa that achieved the Millennium Development Goals (MDGs) for child and maternal health. The national under-five mortality rate declined from 123 per 1,000 live births in 2005 to 59 in 2014, making it one of only 11 of 44 countries in sub-Saharan Africa to have achieved MDG 4 (for child health).8 Ethiopia is also one of only four African countries to have achieved MDG 5 (for maternal health).9 The maternal mortality ratio declined from 1,400 maternal deaths per 100,000 live births in 1990 to 420 in 2014.8 Furthermore, Ethiopia achieved MDG 6—control of HIV, tuberculosis, malaria, and other important diseases—well ahead of the 2015 deadline. HIV prevalence has declined in the adult population and incidence has declined by 90%. Malaria deaths have
dropped by 50% and tuberculosis deaths by 63%\textsuperscript{9,10}. In addition, the contraceptive prevalence rate has increased almost fivefold in only 11 years—from 6% in 2000 to 29% in 2011.\textsuperscript{11} Since 2001, there has been an annual increase of 2% in the contraceptive prevalence rate.\textsuperscript{6} This is one of the most rapid rates of growth in the utilization of family planning so far in the history of Africa.\textsuperscript{12}

The establishment of a strong community-based workforce of HEWs and HDAVs has had many benefits, not the least of which is the linkage of our health system to every household in the country. Thus, infectious disease outbreaks are much more likely to be detected early and communicated to higher levels in the health system for an appropriate response.

**REMAINING CHALLENGES**

Despite all of these major advances, major challenges remain for reducing readily preventable maternal, perinatal, neonatal and one- to 23-month mortality. The percentage of children with symptoms of pneumonia, diarrhea, and malaria who receive iCCM from an HEW remains quite low.\textsuperscript{13} In our dispersed rural population, geographic access still remains an issue because households are often more than a one-hour walk from a health post, and social and economic challenges still exist.\textsuperscript{14}

In addition, although access to quality antenatal, childbirth, and postpartum care for mothers is improving, a lot remains to be done. Only 60% of rural women obtain four or more prenatal visits.\textsuperscript{15} In rural areas, four out of ten deliveries take place in the home.\textsuperscript{15} Home-based neonatal care and visitation of homes of newborns—the most effective way known at present to reduce neonatal mortality in resource-limited settings—is being rolled out but has not been scaled up nationally yet. Though we are strengthening the capacity of primary health centers to attend deliveries, these facilities serve 25,000 people and are often a two- to three-hour walk (or more) away for much of the catchment area.

Health systems are not readily malleable, so important changes take persistence and time. Priority had to be given first to expanding basic preventive and curative services. The expansion of coverage of iCCM, birth by skilled birth attendants at facilities, and home-based neonatal care will take another decade. A resilient (and healthy) health system is one that is continually improving. Leadership across all levels of the health system to identify and respond to priority needs is a sign of a resilient (and healthy) health system.

**REASONS FOR SUCCESS**

At the core of our success has been an unwavering political commitment at the highest level of government—that is, the prime minister’s office, the various departments of the government, along with the Federal Ministry of Health—to achieve health for all of our people by investing in primary health care as envisioned at Alma-Ata in 1978.\textsuperscript{16} This means expanding essential health care—based on “practical, scientifically sound and socially acceptable methods and technology—made universally accessible to individuals and families in the community through their full participation” by “bringing health care as close as possible to where people live and work . . .” and by relying on “physicians, nurses, midwives, auxiliaries and community workers . . ."\textsuperscript{16} As Minister of Health, I keep in close touch with the communities we serve by visiting them regularly. And I also ensure that our highest levels of government leadership are informed of our successes and challenges, identify priorities that require their support, and call on them to support continuing efforts to make our health system more resilient. My role is one of establishing important connections and maintaining linkages across the levels of the health system. By linking the grassroots communities of our country to the top leadership of our national government, I have been able to strengthen our ability to address the needs of our health system through improved priority setting and more collaborative implementation of health systems strengthening efforts.

Community participation is our secret weapon—and by engaging the community and community-level workers, we are building the system from the bottom up and strengthening every level. Through this approach, we are well on our way to achieving Health for All as called for at the 1978 International Conference on Primary Health Care.\textsuperscript{16} Other countries are taking note, and Ethiopia is now receiving delegations from across Africa and beyond to see firsthand what we have done. We have just established an International Institute for Primary Health Care in collaboration with the Johns Hopkins University that will provide training opportunities for individuals and delegations from other countries to learn about Ethiopia’s approach and to reflect on how primary health care can be strengthened elsewhere.

In summary, community-based primary health care is the foundation of our primary health care system, and primary health care is the foundation of our health system. Ethiopia has been able to build a more resilient health system through a balanced and comprehensive approach that focuses on disease control programs, general health services, and community health programs through the primary health care approach. The country is continually increasing the resilience of its health system, and we look forward to collaborating with other countries in this universal quest as we collectively continue the struggle to achieve that elusive dream endorsed
by the global community in 1978—Health for All through primary health care.

DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

No potential conflicts of interest were disclosed.

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