

A Health Systems Approach to Non-Communicable Diseases in Uganda and Rwanda



STUDY TOUR SUMMARY DOCUMENT
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All delegates work on some aspect of global health regularly, but all rated their knowledge on non-communicable diseases as low.

Management Sciences for Health (MSH) and the LIVESTRONG Foundation (LIVESTRONG) sponsored a delegation of US Senate staffers, policy experts, and researchers to Uganda and Rwanda to examine the key elements of the countries' health systems, with a particular focus on how the countries are addressing non-communicable diseases (NCDs), also known as chronic diseases. Strong health systems are the most sustainable way of improving health and saving lives at large scale. For a health system to address the needs of its people, it must:

- Act in a coordinated and integrated way to reach people who may otherwise go undetected.
- Deliver integrated care that involves all players in the health system—government ministries, pharmacists, traditional healers, health workers, and community health workers.
- Be administered responsibly to ensure quality care that is both physically and financially accessible.
- Have strong information systems and an educated health workforce.
- Support local, public, and private-sector healthcare providers.



Minister of Health Dr. Ruhakana Rugunda and Assistant Commissioner for NCDs Dr. Gerald Mutungi with study tour delegates.

PHOTO: BRIGID BOETTNER

Introduction

NCDs are a prominent and increasing portion of the disease burden in the developing world, and impose significant financial costs from loss of productivity and premature death. According to the World Health Organization (WHO), 80 percent of deaths from NCDs worldwide (29 million deaths annually) occur in low- and middle-income countries like Rwanda and Uganda. In many cases, morbidity and mortality related to NCDs are preventable through effective interventions that tackle other health conditions at the same time. For example, many of the cancers that result in premature death in Uganda and Rwanda are caused by infections that could be prevented with vaccines or treated with antibiotics. With a people-centered health systems approach and a vision toward universal health coverage, we can better maximize resources and ensure quality care.

The MSH-LIVE**STRONG** study tour allowed delegates to witness firsthand the need for and impact of sustainable, country-led, integrated health care services in the fight against NCDs. The week-long study tour included more than 20 meetings, meals, and events with ministers of health, US government officials, local health workers, and beneficiaries. It was a wonderful opportunity for international and interdisciplinary politicians, leaders, and technical implementers to engage in candid discussions of the progress made and challenges still faced in global health.

“These trips are absolutely fantastic for purposes of oversight, learning about the practical difference US investments make on the ground, and having an opportunity to build bipartisan relationships with other [Congressional] Hill staff members.”

— Delegate

Convening congressional delegates to see the local response to health care needs firsthand is important for informing policy decisions that complement country-based programs. By addressing NCDs, policymakers help sustain individuals, families, and communities, as well as whole economies.

Objectives

- To see firsthand what US investments in global health have achieved and how these results affect future development efforts.
- To better understand the importance of investing in health systems strengthening.
- To learn how strong health systems can be leveraged against emerging threats like NCDs.
- To understand the biggest challenges to delivering effective health services and strengthening health systems in developing countries.



Loyce Pace Bass gives the delegates an overview of their week-long study tour.

PHOTO: CRYSTAL LANDER



1	Alcohol use
2	High blood pressure
3	Dietary risks
4	Household air pollution
5	Childhood underweight
6	High fasting plasma glucose
7	Smoking
8	Suboptimal breastfeeding
9	Physical inactivity
10	High body-mass index
11	Ambient PM pollution
12	Occupational risks
13	Lead
14	Sanitation
15	Iron deficiency

US bilateral aid to Uganda is focused on good governance, human rights, and multi-party democracy; addresses key health threats like HIV and AIDS and malaria; supports agricultural productivity, food security, and nutrition; and addresses critical development issues such as global climate change and biodiversity. For FY2013, US bilateral aid spent \$409.2 million on health programs in Uganda. (ForeignAssistance.gov) For FY2014, bilateral aid fell to \$393.3 million, but health spending is still the largest investment in Uganda, with \$306.2 million for HIV and AIDS, \$5 million for tuberculosis (TB), \$33 million for malaria, \$13 million for maternal and child health, \$27.9 million

for family planning and reproductive health, and \$7.2 million for nutrition. (ForeignAssistance.gov)

Uganda is one of three pilot countries chosen by the Global Health Service Partnership, a new public-private partnership between the Peace Corps, the US President's Emergency Plan for AIDS Relief (PEPFAR), and SEED Global Health. This partnership creates an opportunity for American physicians and nurses to volunteer through the Peace Corps in foreign countries, like Uganda, to help strengthen the health system. This is one of multiple programs that the US embassy is backing to help build up the national health system, control disease, and encourage country ownership efforts.

The health challenges faced by Uganda represent significant global challenges in the fight against NCDs, and they have important implications for public health in sub-Saharan Africa, where NCDs have traditionally not been given high priority. By visiting Uganda, the delegates examined the importance of civil society and a strong integrated health care system, and identified the challenges that must be addressed to achieve such a system.

Uganda: Days 1–4

Visiting Uganda was a new experience for all of the delegates. After arriving late Saturday evening the group kicked off the first full day in the capital city of Kampala with a history of Uganda by MSH Uganda Country Representative, Stephen Lwanga. To set the tone for the first few days of the trip, the delegates then traveled to Jinja, the site of the source of the Nile River. The historic city of Jinja is the second largest city in the country. Its history reflects the diverse and sometimes turbulent history of the entire country, and the trip offered valuable insight on regional conditions outside the capital.

After a full day in Jinja, the delegates sat down for a dinner discussion with Gerald Mutungi, Assistant Commissioner for NCDs, Ministry of Health, and Edward Ssemafumu, Project Director, Uganda Strengthening TB and AIDS Response – Eastern Region (STAR-E), MSH, to discuss the current structure of Uganda's health system, including the growing burden of NCDs. Dr. Mutungi spoke about the goals of the Ministry of Health as it works with local and international partners and donors to address the new challenge of NCDs. The Uganda National Health Sector Strategic & Investment Plan (HSSIP) selected the following four focus areas:

- Prevent and reduce **diabetes**-related morbidity and mortality
- Prevent and reduce **cardiovascular disease**-related morbidity and mortality
- Prevent and reduce **chronic obstructive pulmonary disease** and **asthma** morbidity and mortality
- Establish a national framework for **cancer** control emphasizing prevention



MSH and LIVESTRONG sponsored the study tour.

PHOTO: CRYSTAL LANDER



The Nile River starts in Jinja, Uganda.

PHOTO: AVENEL JOSEPH



Delegates meet with Ugandan Minister of Health Dr. Ruhakana Rugunda and Director General of Health Dr. Jane Aceng.

PHOTO: BRIGID BOETTTLER



Jackson Orem, Institute Director of the Uganda Cancer Institute, and delegate Avenel Joseph

PHOTO: CRYSTAL LANDER

Dr. Ssemafumu discussed MSH's strategies for addressing NCDs globally and in Uganda. MSH has made NCDs an organizational health issue and works with local governments to implement low-cost changes in their health systems that will address NCDs. For example, the USAID-funded STAR-E project is partnering with Hospice Africa Uganda to integrate palliative care into HIV and AIDS services.

Investing in Health Systems to Address NCDs

On the second day, the delegates met with the Ugandan Minister of Health, Dr. Ruhakana Rugunda, and the Director General of Health, Dr. Jane Aceng. Dr. Rugunda has served as Uganda's Permanent Representative to the United Nations, among other ministerial positions, and he has been supportive of efforts to decrease tobacco use in the country. Less than a year into his new role as head of the Ministry, he displays a high level of cross-Ministry knowledge. The delegates maximized their time in the meeting by discussing both the recent increase in the HIV prevalence rate in the country and balancing donor requests with country priorities. While up to 70 percent of Uganda's health budget comes from foreign donors with their specific priorities, these external needs have still led to some successes. For example, Uganda has halved the number of people dying from TB in the last 12 years, thereby meeting the MDG target for TB.

“The Ugandan government is happy to see interest in NCDs, as they are becoming a new mountain emerging in health. Uganda is a country balancing the effects of both malnutrition and obesity. Our government's number-one goal is the promotion of health... while noting that the benefit of getting older creates additional and different health problems.”

— Dr. Ruhakana Rugunda

Next the delegates visited the Uganda Cancer Institute (UCI), touring the facilities and meeting with Dr. Jackson Orem, Institute Director, to understand how cancer and other NCDs are being addressed in Uganda. Founded in 1967, the institute has a long history in Uganda and has emerged as a leader in cancer research and pediatric cancer care for Uganda, Africa, and the world at large. UCI cases were among the first to help identify and address linkages between cancers and infectious diseases like malaria and HIV. UCI physicians have implemented groundbreaking treatment protocols now adopted by oncologists worldwide. However, Dr. Orem acknowledged there is still a long road ahead. He mentioned a persistent missing link with the PEPFAR program, even though 60 percent of the institute's cases are related to HIV. An ideal scenario, he noted, is one in which patients and providers are not battling two diseases—cancer and HIV— simultaneously, but instead are able to control one and focus on the other.

In addition to technical challenges, UCI has faced operational challenges due to overcapacity in their existing facilities. In partnership with the US-based Fred Hutchinson Cancer Research Center, UCI has built a new clinic and training center to cope with the strain, but regulatory issues have hindered their use of the new facility. The study tour delegates were impressed with the new facility and with UCI's implementation of technical strategies, and they used their meeting with Uganda's Minister of Health to encourage the government to expedite the opening of the new facility. One delegate remarked that it was interesting to see how the region's NCD treatment, management, and research challenges and solutions differ from those domestically.

Following the UCI visit, the delegates toured and received a briefing at the Joint Clinical Research Center (JCRC) to see how government investments in diverse partnerships can advance clinical research and achieve specific health goals that produce broad results. The institution is a limited liability, not for profit, non-governmental organization (NGO) that was founded by a collaborative effort of the Ministry of Health, which is primarily responsible for policy; the Ministry of Defense, which provided the infrastructure; and Makerere University Medical School (currently College of Health Sciences), which provides some of the researchers with whom JCRC works.

Over the past years, various institutions such as the WHO, Case Western Reserve University, Family Health International, US National Institutes of Health (NIH), University of California San Francisco, Johns Hopkins University, and the Institute of Tropical Medicine in Antwerp, have partnered with JCRC to obtain several research grants to study HIV, TB, malaria, and other tropical diseases. The center's core funding sources mainly come from funding bodies that support collaborative biomedical research and antiretroviral therapy roll-out programs. These include USAID, under PEPFAR; the European Developing Countries Clinical Trials Partnership; and NIH, among others. The center also generates revenue from clinical, laboratory, pharmacy, and training services.

That night at dinner, the local health leaders from the three site visits joined the delegates for additional questions and lively discussion.

Healthy Outcomes and Quality of Care

The next day started with a trip out of Kampala to the Mpigi Health Center. At Mpigi the delegates observed the USAID-funded, MSH-led STRIDES for Family Health project, which improves health services and builds local capacity. As part of this program, fourteen health centers in the Mpigi district received ultrasound scanning machines, each to help improve maternal and neonatal health in the district under the Midwives Antenatal Ultrasound Project (MAUP). The donations were made under performance-based contracts awarded by MSH to the Ernest Cook Ultrasound Research and Education Institute (ECUREI), with financial support provided by USAID under a



Delegates tour the lab at the Joint Clinical Research Center.

PHOTO: MSH

A patient at the postnatal room at Mpigi Health Center PHOTO: LOYCE PACE BASS



cooperative agreement. MAUP has an innovative approach that involves training midwives in limited obstetric ultrasound scanning to improve maternal and neonatal outcomes.

With this support, Mpigi district has continued to register increasing numbers of pregnant women receiving antenatal care and delivering at the health facilities. The ability of subcontractors and village health teams to mobilize pregnant women to access maternal, newborn, and child health services at the health facilities, as well as Behavior Change Communication interventions in the district, have continued to be strong reasons for this upward trend. Verified data for STRIDES subcontractor ECUREI in 2012 showed that 633 pregnant women delivered at 7 out of the 14 ECUREI partnering health facilities, representing a 23 percent increase from the baseline. There was also an increase of 143 percent (from 634 in 2011 to 1,541 in 2012) of pregnant women attending antenatal care at the same facilities.

The delegates then returned to Kampala to visit Mulago Hospital, where they met staff, toured the hospital's NCD ward, and learned about the progress made and the challenges faced by the public health care system. Mulago Hospital is the largest hospital in Uganda and it is also one of the three National Referral Hospitals in the country. It serves as a teaching hospital for Makerere University College of Health Sciences, the oldest medical college in Uganda, established in 1924. The hospital offers services in most medical and surgical subspecialties, in addition to dentistry, emergency medicine, pediatrics, and intensive care.

One of the greatest challenges for Mulago Hospital is sustaining a qualified workforce large enough to meet the basic health needs of Uganda's rapidly growing population. While the hospital was built with a bed capacity of 1,500, it now registers an average of 3,000 admissions. This means the hospital has had to do away with some beds in order to accommodate more patients on the floors. Mulago Hospital is also burdened by a lack of the basic medical equipment necessary to maintain sanitary conditions or properly conduct essential surgical procedures and cancer therapy. To decongest Mulago and to improve on health care delivery overall, the director has emphasized the need to build additional hospitals of Mulago's status and capacity in other regions of Uganda.

While at Mulago Hospital, delegates met with a team from the Yale Global Health Leadership Institute, which develops and disseminates research for improving health systems. The institute's research portfolio focuses on examining health outcomes and quality of care in diverse settings and identifying their organizational, environmental, and socioeconomic determinants. They also look to identify essential components of leadership, how they emerge in different settings, and how they lead to flexible, efficient, and effective health systems.

To conclude the day's events, the delegates attended a dinner where they met with private partners and the Chairman of the Parliament's Committee on Health to discuss the role that diverse global health partners play in sustaining strong health systems.

Working Together: Creating a More Prosperous East Africa

During the study tour's last day in Kampala, the delegates visited the US Embassy and met with the US Ambassador to Uganda, Scott DeLisi, before attending an interagency lunch meeting. During the interagency meeting, delegates met with representatives from USAID, the Centers for Disease Control and Prevention (CDC), NIH, and Walter Reed National Military Medical Center. The delegates and agency representatives discussed how each agency's work in Uganda supports US policy objectives in peace and security, democracy and governance, health, education, and economic growth.



The delegates visit the Mpigi Health Center.

PHOTO: BRIGID BOETTLE



The Tuberculosis Treatment Center at Mulago Hospital

PHOTO: AVENEL JOSEPH



The US Ambassador to Uganda, Scott DeLisi, speaks with the delegates.

PHOTO: LOYCE PACE BASS



Central Intelligence Agency (2014). [Map of Rwanda]. *The World Factbook*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/rw.html>

Top 15 risk factors that lead to death among men and women in Rwanda in 2010

1	High blood pressure
2	Household air pollution
3	Alcohol use
4	Dietary risks
5	Smoking
6	Childhood underweight
7	High fasting plasma glucose
8	Physical inactivity
9	Ambient PM pollution
10	Suboptimal breastfeeding
11	High body-mass index
12	Occupational risks
13	Lead
14	Zinc deficiency
15	Unimproved water

University of Washington (2013). [Rwanda: GBD 2010 Heat Map]. Institute for Health Metrics and Evaluation. Retrieved from <http://vizhub.healthdata.org/irank/heat.php>

Background: Rwanda

Rwanda has made progress in strengthening its health system and expanding access to health care over the past decade. Efforts to develop and renovate the infrastructure of health facilities, decentralize health services, and implement health insurance plans have led to declines in morbidity and mortality rates. However, Rwanda's health system continues to have challenges in several areas: shortages in the number of trained health care workers, shortages in health supplies, and limited infrastructure to meet mental health needs.

While Rwanda has had success in reducing rates of infectious disease, there remains a significant need to address NCDs, which in 2008 accounted for an estimated 29 percent of national mortality. As urbanization occurs there is an increase in risk factors such as tobacco and alcohol use and a decrease in physical activities and healthy diets leading to a rise in NCDs such as cardiovascular disease and cancer. (Rwanda NCDs Synergies Meeting, 2013)

Rwanda's Ministry of Health has demonstrated a strong commitment to fighting NCDs, both nationally and on a global scale. Minister of Health Dr. Agnes Binagwaho is leading a comprehensive NCD strategic plan that includes updating health facilities, increasing numbers of skilled health workers, and establishing strategic policies and partnerships. In July 2013 the Ministry collaborated with the international nonprofit organization Partners In Health (PIH) to organize the inaugural meeting of the NCD Synergies Network, an international network of low-income countries dedicated to sharing best practices and increasing technical cooperation in the fight against NCDs.

US bilateral aid to Rwanda has grown significantly over the past decade, from \$39 million appropriated in FY2003 to \$197 million in FY2013. (ForeignAssistance.gov) In part, this rise reflects overall trends in US aid to Africa, which increased significantly during the same period, largely due to growth in global health spending. Rwanda is a focus country of three US global foreign aid initiatives: PEPFAR, the President's Malaria Initiative, and the Feed the Future food security initiative. In the Administration's request for FY2014, bilateral aid to Rwanda would fall to \$169.2 million, mostly as a result of a proposed decrease in health spending, which may reflect Rwanda's increased domestic investments in health. Still, health spending would make up almost 70 percent of the total US bilateral aid, with \$74.2 million proposed in FY2014 for HIV and AIDS, \$17 million for malaria, \$10 million for maternal and child health, \$13 million for family planning and reproductive health, and \$3 million for nutrition. (ForeignAssistance.gov)

Global networking and solidarity are essential in the fight against NCDs. On their visit to Rwanda, the congressional staffers met with leading health experts and policymakers, and witnessed firsthand how a nation's commitment to international partnerships and a comprehensive approach to health care can improve lives at home and around the world.



Health workers greet the delegates at Busanza Health Center, Kicukiro District.

PHOTO: CRYSTAL LANDER

Rwanda: Day 5–6

Building Capacity and Country Ownership

The delegates started their first day in Rwanda with a conversation with Rwandan Minister of Health Dr. Agnes Binagwaho, followed by a visit to the Busanza Health Center, located in Kicukiro District, Providence Uwineza. At Busanza, they met with the staff, toured the facility, and learned how the center manages the community-based health insurance and health management information systems.

The Busanza Health Center benefits from programs in USAID-funded Integrated Health Systems Strengthening Project (IHSSP) in Rwanda. The project seeks to improve quality and accessibility to health services for all Rwandans. It is centered on key health systems strengthening building blocks: health information, health financing, quality assurance, human resources for health, and health service governance and decentralization. The technical and financial resources and training provided at the community health center directly support the Rwandan Ministry of Health in its commitment to improving health care access through implementation of community-based health insurance policies. On the tour of the health center facilities, the delegates were particularly impressed with the mechanisms used for data collection and analysis, which included a structured paper system for health records and an electronic dashboard to monitor and update health trends and patient data. They also met with community health workers to hear about the local impact of their service and outreach.



A staff member shares health data collected at the Busanza Health Center.

PHOTO: LOYCE PACE BASS

Delegates visit the Centre Nationale de Transfusion de Sanguine and the National Reference Lab.

PHOTO: BRIGID BOETTLE



The delegates also met with US government representatives at the US Embassy, where they engaged in a discussion on US government-funded support and how it aligns with country-led health system strengthening efforts. US health activities in Rwanda support the long-term development of the Rwandan health system. Significant support is provided through technical assistance to the government of Rwanda for decentralization in the health sector, health policy development, strengthening health care financing, developing a pharmaceutical logistics system, and building capacity of service providers and systems.

Later that day the delegates visited the National Blood Transfusion Center (*Centre Nationale de Transfusion Sanguine* in French) and the National Reference Lab (NRL), which are supported by the CDC. The National Blood Transfusion Center is responsible for the collection of blood for the formation of a blood bank, the total analysis and control of blood taken, transport of blood or blood substitutes to all the territories, the supply of blood products to different health facilities, and the manufacture of blood-derived products. In addition, the transfusion center contributes to the implementation of the national blood transfusion policy; coordination and supervision of regional structures, ensuring the availability of blood products; training and research in blood transfusion; coordination of quality management; and hemovigilance.

The NRL was established in July 2003 by the government of Rwanda to develop institutional infrastructure, a laboratory network, research, and links at national and international levels. The NRL built the national laboratory network and coordinates all the network activities. The NRL has initiated decentralized policies to bring laboratory services closer to the population. It continues to collaborate with a number of internationally reputable organizations, universities, and institutions in areas of epidemiology, public health, and research. Through these collaborative ventures, the NRL has received technical and financial support, as well as opportunities to share information on its activities.



Delegates visit the Pediatric Room at Rwinkwavu District Hospital.

PHOTO: LOYCE PACE BASS

By touring the labs with physicians and staff, the delegates gained perspective on health system strengthening efforts applied at the national level, and examined the importance of integrated efforts across community, district, and national facilities. One delegate in particular was impressed with the advanced technology and testing equipment available at the NRL, but pointed out that effective training of staff is key if the equipment is to be used effectively and results interpreted accurately.

The day concluded with a reception at the US Deputy Chief of Mission's residence. The reception, "Together for Health: Stronger Health Systems for Long-Term Impact," brought together the delegates, local NGO partners, government representatives, and Minister of Health Dr. Agnes Binagwaho to celebrate the importance of collaboration and partnership in health systems strengthening.

The reception was an opportunity to emphasize how strong partnerships are essential to achieving global health goals. Delegates learned how the ability of ministries and institutions to deliver health results for their populations is strengthened when strategic partnerships are formed that ensure access and commitment to necessary tools, models, and approaches. Facilitating the development of effective and sustainable partnerships with public and private sector stakeholders has mutually beneficial results, including helping to allocate resources for health programs and projects in the field. The tools, models, and approaches needed to improve priority health programs already exist, but they are not fully utilized or scaled up. Strengthening partnerships between the public and private sector can in turn strengthen health systems that can be leveraged against emerging challenges such as NCDs.

Public-Private Partnerships

During the study tour's last full day, the delegates visited PIH's headquarters in Rwanda at Rwinkwavu District Hospital and toured the hospital's NCD Clinic and Health Center. At the headquarters, the delegates learned about



*MSH Country Representative Apolline Uwayitu
with delegate Jay Sulzmann*

PHOTO: MSH

PIH's work in Rwanda and how they leverage leadership, skills, and experience of patients, local governments, and other partners to strengthen health care services in local communities. In alignment with the government's priorities, PIH has placed a particular emphasis on strengthening all aspects of the health care system in these areas: working at the community, health center, and district-hospital levels to train health care providers; strengthening referral and procurement systems; building capacity at health care facilities; and developing community outreach programs to eliminate preventable deaths.

At the Rwinkwavu District Hospital, delegates were able to witness firsthand the impact of public-private partnerships and how they improve health care training, strengthen referral and procurement systems, and build capacity at health care facilities. To conclude their tour in Rwinkwavu District Hospital, the delegates went out on patient visits to meet with those receiving services, witness the local impact of trained community health workers, and understand the importance of strong community outreach programs. Delegates saw how the PIH-supported districts have exceeded the progress made elsewhere in the country due to PIH's unique package of interventions that have been implemented in partnership with the Rwandan Ministry of Health. The MOH-PIH collaboration in Rwanda has achieved and documented some of the most dramatic improvements in population health anywhere in the world: reducing under-five mortality by nearly two-thirds in just five years, achieving near-universal access to antiretroviral treatment with outstanding outcomes, and more.

The day concluded with a dinner bringing together Ministry of Health representatives and other key partners.

Role of the US Government

The US government, through USAID, is providing support to Uganda and Rwanda in order to increase the efficiency, effectiveness, responsiveness, and equitability of their health systems. USAID ensures the proper elements are in place for a fully functioning health system that is country-owned and sustainable. Working closely with national governments and NGOs, by 2015 USAID aims to increase access to and use of programs that address these countries' high level of out-of-pocket spending; ensure that these countries have a strategy to address key health system challenges; and develop a clear plan to measure progress in health systems strengthening in these countries.

The CDC also has a long history of working with partners in the global health community to address NCDs in low and middle income countries. Current CDC efforts to prevent and reduce the burden of global NCDs include disease surveillance and field epidemiology training programs; identification and control of risk factors, including indoor cookstoves and tobacco control; and promotion of healthy behaviors, such as use of motorcycle helmets and increased physical activity.

Similarities and Differences in Health Systems Observed in Rwanda and Uganda

Importance of trained health workers

In both countries, the delegates learned how a shortage of trained health care professionals can weaken a health care system. For example, in order for a facility like the Uganda Cancer Institute to be effective, there must be an adequate number of health care workers trained to recognize the signs of various health issues. In Rwanda, the delegates saw firsthand how US assistance is implemented locally to train and retain health care workers in rural areas, which are often most affected by workforce shortages. One delegate remarked on the high level of esteem held for community health workers in Rwanda, and acknowledged the impact these workers have when given full access to educate, treat, and deliver health resources to local populations.

Fee for service/performance based financing

Performance-based financing (PBF) is an innovative, results-oriented, and practical approach that ties payments to staff or beneficiaries based on their achievement of agreed-upon, measurable, performance targets. PBF requires verifiable indicators and provides incentives for meeting or exceeding the expected results. Incentives include financial payments, bonuses, and public recognition. In Rwanda, delegates learned how PBF is generating better return on health care investments, and the idea of accountability-driven health service delivery resonated closely with the priorities of their congressional offices. MSH works closely with the governments of Uganda and Rwanda to design and roll out PBF plans at the national level.

Infrastructure

In both Uganda and Rwanda, the delegates identified a strong link between the level of basic infrastructure and its impact on all levels of a health system. The quality and extent of the local road network directly impacts supply chain management and health care service delivery, particularly emergency health care. The condition of power grids will affect the reliability of everything from testing equipment in national laboratories to patient monitors in the local hospital. Furthermore, the level of regulation of vehicles and industrial plants directly influences air quality, particularly in the rapidly growing urban centers.

The delegates found the level of local infrastructure to be strikingly different in Uganda than in Rwanda. In connection with its tumultuous history, Uganda has faced challenges in growing and sustaining its basic infrastructure,

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particularly in terms of roads and outdoor air quality. However, in recent years, the government has made significant development investments, particularly with the start of construction of a four-lane toll highway connecting the country's largest airport, Entebbe International Airport, to Kampala.

In contrast, the high-quality, extensive road network and drainage system in Rwanda's capital city of Kigali left a strong impression on the delegates. Several delegates commented on the mindset of community service and shared responsibility in the maintenance of Kigali's clean streets. For them, the structural integrity of the local infrastructure tied in directly with the strength and organization of the local health system.

Country ownership

Rwanda has begun the path to country ownership with its Vision 2020 plan. Delegates learned how the government of Rwanda is working to create a self-sustaining health care system that is not reliant on foreign assistance by the year 2020. While achievement of this goal will require a much more robust national health insurance structure, the political will aligns well with the financial will, as 20 percent of expenditures are channeled to public health. In contrast, Uganda understands the importance of country ownership and believes it can happen, but has not started developing a plan to achieve it.

Conclusion

This study tour provided unique, firsthand insight into how Uganda and Rwanda are working toward stronger health systems to address the ever-growing burden of NCDs. While each country has made strides to improve national health care, systemic challenges still remain with regard to chronic shortages of trained health workers, lack of access to basic health supplies, and limited or unreliable financial resources.

While the response to NCDs is varied, government representatives, NGO leaders, and health care providers alike have identified NCDs as an immediate problem requiring action sooner rather than later. Some stakeholders, such as health ministry or local CDC staff, are still in the planning stages, looking at how to use available resources to further assess the problem and the best means for tackling it. Others, such as those running health centers or community projects and leading dedicated hospital clinics, are a bit further along, given that people are walking through their doors with co-morbid conditions like HIV and cancer. To address a patient's overall health status, and not just discrete ailments, those on the frontlines have established protocols to screen and treat individuals for certain NCDs.

No matter where stakeholders are on the spectrum of a response to NCDs, the key word to describe future action is “leverage.” Repeatedly, PEPFAR funding recipients gave examples of how they were using or wanted to use PEPFAR funds as a means of expanding services for the prevention and control of NCDs. As a result of the passage of PEPFAR Stewardship and Oversight Act of 2013, the US government requires country level reporting of comorbidities, including AIDS-related cancers, among the treatment population. Another area of potential integration is health-worker training, with new providers and support staff becoming well versed in NCD risk factors and symptoms, as well as educated about basic interventions and referral systems. Likewise, laboratory facilities and supply chains could be dual-purposed to address NCD-related health issues. However, many of these solutions were presented as theories rather than practice; the challenge now is to implement more ideas and scale up proven solutions.

“The study tour actualized the theory behind the elements of health systems, enabling staffers to see systems that are moving towards well-functioning health systems and those that face systemic challenges, particularly in the area of governance.”

— Delegate

“We need to use the growing focus on NCDsw to build a global social movement for Universal Health Coverage (UHC) to address all health needs according to national and local epidemiology and priorities,” notes MSH President and CEO Dr. Jonathan Quick. He argues that a new “mega-fund” platform may not be the ideal solution. UHC would create health plans and financing structures that allow access to essential diagnostics, prevention, and treatment for all. As demographics change and people with communicable diseases live long enough to develop chronic diseases, a responsive, performance-driven, integrated health systems approach will have the greatest health impact.

It remains to be seen how what the study tour delegates experienced will influence the thinking of the US government—the largest donor to global health. The ongoing United Nations dialogue regarding global responses to NCDs is timely and provides a key opportunity. Ideally, countries will bridge persistent gaps between what they know and what they do, and further build their capacity to lead on improving public health for everyone’s benefit. ■



www.msh.org

About Management Sciences for Health

MSH, a global health nonprofit organization, uses proven approaches developed over 40 years to help leaders, health managers, and communities in developing nations build stronger health systems for greater health impact. MSH works to save lives by closing the gap between knowledge and action in public health. Since its founding in 1971, MSH has worked in over 150 countries with policymakers, health professionals, and health care consumers to improve the quality, availability, and affordability of health services. Working with governments, donors, nongovernmental organizations, the private sector, and health agencies, MSH responds to priority health problems such as HIV and AIDS; TB; malaria; maternal, newborn, and child health; family planning and reproductive health; and chronic non-communicable diseases such as cancer, diabetes, and lung and heart disease. By strengthening capacity, investing in health systems innovation, building the evidence base, and advocating for sound public health policy, MSH is committed to making a lasting difference in global health.

In Uganda, MSH partners with the government to strengthen the health care system by providing support and technical assistance to the Ministry of Health and its regional and district offices. Through the partnerships projects are improving diagnosis and treatment for HIV and AIDS, along with TB, in the eastern region and to increase access to and the quality of family planning and reproductive services.

In Rwanda, MSH works to increase access to quality drugs and commodities and improve districts' measurement and evaluation systems. MSH helps develop health leadership, management, and governance while addressing health care financing challenges.

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About LIVESTRONG

The **LIVESTRONG** Foundation fights to improve the lives of people affected by cancer *now*. Created in 1997, the foundation is known for leading an ongoing dialogue with patients and survivors, providing free cancer support services and advocating for policies that improve access to care and quality of life. Known for its powerful brand—**LIVESTRONG**—the foundation has become a symbol of hope and inspiration around the world. Since its inception, the foundation has served 2.5 million people affected by the disease and raised more than \$500 million to support cancer survivors. One of America's top nonprofit organizations, the foundation enjoys a four-star rating from Charity Navigator and has been recognized by the National Health Council and the Better Business Bureau for its excellent governance, high standards, and transparency.

Report contributors

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