

A network diagram consisting of five colored nodes (green, brown, blue, yellow, and grey) connected by a dotted line, positioned to the left of the main title.

# COHERENCE IN COMPLEXITY

Strengthening Human Resources for Health Programs

**ENCOMPASS STUDY TEAM**

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*Design and layout by Crystal Cason*

# Foreword

*Dr. Ann Kurth, Yale University*

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In a world facing pandemics such as HIV (and now, SARS-CoV-2), the crucial nature of a strong health workforce, functioning in an adaptive health system, cannot be overstated. Rwanda's HRH Program has been a fount of lessons learned that can apply to Rwanda's dynamic health system strengthening efforts, and, importantly, to other countries, regions, and partners aiming to improve health workforce capacity, resilience, and impact.

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# Introduction

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## Introduction

# Background

The world needs more health workers. The need is acute in low-income country settings with the highest burden of HIV disease, including in Sub-Saharan Africa. The Republic of Rwanda has made gains in its health system and HIV response, but a persistent shortage in human resources for health (HRH) affects the health of people living with HIV and the entire Rwandan population. The Government of Rwanda, with support from partners such as the President's Emergency Plan for AIDS Relief (PEPFAR), a U.S. Government initiative, developed a program to strengthen institutional capacity in health professional education and thereby increase the production of high-quality health workers. The HRH Program started in 2012.

Activities centered around a twinning program that paired Rwandan and U.S. faculty, new specialty training programs and curricula, and investments in teaching hospitals and learning environments. Funding came primarily from PEPFAR through the U.S. Centers for Disease Control and Prevention. Other funders included the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Rwandan Ministry of Health; and, to a lesser extent, other entities. The program was fully managed by the Government of Rwanda.

In February 2020, the National Academies of Sciences, Engineering, and Medicine [published an evaluation](#) of PEPFAR's contribution to Rwanda's HRH Program.

## Introduction

# Discussion Series

Following the release of the evaluation, the National Academies of Sciences, Engineering, and Medicine engaged EnCompass LLC to organize a series of discussion events with stakeholder groups. These events used what was learned from the evaluation and the HRH Program to launch broader discussions about ongoing and future opportunities and actions related to the health workforce in Rwanda—and beyond. The discussions centered around the overarching theme of “coherence in complexity.” Several sub-themes emerged from these sessions: ensuring the strategy is dynamic, mitigating strategy fragmentation, strengthening individual and institutional capacity, and partnership in health professional education.

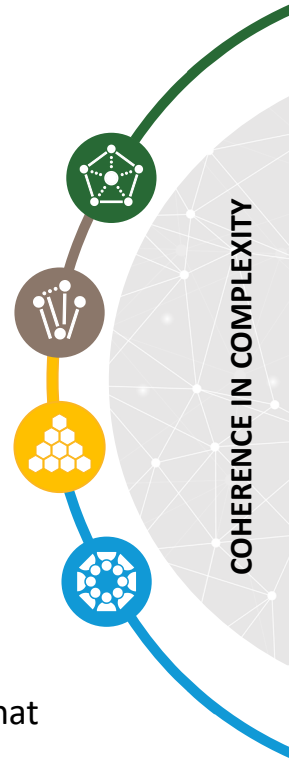
**ENSURING THE STRATEGY IS DYNAMIC**

**MITIGATING STRATEGY FRAGMENTATION**

**STRENGTHENING INDIVIDUAL  
AND INSTITUTIONAL CAPACITY**

**PARTNERSHIPS IN HEALTH  
PROFESSIONAL EDUCATION**

The discussions yielded a set of actions that policymakers, universities, program managers, and funders might take to further strengthen health professional education systems among other human resources for health efforts. This resource describes the potential actions.

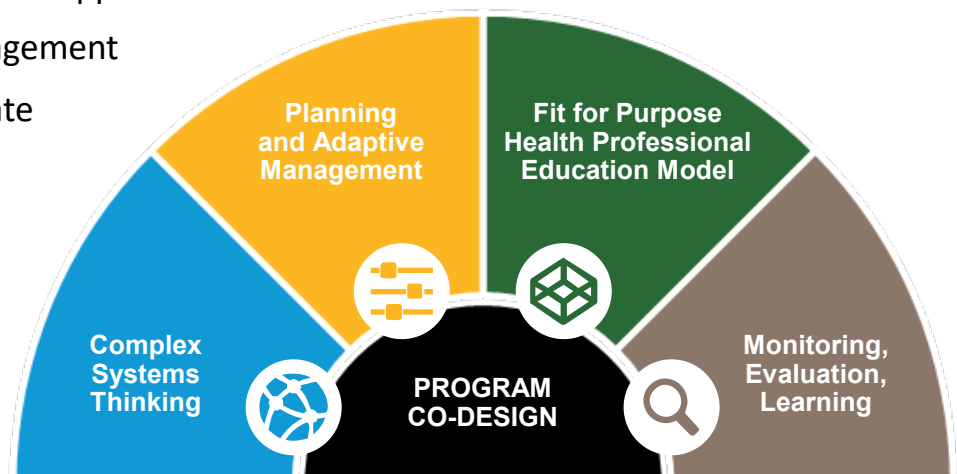


## Introduction

# Evaluation Recommendations

The discussion series built on the recommendations from the evaluation findings, which were organized into five key areas that reflected lessons learned and the inherent complexity of HRH:

- The need to co-design programming with diverse, relevant stakeholders
- The importance of taking a complex systems approach
- The value of planning and adaptive management
- The importance of selecting an appropriate model (or components) for improving health professional education
- The centrality of a proactive and multifaceted approach to monitoring, evaluation, and learning



## Section 02

# How to Use This Resource

This resource presents possible actions that participants in the discussion events suggested different stakeholders could take to strengthen HRH programs in their countries and in the countries with which they partner. Its five sections each correspond to one stakeholder group. You can refer to the section most relevant to your work or explore all of them to get a wide breadth of perspectives on how to strengthen HRH programs.

The themes and suggested actions are organized by the following groups:

- Policymakers
- Host-country universities
- External universities
- Program managers and administrators
- Donors/Funders







# Themes & Possible Actions

## Section 03

- [Policymakers](#)
- [Host-Country Universities](#)
- [External Universities](#)
- [Program Managers and Administrators](#)
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# Polycymakers



## Policymakers

# Overview

In the complex world of healthcare systems, creating coherence is essential to developing and implementing successful HRH policies. Policymakers create the framework within which health and education professionals build the workforce's capacity. In this role, policymakers must be keenly aware of—and mitigate against—fragmentation between strategy creation and implementation; between health, education, and other relevant sectors; and between resources and the actual needs of the workforce. They must work with stakeholders from the local and international communities to ensure policies support the needs of the workforce and the populations they serve, and evidence being generated is appropriate, helpful, and used. And, of course, they need to help obtain funding for these activities.



The following possible actions can help address these issues and would ideally be considered in the early stages of creating a policy or strategy.

## Policymakers

# Possible Actions

### *Funding*

Funding is, of course, fundamental to implementing and improving HRH programs. Although bilateral funding can support these programs, donor priorities can change, affecting the continuity of investments. Discussion participants noted that policymakers should look for opportunities to partner with multilateral donors or a consortia of donors. Policymakers can also take a holistic view and leverage existing resources to produce the health workforce. Funding should include resources for ongoing qualitative and quantitative evidence gathering to inform adaptations during implementation.

### *Stakeholder engagement*

According to discussion participants, policymakers should bring the voices and perspectives of a wide range of stakeholders into the policy design and implementation process. This helps programs consider all elements with which they interact and be more responsive to the needs of the workforce and the people they serve. Stakeholder groups should include people with knowledge of the community, culture, and social determinants of health. Stakeholders who can communicate policies back to the community and receive feedback on what the community needs can help bridge the gap between policy and community.

## Policymakers

# Possible Actions

### *Implementation process*

To improve implementation effectiveness, discussion participants noted, policymakers should design policies that can integrate with existing local and regional systems. Rather than basing policy on a one-time consultation process during the creation phase, implementation should incorporate ongoing consultation and reflection to ensure it remains relevant and responsive to changing contextual realities. To make this possible, policymakers should build in funding for ongoing data collection and program adaptation. Including a logistician on the strategy implementation team could help avoid fragmentation between policy creation and implementation.

### *Coordination across sectors*

Coordinating between ministries of health and education—and between health, education, labor, infrastructure, IT, and other sectors—is an important part of continuing to advance HRH. Discussion participants felt policymakers should work with health professional training institutions to understand the needs of the health education system and health workers. With this information, policymakers could make systemic and policy-level changes that support the health workforce. Further, policymakers should work alongside the labor sector to identify the health labor market needs and build sustainable jobs.

## Policymakers

# Possible Actions

### *Support for healthcare workers and the systems in which they work*

Although increasing the *numbers* of healthcare faculty and clinicians is important, *quality* should be a priority. Discussions emphasized that HRH policies should ensure faculty skills match the needs of the workforce and the populations they serve. Integrating and aligning services—so healthcare providers who are qualified to work across spheres can shift to different activities when gaps develop—could help mitigate risks as healthcare needs shift. There should also be a system to support and care for healthcare workers during and beyond the training period.



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What made [the HRH Rwanda Program] a success? ... The institutional commitment—on one side from the U.S. institutions and on the other side from the Government of Rwanda—was really what made it work. That was the strongest factor.

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**Participant, University of Rwanda discussion session**

# Host-Country Universities





## Host-Country Universities

# Overview

Universities play a frontline role in strengthening HRH. They sit at the junction of policymakers, health practitioners, and communities, giving them the opportunity to help ensure coherence among these different parts of the system. As leaders in training the next generation of healthcare professionals, universities must be attuned to the needs of the workforce and the populations they serve to ensure the training they provide matches and adapts to those evolving needs. Universities are also responsible for creating an environment where faculty have the time to dedicate to their own professional development and are skilled in training not just clinical practitioners, but leaders, health policymakers, and data professionals.

The following possible actions address critical parts of the overall system and policies, as well as specific approaches to strengthening HRH, such as exchange programs and mentorship.



# Possible Actions

### *Policies and systems*

In the discussions, participants shared that universities and policymakers should work together to create and implement policies that ensure the skills of the workforce match the needs of the population, including policies that address remuneration and account for the market's ability to absorb newly trained health workers. Including members of the community on advisory boards would help with this. As a country's health system becomes stronger, policies should be put into place to empower specializations and create avenues for specialized nurses. University-level policies should give faculty the time and support they need for ongoing professional development. University training systems should complement the wider health system, taking a holistic view that considers the system's infrastructure and the health workforce skills needed beyond clinical work. Including data clerks and data managers as well as administrative and policy professionals in HRH, even though these roles are not in direct patient care, would go a long way in supporting better evidence-informed practice.

# Possible Actions

### *Training and mentoring*

Ensuring training and trainers' skills match the needs of the workforce is an important element of strengthening HRH. Discussion participants suggested that healthcare workers should, to the extent possible, be trained to use the equipment and tools they will have available to them in a clinical setting. Training should also include cultural awareness, policy, and leadership skills to strengthen the roles healthcare providers play outside of direct patient care. Universities should make sure faculty can continue their own professional development to learn continually about best practices and interact with colleagues to see how the education the university is providing is effective for students. Universities should also enable faculty to support future generations by training the trainers and building expertise in a widening range of needed specialties and subspecialties. When participating in mentoring or twinning programs, universities should work with program managers to match the needs of the faculty to the appropriate level and intensity of mentoring and connect graduates with experienced mentors to guide them through the transition from an academic to a clinical setting.

## Host-Country Universities

# Possible Actions

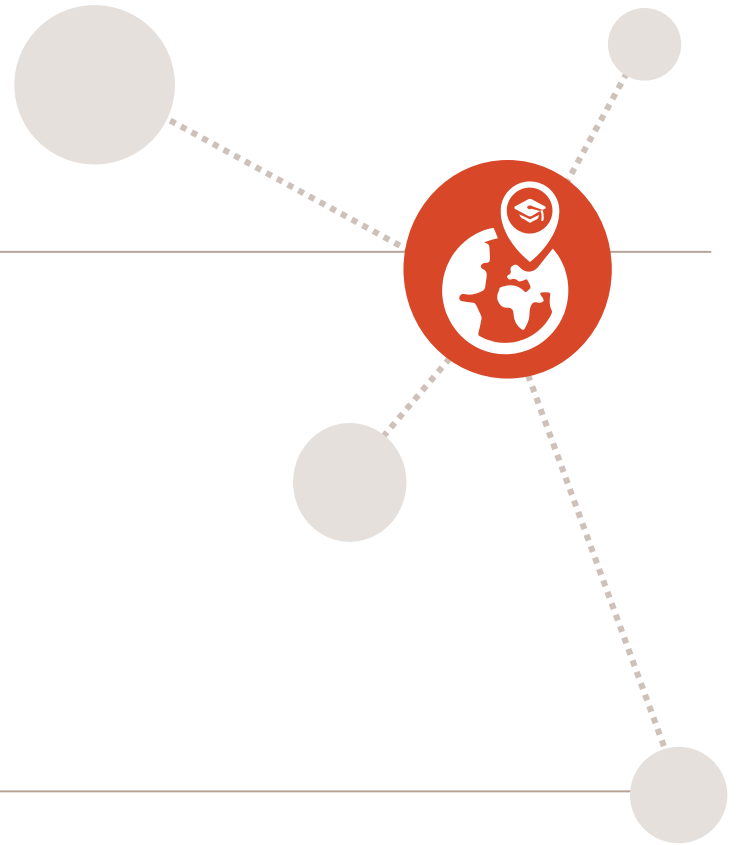
### *Curricula*

Discussion participants shared that universities should work with non-health sectors, such as information and communication technology and infrastructure, to deliver health professional education and ongoing training in innovative, context-appropriate ways. Universities should also ensure curricula evolve as the country's healthcare system and needs change and as evidence-based practice changes, expanding into additional specialties and subspecialties as needed. The curricula should include leadership and policy training to prepare healthcare professionals to serve as policymakers and in other non-clinical roles.

### *Exchange programs*

International exchange programs can be an important learning tool for strengthening HRH. Universities should consider the program's goals in determining how to best meet their own goals, including whether to partner with universities in similar contexts so trainees are getting experience in settings with resources and tools similar to those in their countries, or with universities that can provide specialists that fill a gap in the university's current skillset. Dedicated time and support should be built into participants' workloads for exchange programs and for building formal and informal relationships with peers and visiting faculty.

# External Universities



## External Universities

# Overview

External universities can play an important role in strengthening HRH in lower-resource settings. Faculty exchanges can provide important knowledge transfer and mentorship opportunities. However, a paradigm shift in how external institutions engage with their counterparts in host countries is needed. Rather than a one-sided giving of knowledge, relationships should be bi-directional exchanges that recognize the strengths and knowledge that exist on both sides. Additionally, the role of external universities should be targeted to fill gaps where regional exchanges—which generally provide a more relevant context for healthcare training—fall short.



The following possible actions provide some approaches for how to make relationships between external and host universities most beneficial for everyone.

## External Universities

# Possible Actions

### *Exchange programs*

Discussion participants expressed that for faculty to benefit from exchange programs between external and internal universities, there should be a focus on bi-directional learning. Visiting and host faculty should have personal as well as shared learning goals to work toward and clear expectations of the purpose and roles in the partnership. External universities should work with exchange program managers and host universities to ensure visiting faculty receive in-depth theoretical and practical cultural competency training, both before departure and throughout the program, so they understand the customs and power dynamics they will encounter in the country in which they will work. Finally, it should be noted that although exchange programs between external universities and universities in countries such as Rwanda can be valuable, particularly for gaining specialty knowledge, exchanges between countries with similar contexts are more likely to provide trainees with relevant practical experience.

# Possible Actions

### *Matching training to country and workforce needs*

The discussions highlighted that when the needs of the training and trainers are appropriately matched to the needs of the role they have been invited to fill, and to the needs of the workforce, visiting faculty can play an important role in strengthening existing programs and jointly identifying where new programs are most needed. Visiting faculty from external universities should come into the host country with an understanding of the strengths and resources already available and build on them, rather than coming into a host-country university with predetermined ideas about what training is needed. External universities should also help ensure exchange programs match the needs of the faculty to the appropriate level of intensity and mentoring. For sustainability, external universities should elevate the value of training the trainer by strengthening host-country faculty to teach in specialties and subspecialties and by mentoring clinicians to train future students.



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The idea of training specialists, people who could do top level research, training specialists that could trickle down into health centers ... was a unique and brilliant aspect of the HRH Program and can be informative in so many ways.

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**Participant, U.S. Government discussion session**

# Program Managers & Administrators



## Program Managers & Administrators

# Overview

Program managers and administrators pull together all the pieces of HRH programming and play a crucial role in implementing many of the suggested actions throughout this document. By coordinating the needs of the various stakeholders, managing evidence collection and use, and providing an impartial feedback mechanism for program participants, program managers and administrators can ensure HRH programs are effective, adaptable, and sustainable.

The following possible actions demonstrate the role program managers can play in supporting policymakers, funders, universities, healthcare practitioners, and communities in strengthening HRH.



## Program Managers & Administrators

# Possible Actions

### *Matching programming to workforce and country needs*

Discussion participants highlighted that program managers should ensure HRH program priorities and goals are set based on the needs of the workforce and the local community determined through robust needs assessments as well as health labor market analyses. Before starting a partnership, program managers should consult with the local community to determine what is needed on the ground. Then, they should match institutions and programs based on those needs. Community members should be included on advisory boards to ensure ongoing input from the community. Program managers should work with funders and other government stakeholders to base programming on the country's existing strengths and resources, and with government stakeholders and universities to help ensure that training on specialties and subspecialties is based on the country's needs and what the market can absorb. Program managers should also play a role in coordinating between external and host country universities to match participants' needs to the appropriate level and intensity of mentorship.

## Program Managers & Administrators

# Possible Actions

### *Exchange programs*

In discussions, participants shared that exchange programs should be set up and managed to meet the needs of the workforce and host institutions. Program managers should consider the program's goals in determining whether to partner with universities in similar contexts or with universities that can fill a gap in the current skillset. Before exchange programs begin, program managers should ensure visiting faculty have sufficient understanding of the culture they'll be visiting and are aware of the opportunities for bi-directional learning and learning from working in a different setting. Program managers can set expectations that lead to mutually beneficial partnerships by requiring visiting faculty and host faculty to set individual and joint learning goals. Acting as or creating a neutral body to facilitate relationships and provide a structured mechanism for feedback could help program managers mitigate issues that arise. Program managers should also work with host universities to ensure faculty have enough time dedicated to the exchange program and clear roles, responsibilities, and objectives.

## Program Managers & Administrators

# Possible Actions

### *Evidence-informed practice and adaptation*

As discussion participants suggested, program managers should work with funders to make sure research — as well as program monitoring and evaluation—is planned for at the start of an HRH program and sufficiently resourced. HRH programs should increase the use of qualitative research in generating evidence that informs practice. Program managers should consider including anthropologists on monitoring, evaluation, and learning teams to gather more data on how people interact and what makes groups and relationships successful. Program managers should work with other stakeholders to make sure the evidence being collected is appropriate for the cultural setting and is being applied to ongoing program management and adaptation.

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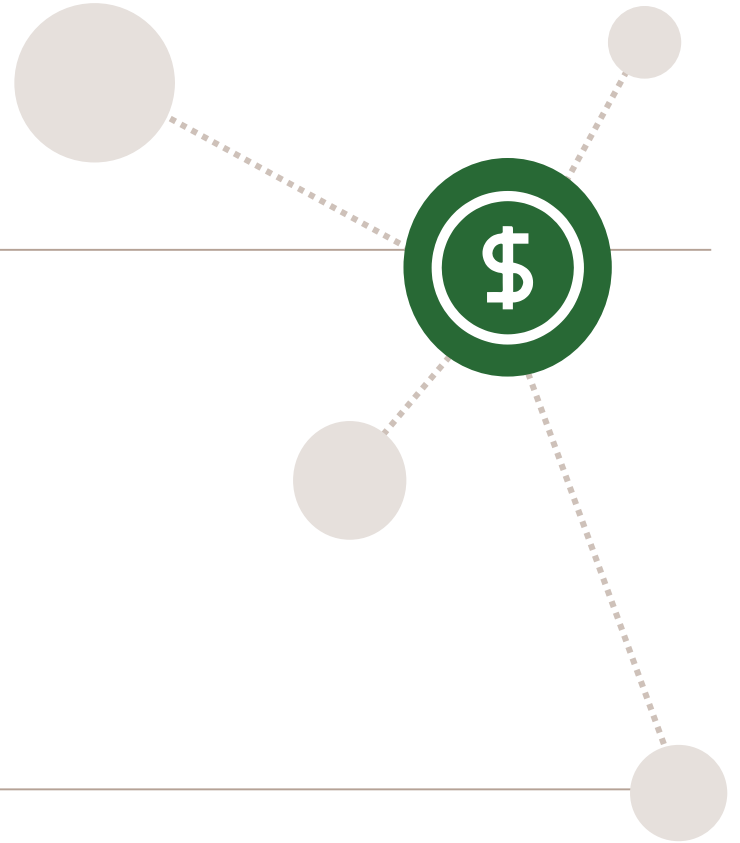
Research is needed to build locally relevant algorithms of care outside of university settings and should be coupled with qualitative research to ensure such recommendations are appropriate from an anthropological/cultural perspective, and therefore can be operationalized.

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**Participant, Building the Health Workforce discussion session**

# Donors/ Funders





# Overview

Funding plays a foundational role in strengthening HRH. It is important not only for training and exchange programs, but also for in-depth, culturally appropriate evidence collection to inform practice. However, shifting priorities and unexpected changes to funding levels can undermine HRH programs and outcomes. The following possible actions suggest ways funders can work with recipient governments to ensure that program funding is sustainable and directed to activities that reflect a country's needs and priorities.



# Possible Actions

### *Country-led approaches*

For discussion participants, funders should strengthen country ownership of HRH programs by designing their funding policies to respond to the programmatic priorities and interests that emerge from a robust local strategy process. Funders should support a program scope that includes quantity *and* quality of people trained and has the flexibility to accommodate surge and sustainability.

### *Mitigating against shifting priorities*

Changes in funders' priorities and commitments can disrupt program implementation and put positive outcomes at risk. Discussion participants noted that funders should provide resources in a way that aligns with and is in support of local strategy, including working in concert with other funders to mitigate strategy fragmentation in the event of shifting funder priorities. Further, discussion participants suggested that the host country could manage program funds and priorities (including monitoring and evaluation), and funding train-the-trainer approaches.

# Possible Actions

### *Data collection, quality, and use*

Discussion participants felt that funders should provide adequate resources to collect high-quality qualitative and quantitative data from the start, including developing a robust monitoring and evaluation plan during the design phase. Ongoing, in-depth data collection—including data on how teams and individuals interact in exchange programs—supports adaptable, evidence-based programming. Donors and program managers should agree from the start on what data will be collected and what the data will be used for, based on a well-thought-out theory of change. Donors and program managers should agree on a data plan that includes data to monitor and course-correct, track academic publications, and evaluate the program, including an analysis of cost.

## Section 04

# Closing

Health systems are complex, requiring all stakeholders to work together to create the coherence that makes the system function effectively. In strengthening HRH, policymakers, host-country universities, external universities, program managers and administrators, and donors/funders should play coordinated, complementary roles. When they do, they can build a health system that is responsive to the community's needs, reaches the entire population, and continues to improve and advance the quality of care.



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