

Global Evaluation and Monitoring Network for Health (GEMNet-Health)

An Institutional Partnership as a Vehicle for Capacity Building

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ABBREVIATIONS

ACIPH Addis Continental Institute of Public Health

CLEAR Centers for Learning on Evaluation and Results

CPC Carolina Population Center

FTE full-time equivalent

GEMNet-Health Global Evaluation and Monitoring Network for Health

GIS geographic information system(s)

HIS health information system(s)

INSP Instituto Nacional de Salud Pública

KU Kenyatta University

M&E monitoring and evaluation

MOU memorandum of understanding

PHFI Public Health Foundation of India

RHIS routine health information system(s)

3ie International Initiative for Impact Evaluation

TOT training of trainers

UG University of Ghana

UP University of Pretoria

USAID United States Agency for International Development

WHO SEARO World Health Organization South-East Asia Region

EXECUTIVE SUMMARY

The Global Evaluation and Monitoring Network for Health (GEMNet-Health) is a group of training institutions that fosters organizational growth, collaboration, and peer-to-peer support for the monitoring and evaluation (M&E) of health programs through ongoing linkages among members. The member institutions are located worldwide and, because each member has diverse skills and experiences, the GEMNet-Health partnership acts as a global resource for teaching and training, research, technical assistance, and capacity building across a range of M&E-related topics. As members share, they in turn become better able to address local, national, regional, and global needs in M&E.

Nine member institutions¹ founded GEMNet-Health in 2012 as a natural evolution of capacity-building efforts undertaken by the United States Agency for International Development (USAID)-funded MEASURE Evaluation project, based at the University of North Carolina at Chapel Hill.

The purposes of this paper are to (1) describe how GEMNet-Health has served as a global resource for teaching and training, research, and technical assistance while also strengthening the capacity of individual network members; (2) document the technical activities and materials that have been produced to date; and (3) explore how GEMNet-Health has added to the global knowledge base on partnership networks as vehicles for capacity building in the field of public health.

The role of institutional partnerships as a means of advancing our collective efficacy in public health is becoming more widely recognized. A search of the peer-reviewed literature revealed articles noting the promise of networks for strengthening institutional capacity in low- or middle-income countries. Some networks described in these papers were organized around public health content (such as AIDS, livelihoods, or food security); other networks were organized around specific skill areas (such as research, information dissemination, and workforce development). Collectively, the articles provided evidence of the benefits of peer-to-peer support, collective commitment, academic exchange, and facilitation of the accomplishment of important objectives with limited funding.

Since its launch in 2012, GEMNet-Health has had several technical and operational achievements. The scope of GEMNet-Health's technical activities has included developing and conducting joint training programs (inservice and pre-service), expanding M&E training activities at member institutions, providing technical assistance, conducting collaborative research, developing/harmonizing competency-based curricula, sharing knowledge and resources among members, and engaging with external stakeholders. GEMNet-Health has also worked toward operational sustainability by developing and implementing policies and procedures on the network's structure and its finances.

GEMNet-Health's impressive accomplishments are clear evidence that it is a successful example of an academic partnership. The existence of the GEMNet-Health platform has allowed for the pooling of technical expertise, harmonization of training curricula, sharing of information and learning among members, strengthened regional linkages, and the emergence of a global resource for M&E technical assistance.

¹ The nine founding member institutions of GEMNet-Health were Addis Ababa University, Ethiopia; Addis Continental Institute of Public Health (ACIPH), Ethiopia; Centre Africain d'Etudes Supérieures en Gestion, Senegal; Instituto Nacional de Salud Pública (INSP), Mexico; Mahidol University's Institute for Population and Social Research, Thailand; Public Health Foundation of India (PHFI), India; University of Ghana (UG), Ghana; University of Pretoria (UP), South Africa; and the University of North Carolina at Chapel Hill (USA), which served as the Secretariat until 2018. Kenyatta University (KU) School of Public Health, Kenya, joined GEMNet-Health as a full member in 2015.

Participation in GEMNet-Health has yielded benefits to individual network members. Some advantages of network participation have been mutual assistance and information sharing, formal bilateral linkages resulting in memoranda of understanding (MOUs), access to jointly developed and harmonized curricula, and cross-partner faculty exchanges.

GEMNet-Health has anticipated and adapted to the challenges of operationalizing the network. It has implemented creative and successful ways to work toward technical and operational sustainability. An equally important and essential ingredient of the network's success has been the trust and rapport among member institutions. The camaraderie and positive energy were evident at the network's launch meeting. The relationships evolved and grew as the network matured and were displayed at every in-person gathering of network representatives. There was genuine respect for fellow network members, and an appreciation of the benefits of network membership. Over the years, members have been champions and advocates for GEMNet-Health at their home institutions and beyond.

GEMNet-Health's movement toward technical sustainability, by strengthening member institutions' capacity in M&E and health information systems (HIS), has resulted in a reputation for excellence of its joint training programs and technical assistance. As for the network's finances, although GEMNet-Health benefitted from the security of sustained funding from a single donor for seven years, network members recognized early on that it would be prudent to plan for transitioning from reliance on a single funding source to diversifying funding sources. Acknowledging the need to transition and beginning to plan for this transition have been critical to GEMNet-Health's continued functioning beyond the end of MEASURE Evaluation Phase IV.

The presence of an effective and well-resourced secretariat has also been an essential component of the network's success. GEMNet-Health's accomplishments to date would not have been possible without USAID's vision and long-term commitment. Effectively managing the transition of the secretariat from MEASURE Evaluation to another network member has affirmed the commitment of members to ensuring the network's well-being.

Network members have demonstrated a genuine commitment to seeing the network succeed, even to the extent of being willing, at times, to put the network's well-being ahead of their own institutions, as shown by GEMNet-Health's joint workshop revenue sharing policy.

Another reason for the network's success and the culture of partnership among network members was because they spoke a common language. All network members have a common approach to M&E because of their bilateral partnerships with MEASURE Evaluation before GEMNet-Health was launched.

Although GEMNet-Health has room to improve some technical and operational aspects, its future as a mature, independent network—with an expanding international footprint and a robust portfolio of collaborative activities, serving as a global resource for capacity building, technical assistance, and research in M&E—is within reach.

INTRODUCTION

GEMNet-Health is a group of training institutions that fosters organizational growth, collaboration, and peer-to-peer support for the M&E of health programs through ongoing linkages among members. The member institutions are located worldwide and, because each member has diverse skills and experiences, the GEMNet-Health partnership acts as a global resource for teaching and training, research, technical assistance, and capacity building across a range of M&E-related topics. As members share, they, in turn, become better able to address local, national, regional, and global needs.

Nine member institutions² founded GEMNet-Health in 2012 as a natural evolution of capacity building efforts under the USAID-funded MEASURE Evaluation project, led by the University of North Carolina at Chapel Hill. MEASURE Evaluation's previous capacity building efforts had established bilateral relationships with a variety of training institutions worldwide, often universities, in furtherance of its mission to improve methods, materials, and workforce capacity in the M&E of health programs. These early efforts resulted in a common approach to the content, competencies, and design of materials, and a common language among the bilateral partners about how to implement, sustain, and improve their pre-service and in-service training programs, research, and technical assistance efforts in the M&E of health programs. However, this bilateral model was limited in two ways: (1) it placed an institution from the North (CPC) at the center of all interactions; and (2) the rate of interaction among members was checked by the limits of MEASURE Evaluation's capacity to manage them.

Findings from a midterm evaluation of MEASURE Evaluation by USAID suggested a structural redesign of the project's approach to capacity building, from a set of bilateral relationships to a network model that was intended to promote South-to-South-leadership and learning. Moreover, by moving decision making to a leadership group comprised of representatives from the member institutions, the overall level of interaction between and among all participating institutions would increase.

Since its founding, GEMNet-Health has sought to promote a healthy world population through evidence-based decisions, policies, and interventions. Its mission is to empower member institutions to ensure access to quality M&E training, research, and services.

² The nine founding member institutions of GEMNet-Health were Addis Ababa University, Ethiopia; Addis Continental Institute of Public Health (ACIPH), Ethiopia; Centre Africain d'Etudes Supérieures en Gestion, Senegal; Instituto Nacional de Salud Pública (INSP), Mexico; Mahidol University's Institute for Population and Social Research, Thailand; Public Health Foundation of India (PHFI), India; University of Ghana (UG), Ghana; University of Pretoria (UP), South Africa; and the University of North Carolina at Chapel Hill (USA), which served as the Secretariat until 2018. Kenyatta University (KU) School of Public Health, Kenya, joined GEMNet-Health as a full member in 2015.

Vision

The vision of GEMNet-Health is for a healthy world population through evidence-based decisions, policies, and interventions.

Mission

The mission of GEMNet-Health is to empower member institutions to ensure access to quality monitoring and evaluation training, research, and services.

Core Values

The GEMNet-Health founding members identified the following core values as foundational tenets: accountability, commitment, cultural sensitivity, diversity, equity, impartiality, mutual respect, quality control at all levels, professionalism, resource-oriented, synergy, and transparency.



The purposes of this paper are to (1) describe how GEMNet-Health has served as a global resource for teaching and training, research, and technical assistance while also strengthening the capacity of individual network members; (2) document the technical activities and materials that have been produced to date; and (3) explore how GEMNet-Health has added to the global knowledge base on partnership networks as vehicles for capacity building in the field of public health.

LITERATURE ON INSTITUTIONAL NETWORKS AS VEHICLES FOR STRENGTHENING CAPACITY IN PUBLIC HEALTH

The role of institutional partnerships as a means of advancing our collective efficacy in public health is becoming more widely recognized. As a first step in creating a context for discussing GEMNet-Health as an institutional partnership, we conducted a search of the literature for peer-reviewed articles about networks as a tool for building capacity in public health published in the last 10 years. The search terms used were capacity strength, capacity enhance, capacity build, network, group, and public health. More than 300 articles from Web of Science, PubMed, and Global Health (EBSCOhost) were identified.

The following inclusion criteria were applied: (1) described the work of a **network**, defined as more than two organizations; (2) **capacity building** was explicitly stated as an objective of the network; (3) the network worked in the field of **public health**; and (4) some or all members of the network were from **low- or middle-income countries**. Following a review, 10 papers were found to meet the criteria and were included in the annotated bibliography. A diagram of the search strategy and its results is provided in Appendix A. A list of the articles meeting the inclusion criteria is given in Appendix B.

Although the literature review yielded relatively few papers meeting the inclusion criteria, they all noted the promise of networks for strengthening institutional capacity in low- or middle-income countries. Some networks described in the articles were organized around public health content (such as AIDS, livelihoods, or food security); other networks were organized around specific skill areas (such as research, information dissemination, and workforce development). Collectively, the articles provided a rich set of lessons learned and recommendations for practice, and evidence of the benefits of peer-to-peer support, collective commitment, academic exchange, and facilitation of the accomplishment of important objectives with limited funding. The relatively small number of examples in the literature, coupled with the networks' promise of meaningful contributions to sustainable capacity development, highlighted the importance of sharing additional experiences.

SCOPE OF GEMNET-HEALTH ACTIVITIES

Since its launch in 2012, GEMNet-Health has had several technical and operational achievements. The scope of the network's technical activities has included developing and conducting joint training programs (in-service and pre-service), providing technical assistance, conducting collaborative research, developing/harmonizing competency-based curricula, sharing knowledge and resources among members, and engaging with external stakeholders. GEMNet-Health has also worked toward operational sustainability by developing and implementing policies and procedures on the network's structure and its finances. The next section reviews GEMNet-Health's accomplishments to date in these areas.

Technical Activities

GEMNet-Health Joint Training Programs

GEMNet-Health's joint training programs are a good example of how the network's achievements as a whole are more than the sum of its parts. It identified joint training programs as a priority, to promote the network's profile and its global role in the field of public health. Although joint training programs can be offered on several M&E topics, those requiring specialized or advanced technical skills are especially well suited for joint delivery because collaborative training facilitates the sourcing of technical expertise from multiple partners. GEMNet-Health successfully developed and offered joint international workshops on several advanced M&E topics, drawing from expertise across member institutions.

The network identified impact evaluation as a priority for joint training in its first strategic plan. The first international impact evaluation workshop under the GEMNet-Health banner was conducted in 2014 in Pretoria, South Africa. It was followed by workshops in New Delhi, India in 2015; Accra, Ghana in 2016; Addis Ababa, Ethiopia in 2017; Bangkok, Thailand in 2018; and Accra, Ghana in 2019.

These workshops are a good example of the network's progress, first toward technical sustainability, and also toward financial sustainability (discussed later). From the outset, GEMNet-Health aimed for the workshops to be technically and financially sustainable. Key technical and financial milestones were achieved between 2014 and 2019. For technical sustainability, the network used the learning and mentoring model, which entailed a phased approach to faculty from member institutions acquiring skills to teach in the impact evaluation workshops. GEMNet-Health faculty members attended workshops and training of trainers (TOT) events, which were followed by co-teaching of sessions accompanied by mentoring, followed by teaching sessions independently. A TOT workshop was held in May 2016 in Accra, Ghana, attended by seven faculty members from the University of Ghana (UG) and nine faculty members from member institutions in Ethiopia, India, Kenya, and South Africa involved in teaching the impact evaluation workshop and other evaluation courses. The TOT had the specific objective of strengthening the capacity of the pool of GEMNet-Health instructors for future impact evaluation workshops.

As part of the MEASURE Evaluation project's capacity building strategy, its instructional support for the impact evaluation workshops gradually reduced over time, as GEMNet-Health instructors took on increased teaching responsibilities. The goal was for GEMNet-Health member institutions to offer such specialized training programs independently, by pooling technical expertise. The impact evaluation workshops have demonstrated progress along this continuum of capacity building, culminating in the network offering the

impact evaluation workshop independently in 2019 in Ghana, and being engaged to replicate the same workshop in Malaysia later in 2019.

Building on the success of the impact evaluation workshops, GEMNet-Health has offered workshops on other topics. International workshops on qualitative methods in the evaluation of public health programs have been offered annually from 2017 to 2019. A new workshop on health informatics was offered in 2018 and another is planned for early 2020. A summary of all joint training programs conducted by the network to date is provided in Table 1.

Table 1. GEMNet-Health international workshops, 2014 to 2019

Workshop Type	Number of Participants	Number of Countries Represented by Participants
Impact Evaluation of Population, Health, and Nutrition Programs		
2014 in Pretoria, South Africa	23	13
2015 in New Delhi, India	23	12
2016 in Accra, Ghana	22	13
2017 in Addis Ababa, Ethiopia	22	12
2018 in Bangkok, Thailand	22	17
2019 in Accra, Ghana	28	14
Qualitative Methods in Evaluation of Public Health Programs		
2017 in Accra, Ghana	27	14
2018 in Pretoria, South Africa	15	7
2019 in Bangkok, Thailand	17	11
Overview of Health Informatics for Low- and Middle-Income Countries		
2018 in Nairobi, Kenya	14	5

Participants at these international training programs have consistently rated them highly, for their content, method of delivery, and the quality of instruction. Recruitment and attendance at the workshops have been strengthened through the generous support of the International Initiative for Impact Evaluation (3ie) and UNICEF, which have provided fellowships for qualified applicants for the impact evaluation workshops and have advertised the workshops on their websites. The high level of demand and the overall quality of applicants bode well for offering workshops on these topics in the future. Additional sources of sponsorship need to be explored to continue to attract high-quality participants.

By working together, GEMNet-Health partner institutions pooled their technical expertise to offer training programs for which no single member had sufficient in-house expertise. The process of planning and conducting these joint events also strengthened relationships between among partners and helped the network further refine its role in the global public health field. The members' willingness to collaborate, and to share curricula and faculty expertise, were vital to the success of the joint GEMNet-Health workshops.

Expansion of M&E Training Offerings at Member Institutions

In addition to the joint GEMNet-Health workshops discussed above, the member institutions have conducted an impressive variety of in-service and pre-service M&E training programs independently. Examples include annual workshops on M&E of Health Programs at UG and UP and master's degree programs with M&E concentrations at PHFI, UP, and ACIPH. Although GEMNet-Health members already offered M&E training programs before the launch of the network, the programs have since benefited from the network's information sharing and collaborative curriculum development activities. Moreover, members have initiated new M&E training programs, such as a new master's degree program in M&E at UG, as a result of using and/or adapting curricula developed by GEMNet-Health.

All GEMNet-Health member institutions responding to a survey conducted by MEASURE Evaluation in mid-2019 indicated that they offered multiple in-person training programs on M&E or health information systems (HIS) that were made possible because of network assistance or resources.

Competency-Based Approach to Curriculum Development and Harmonization

Curriculum development and harmonization were identified as a priority by GEMNet-Health members at the network launch and continue to be a priority. The network has completed several activities to harmonize competencies in M&E topic areas and to develop curricula using a competency-based approach.

GEMNet-Health decided to promote harmonization rather than standardization of competencies, which would result in more consistent M&E training programs, but still allow individual institutions to develop curricula that met the needs of their target populations, institutional priorities, and faculty expertise. Network members reviewed their M&E course offerings to map existing curricula to align with core competencies developed by GEMNet-Health expert groups.

The network adopted a competency-based approach to curriculum harmonization so that members would have a solid foundation to develop more consistent M&E training programs. When designing M&E courses, it is important to consider the skills and knowledge people practicing evaluation in their workplaces will need. Although the skills needed will likely differ for professionals coming from different regions, countries, and institutions, there are core skills and knowledge that are globally recognized as essential for effective evaluation practice. Defining the levels of mastery expected of students completing the courses facilitates the development of learning objectives for each competency. Core competencies are used by those developing learning objectives and curricula, with the goal of participants achieving the specified levels of competencies.

GEMNet-Health's recommendations on core competencies for M&E training programs also aimed to serve as a useful resource to M&E trainers globally. The network's competency harmonization and curriculum development efforts have been presented at international conferences in Kolkata, India, Cuernavaca, Mexico,

at the American Evaluation Association conferences, and at the Council of Universities in Global Health conference in Atlanta, New York, Chicago, and Washington, DC.

GEMNet-Health has completed competency harmonization and curriculum development exercises for the following in-service and pre-service M&E training programs:

- Core M&E Competencies, Topics, and Learning Objectives for Workshops on M&E of Population, Health, and Nutrition Programs
- Advanced M&E Competencies for Workshops on M&E of Population, Health, and Nutrition Programs
- Core Competencies for Postgraduate Evaluation Courses (The report of the GEMNet-Health Task Group is available at https://www.measureevaluation.org/resources/publications/wp-17-188 en/.)
- Development of a curriculum module on Evaluation Theory
- Development of modular curriculum packages for a Postgraduate Overview Course on Evaluation
 (ongoing). Each module has a syllabus, with competencies, topics, and learning objectives specific to
 that module, session plans, PowerPoint presentations, case studies, and additional resources. (The
 available Postgraduate Evaluation Curriculum resources can be retrieved from
 <a href="https://www.measureevaluation.org/resources/training/capacity-building-resources/evaluation-of-health-programs-a-postgraduate-overview-course/evaluation-of-health-programs-a-postgraduateoverview-course.)

GEMNet-Health member institutions' faculty and staff have also been involved in several curriculum development activities led by MEASURE Evaluation, including the preparation and piloting of curricula on:

- Routine Health Information Systems: A Curriculum on Basic Concepts and Practice (in collaboration
 with other global leaders) (https://www.measureevaluation.org/our-work/routine-health-information-systems/rhis-curriculum)
- Qualitative Methods in Evaluation of Public Health Programs, a Curriculum on Intermediate
 Concepts and Practices (<a href="https://www.measureevaluation.org/resources/training/capacity-building-resources/qualitative-methods-in-evaluation-of-public-health-programs-a-curriculum-on-intermediate-concepts-and-practices/qualitative-methods-in-evaluation-of-public-health-programs-a-curriculum-on-intermediate-concepts-and-practices)
- Workshop on Impact Evaluation of Population, Health, and Nutrition Programs

 (https://www.measureevaluation.org/resources/training/capacity-building-resources/workshop-on-impact-evaluation-of-population-health-and-nutrition-programs-landing-page)
- M&E of Malaria Programs (https://www.measureevaluation.org/resources/training/capacity-building-resources/m-e-of-malaria-programs-1/m-e-of-malaria-programs)
- Health Informatics for Low- and Middle-Income Countries: Short Course for Health Information
 System Professionals (<a href="https://www.measureevaluation.org/resources/health-informatics-for-low-and-middle-income-countries-short-course-for-health-information-system-professionals/health-informatics-for-low-and-middle-income-countries-short-course-for-health-information-system-professionals)

Several GEMNet-Health member institutions have collaborated with MEASURE Evaluation to develop and adapt curricula. For example, INSP faculty helped refine and update the Workshop on Impact Evaluation curriculum. PHFI collaborated on the refinement and piloting of the Performance of Routine Information System Management tool. PHFI also worked with MEASURE Evaluation to customize curricula and conduct four in-country workshops in Nepal on impact evaluation, M&E of population, health, and nutrition programs, data quality assessment, and geographic information systems (GIS) applications in public health.

Other Collaborative Technical Activities

In addition to joint activities undertaken by the network as a whole, GEMNet-Health members have expressed interest in exploring collaboration between two or more network members. As the network matured and relationships among member institutions flourished, several formal and informal collaborative activities have occurred, including faculty exchanges, collaborative research, webinars, faculty members serving as external examiners for graduate level programs, and the execution of memoranda of understanding (MOUs). Most activities were done without external funding. Every GEMNet-Health meeting, especially the in-person meetings, has served as an important opportunity for member institutions' faculty and staff to establish linkages and explore creative ways of working together in areas of mutual interest.

To facilitate and promote collaboration and knowledge sharing among members, GEMNet-Health developed an inventory of M&E resources at all member institutions. By better understanding the depth and breadth of M&E expertise and M&E resources available among all partners, members can better identify areas for collaboration and knowledge sharing, which will guide the network's future activities.

As network members became more aware of the potential for collaborative activities, some members sought to formalize bilateral linkages for M&E research, curriculum development, technical assistance, training, or distance learning. For example, MOUs have been signed between PHFI and INSP, ACIPH and PHFI, and PHFI and UG. The MOUs facilitate and promote collaborative activities such as faculty exchanges, external examinerships, and adjunct appointments.

There have also been several instances of faculty exchanges between member institutions, ranging from guest lectures (virtual and in-person); faculty members serving as external examiners and thesis advisors for master's and PhD students at partner institutions; and faculty members from one institution serving in technical roles (e.g., statistician) on a research project at a partner institution.

GEMNet-Health has conducted several joint webinars over the years. These events have drawn on experts from several network members, have been TOT workshops for faculty and staff from GEMNet-Health member institutions, and have allowed for the sharing of new tools and products developed by GEMNet-Health with M&E professionals across the globe. Webinar topics have included: New Approaches to Integrating Data Demand and Use Concepts and Tools in M&E Training Programs; PRONTO (Obstetric and Neonatal Rescue Program): Preliminary Impact Estimations from a Hospital-Level Randomized Trial in Mexico; GIS for M&E of Public Health Programs: Applications and Capacity Building Experiences; The Experience Exchange on Monitoring & Evaluation (M&E) Guidelines for Sex Workers, Men who have Sex with Men, & Transgender Populations; Health Informatics Curriculum, Qualitative Evaluation Curriculum, Data Quality Assessments, and Data Analysis. These webinars highlight the breadth of M&E skills in the network membership.

To promote additional evaluation-related collaboration, MEASURE Evaluation contacted GEMNet-Health member institutions for ideas that could be implemented with a small amount of funding. Many interesting proposals were received. The project provided support for the following: process evaluation design for national health insurance schemes (PHFI, UG, and UP collaborated); development of a module on evaluation theory (INSP, KU, and UG collaborated); and the exchange of virtual courses (INSP and PHFI collaborated).

Among the network members, PHFI and INSP currently offer distance learning courses on M&E, evaluation, and routine health information systems (RHIS), and have explored collaborating on sharing virtual curricula. PHFI and INSP also offer virtual certificate courses and virtual academic degree programs on M&E topics. Several of these courses were developed in collaboration with MEASURE Evaluation, including short courses on the M&E of population, health, and nutrition programs and GIS applications in health at PHFI, and postgraduate programs in HIS and comprehensive evaluation at INSP. INSP and PHFI conduct several other in-service and pre-service virtual training programs on M&E-related topics that were developed without the involvement of GEMNet-Health. MEASURE Evaluation has supported the translation of a virtual, postgraduate evaluation degree program at INSP from Spanish into English, and INSP and PHFI have agreed to share curricula for virtual M&E courses/programs under their MOU. PHFI is working on contextualizing and adapting the INSP curriculum to develop a virtual certificate course on evaluation in English, to be offered on PHFI's virtual learning platform. Similarly, INSP is exploring the feasibility of translating PHFI's virtual short course on the M&E of population, health, and nutrition programs to offer it in Spanish on its virtual learning platform.

Links with External Stakeholders

Although the primary focus of GEMNet-Health activities has been to promote and expand collaborative activities among the network's member institutions, the exploration of linkages and collaborative activities with other organizations involved in capacity building and research activities have been prioritized, especially since the decision in 2015 not to expand network membership beyond its current composition.

For example, GEMNet-Health has had a relationship with 3ie since 2014. It has provided fellowships for the annual impact evaluation workshops. 3ie was also invited to participate in strategic discussions at the 2017 GEMNet Health Planning Meeting to explore collaboration on M&E activities.

GEMNet-Health has maintained a dialogue with the Centers for Learning on Evaluation and Results (CLEAR) about the development of curricula on evaluation topics. Representatives from CLEAR attended the 2017 Annual Meeting to discuss ways in which the different CLEAR centers could work with GEMNet-Health, especially on postgraduate-level evaluation curriculum development. Other collaborative activities have included joint panel presentations at two international conferences to showcase their respective evaluation curriculum development work. The CLEAR Anglophone Africa regional center invited three GEMNet Health experts, from UG, UP, and KU, to participate in an advisory capacity on a curriculum development exercise that CLEAR undertook in eight sub-Saharan African countries. GEMNet-Health experts attended two inperson meetings coordinated by CLEAR, in Uganda and Ghana, providing lessons learned and best practices from the network's postgraduate evaluation competency and curriculum development activities.

The World Health Organization South-East Asia Region (WHO SEARO) has collaborated on RHIS capacity building and networking activities in the Asia region. MEASURE Evaluation and PHFI were instrumental in

establishing a RHIS focus group with the Asia E-Health Information Network to coordinate and promote RHIS capacity building, advocacy, and knowledge management activities. PHFI has also been engaged by WHO SEARO to conduct a RHIS workshop for Ministry of Health staff in the Maldives, and to implement WHO's SCORE tool for health data in several South Asian countries.

GEMNet-Health has engaged more broadly with global stakeholders through technical presentations and conference participation to showcase technical activities, especially in curriculum development. Presentations have been made at the World Public Health Congress in Kolkata, India in February 2015, at the American Evaluation Association conferences in 2016 and 2017, and at the Council of Universities in Global Health in 2015 and 2018.

M&E Technical Assistance

With its diverse set of skills and experiences, and with members located throughout the world, GEMNet-Health is well-placed to offer technical assistance to others interested in capacity building on M&E and HIS topics. GEMNet-Health experts have been engaged to provide technical assistance in several contexts over the past few years. The network's international pool of trainers can adapt and customize curricula to suit specific audiences, geographic contexts, and teaching settings. Examples are:

- Experts from UG and UP joined MEASURE Evaluation to conduct TOT workshops at universities in Tanzania and Nigeria to develop and offer their own M&E master's degree programs and workshops, respectively.
- PHFI experts worked with MEASURE Evaluation to conduct customized workshops on the M&E of
 population, health, and nutrition programs, impact evaluation, GIS, and data quality assessment in
 Nepal, and impact evaluation and RHIS workshops in Bangladesh.
- UP adapted the curriculum on Evaluation of Malaria programs and conducted a country-level course for staff of the malaria control program in Mozambique.
- UG, ACIPH, and UP served as local implementing agencies for USAID-funded evaluation studies.
- PHFI provided technical assistance to WHO SEARO to implement the SCORE tool in South Asian countries, and to customize and deliver a RHIS workshop to Ministry of Health officials in the Maldives.
- GEMNet-Health experts were invited to design and deliver a customized two-week workshop on impact evaluation for researchers at the National Institutes of Health in Malaysia in November 2019.
- GEMNet-Health experts were invited to assist with the development of competency-based curriculum materials for a new master's degree program in M&E to be developed by the University of Sri Jayawardenapura, Sri Lanka.
- The network was included as a resource partner for the USAID-funded Data for Implementation project awarded to the Palladium Group.
- GEMNet-Health was included as project partner on two bids submitted for USAID funding: Moving Integrated, Quality Maternal, Newborn, and Child Health and Family Planning and Reproductive Health Services to Scale (Momentum 2C) and Country Health Information Systems and Data Use.

NETWORK OPERATIONS

Operational sustainability of the network has been a focus from the outset. Starting with the launch meeting in 2012, members have worked to set a solid foundation for network operations.

From 2012 – 2014, the following activities relating to network operations were conducted:

- Created a network identity and logo, establishing the visual aspects or image, which served as the basis for building the GEMNet-Health "brand."
- Established a GEMNet-Health webpage and Sakai-based network resource center. The webpage is currently part of the websites of MEASURE Evaluation and UG and is GEMNet-Health's "public face." The Sakai-based network resource center serves as an archive and virtual workspace for GEMNet-Health members and its secretariat.
- Created bylaws that guide day-to-day network operations.
- Prepared communications and advocacy tools that GEMNet-Health members can use to inform
 people at their home institutions so as to broaden and strengthen member engagement, and to inform
 external stakeholders on GEMNet-Health's mission, vision, and current activities.
- Developed network documents on "Planning and Conducting Joint GEMNet-Health Training Programs" and "Guidelines for Responding to Technical Assistance Requests" to further support the day-to-day implementation and management of activities that serve the global M&E community.
- Prepared the GEMNet-Health Business Plan and Prospectus to guide the growth, sustainability, and management (both financial and operational) of the network.
- Identified strategies for leadership and member engagement to continually strengthen and enhance individual involvement of people at member institutions.

Although regular network committee meetings have been conducted virtually, members recognized the importance of having in-person meetings to build relationships and trust among member representatives, and to develop strategic plans and workplans for network activities. The frequency of in-person meetings has been dictated by financial constraints; they have been held about every 18 months. The meetings have been essential to the functioning of the network. Themes for the planning meetings varied over the years, but have generally addressed the following topics:

- Review of GEMNet-Health accomplishments over the past two years.
- Exchange information on new and current evaluation and health system-related activities at each GEMNet-Health member institution.
- Discuss potential collaboration with other organizations, including 3ie and CLEAR.
- Discuss current and future collaboration among GEMNet-Health member institutions.
- Identify and prioritize a list of potential future technical and operational activities for GEMNet-Health.
- Develop the GEMNet-Health Capacity Building and Strategic Action Plan.

An important finance-related achievement was the development of the GEMNet-Health Joint Workshop Revenue Sharing Policy in March 2016.

Network Structure

Discussions about the network's operational sustainability have been held from the outset. However, decisions about fundraising and other operational sustainability issues were deferred while the network focused on technical activities, mainly because it could rely on sustained funding from MEASURE Evaluation.

As the end of MEASURE Evaluation approached, the network revived discussions about key operational sustainability issues. Members agreed that they wanted GEMNet-Health to continue beyond the life of MEASURE Evaluation. In September 2017, the GEMNet-Health Steering Committee decided that the two broad areas of network structure/secretariat and network finances were high priority, warranting attention and careful deliberation.

Network members made the following decisions about the network structure and secretariat:

- Registering GEMNet-Health as an autonomous independent entity would not be pursued at this time. This option can be revisited in the future, as members wish.
- Expanding full membership would not be considered at this time; however, an alternate expansion
 was proposed, involving the possible addition of affiliated members or observers, with institutions
 participating at their own cost and becoming involved in technical activities. The group agreed to
 explore and clearly define the idea of observer status, with boundaries on proprietary
 information/intellectual property, involvement in fundraising, quality concerns, etc., clearly delineated.
- The transition of the secretariat from MEASURE Evaluation to another network member needed to take place. The core functions of the GEMNet-Health secretariat were defined as:

Administrative and Coordinating Functions

- O Developing the network's strategic plans and annual workplans
- o Coordinating funder relations and generating funding for network activities
- o Organizing regular meetings of standing committees and technical working groups
- o Maintaining all communication channels to promote active member participation
- Overseeing financial management of network resources

Technical Assistance and Support Functions

- Providing technical support services for all standing committees and technical working groups
- Providing technical support services to prepare GEMNet-Health technical and administrative reports
- o Providing office and logistics support for network activities

Staffing levels required to provide the GEMNet-Health secretariat functions were estimated to be: 0.5 full-time equivalent (FTE) Senior Technical Staff (with M&E expertise); 0.5 FTE Junior Technical Staff (with M&E expertise); 0.5 FTE Administrative Staff; 0.10 FTE Financial Staff; office space; communications infrastructure; and supplies/postage.

- At the September 2018 Steering Committee meeting, the following recommendations on criteria for selecting future secretariat sites were approved:
 - O Cost estimates for performing key secretariat functions
 - A strong team: includes commitment, willingness, innovative resources, number of relevant technical staff, ability to dedicate staff time to secretariat functions, and infrastructure to support virtual meetings.
 - Financial management: includes foreign exchange issues, financial management mechanism, ability to pay honoraria/wire transfers to local and foreign experts, and experience with grant management and reporting.
 - Fundraising: this new secretariat function will be crucial going forward as the network implements recommendations on exploring multiple donors to offset expenses for secretariat functions and technical work.
- Based on the review of proposals submitted by network member institutions interested in serving as
 the next secretariat site, UG was unanimously selected, effective March 1, 2019. A transition plan was
 implemented and was completed in August 2019, with the final handover taking place at an in-person
 planning meeting in Accra in August 2019.

Network Finances

With the impending end of MEASURE Evaluation support for GEMNet-Health, members agreed that fundraising needed to be a priority going forward. To that end, a fundraising subcommittee was convened to oversee the development and implementation of a strategy to cover the financing of secretariat functions and network technical activities in the future.

Effective networks need dedicated resources for technical activities and administrative support. GEMNet-Health currently relies on several funding sources to support secretariat functions and technical activities, as follows:

• In-kind contributions from network members: GEMNet-Health members agreed from the outset not to levy dues for membership. Instead, members have demonstrated their sustained commitment by providing generous in-kind contributions in the form of representation on all committees and technical groups to accomplish the activities in the network's action plans. A rough estimate of in-kind contributions (technical/administrative/finance staff time) that GEMNet-Health member institutions donate on an annual basis for network activities (e.g., planning and attending meetings, knowledge management time to edit final versions of documents, grant management, fundraising, etc.) was calculated. Revenue from GEMNet-Health workshops: The GEMNet-Health Joint Workshop Revenue Sharing Policy states that surplus workshop revenue will be divided into two portions: (1) a percentage of the surplus revenue is allocated to the host institution; and (2) the remaining surplus also remains with the host institution, but is earmarked to spend on GEMNet-Health activities. It was agreed that the division of the surplus would be negotiated for each workshop using the following three options: 50/50 (50% to host institution, 50% for future

GEMNet-Health activities); 60/40 (60% to host, 40% for future GEMNet-Health activities); or 70/30 (70% to host, 30% for future GEMNet-Health activities).

The policy stipulates that each host institution will ensure that that the earmarked funds are spent on GEMNet-Health activities. The host institutions will retain the GEMNet-Health earmarked portion of the surplus funds and will inform the GEMNet-Health Executive Committee about the activity(ies) on which it plans to spend the earmarked percentage of the workshop surplus, for discussion and agreement.

This revenue sharing policy was successfully piloted in 2016 at the Impact Evaluation workshop held in Ghana and has continued to be implemented for all GEMNet-Health workshops subsequently conducted. The network members' willingness to implement this policy (and to share the surplus revenue) demonstrates their commitment to the network's sustainability, rather than focusing solely on institutional gains for each partner. This bodes well for offering more joint training programs under the GEMNet-Health banner.

- Revenue from technical assistance and collaborative research projects: An agreed on overhead percentage is being levied on all GEMNet-Health technical assistance and research activities. The use of these funds is treated in the same manner as the joint workshop revenue discussed above. Until GEMNet-Health decides that it is time to incorporate the network as a legal entity, as Secretariat for the network, UG is authorized to enter in contractual agreements with partners/donors/clients on behalf of GEMNet-Health.
- Funding from external sources: MEASURE Evaluation has provided funding for all GEMNet-Health secretariat support functions listed above from the network's inception until March 2019, and during the implementation of the secretariat transition plan, from March to August 2019. Other external funding sources have been limited to fellowship support from 3ie for the impact evaluation workshops and to income from technical assistance clients.

DISCUSSION

GEMNet-Health: An Example of a Successful Academic Partnership

The impressive list of accomplishments is clear evidence that GEMNet-Health is a successful example of an academic partnership. The activities and products made possible by the existence of the GEMNet-Health platform have been joint training programs that draw on pooled technical expertise; harmonization and development of competency-based training curricula; knowledge sharing and other linkages among network members; and the emergence of a global resource for M&E technical assistance. Participation in GEMNet-Health has also yielded benefits for individual network members: mutual assistance and information sharing; formal bilateral linkages resulting in MOUs; access to jointly developed/harmonized curricula; and cross-partner faculty exchanges.

Factors Contributing to GEMNet-Health's Success

Achieving Technical Sustainability

GEMNet-Health has made significant movement toward technical sustainability by strengthening training capacity for monitoring, evaluation, and HIS since its inception. The technical capacity of member institutions has increased, resulting in the sustainability of specialized joint training programs. The cross-partner faculty exchanges and interactions have provided valuable professional development and mentoring opportunities, and beneficial interactions among international colleagues with shared research interests.

Periodic capacity assessments of GEMNet-Health conducted by MEASURE Evaluation, have provided information for the development of strategic plans and capacity building plans for the network, and have yielded evidence of institutional capacity strengthening. Capacity assessment is useful for identifying performance gaps; understanding relationships and factors that hinder or facilitate capacity building activities; developing appropriate capacity building plans that address capacity gaps and capitalize on local strengths/assets; and document gains in capacity and results/achievements.

An important input into the original GEMNet-Health Strategic Plan and Capacity Building Plan was a rapid capacity assessment of GEMNet-Health conducted by MEASURE Evaluation using a customized capacity assessment tool and a faculty survey. A midline capacity assessment was carried out in 2017. In June 2019, an end line rapid assessment of GEMNet-Health capacity was implemented to coincide with the end of MEASURE Evaluation Phase IV. The capacity assessment survey tool used for the three assessments was similar. A few new questions were added and the follow up of key informant interviews was conducted during the end line assessment to solicit in-depth information about the perceived benefits of network membership.

The network's member training institutions had well-established M&E activities even at baseline, due at least in part to previous bilateral M&E training partnerships with MEASURE Evaluation. This M&E experience was reflected in the technical skills of the network and each of its partners. GEMNet-Health has members skilled in a range of topic areas, with many members comfortable conducting training programs, collaborating on research, providing technical assistance, and mentoring others in GEMNet-Health.

The main areas of technical expertise at baseline were: basic M&E concepts, M&E indicators, data analysis, M&E frameworks, and survey design. These were also the areas in which the largest number of faculty were comfortable mentoring others. The main areas of technical expertise at midline were: data analysis, basic M&E concepts, impact evaluation, regression analysis, and M&E indicators. The addition of impact evaluation to the list is important to note, and reflects the focus on capacity building in this area during the first half of MEASURE Evaluation Phase IV. End line results showed enhanced expertise in the areas of impact evaluation, evaluation design, survey design, qualitative/mixed methods, and RHIS. These results reflect the continued focus on strengthening capacity in rigorous evaluation, and the effect of curriculum development activities in such areas as qualitative evaluation and RHIS.

The capacity assessment of the network conducted in mid-2019 included a survey of steering committee members' perceptions of what they felt were the main benefits of network membership. GEMNet-Health partners reported that over the past five years, there was an increase in the number of faculty members/staff who were comfortable teaching, providing technical assistance and/or conducting research in the following topic areas: impact evaluation, evaluation design, economic evaluation, survey design, qualitative or mixed methods, RHIS, and HIS. They attributed this change to participation in GEMNet-Health activities.

In mid-2019, MEASURE Evaluation also conducted key informant interviews with current and past chairs of GEMNet-Health. The interviews provided an opportunity to delve deeper into the network membership experiences from their unique perspectives. Some illustrative examples of their reflections were as follows:

- When asked about the most important benefits of GEMNet-Health for network members, PHFI and UG said that the joint training programs, curriculum development/harmonization, collaboration with one or more institutions, information sharing, technical inputs, communication/networking, and financial sustainability were the most impactful.
- PHFI also mentioned the benefits of increased partnership, the signing of MOUs with UG, INSP, and ACIPH, and the benefits accruing to PHFI's academic offerings by drawing on GEMNet-Health activities and expertise to strengthen M&E components in their curricula. UG echoed PHFI's sentiments, saying "that institutional capacity expanded in the areas of M&E, impact evaluation, qualitative evaluation, and RHIS. Faculty of the school have participated in training of trainers workshops, which has led to increased capacity, that then led them to assume roles as workshop facilitators." One of the most beneficial effects has been UG's ability to offer a new Master of Science degree program in public health M&E, launched in 2018, using GEMNet-Health curricula and training materials. The UG respondent said that "before GEMNet-Health, the School had been running short courses in M&E in malaria and HIV, and had some capacity, and now, we can run a master's program— thanks in large part to capacity built through GEMNet-Health materials and expertise. The contribution of GEMNet-Health is significant."
- Commenting on the unique characteristic of GEMNet-Health and the culture of sharing and partnership in the network, the PHFI respondent stated, "We don't look at GEMNet-Health as a creation of MEASURE Evaluation. We look at it as an equal partnership that cuts across academics, research, technical assistance, and overall competencies related to M&E and HIS. GEMNet-Health has been a unique relationship at multiple levels. We, as member institutions, felt we are in the driver's seat—our voice and opinions mattered—and we chose what we thought was in our best interest."

Respondents from PHFI and UG also commented on the significant, beneficial impact of connections
established between individuals and institutions due to GEMNet-Health activities. They believed that
there was potential for even "bigger and better" connections, especially engaging in faculty exchanges
and collaborating on research and technical assistance projects of mutual interest.

The structure of GEMNet-Health has allowed the network to serve as an effective mechanism for organizing and building on the collective technical capacity of network members. The GEMNet-Health platform is used to facilitate a collaborative approach to building training capacity in specialized/advanced topics, such as rigorous evaluation, whereby several institutions combine and pool expertise and resources rather than rely on the skills of just one institution to offer the training programs. By sharing expertise and capitalizing on the relative strengths of individual institutions, the prospect of technical sustainability of these training programs in the network is improved.

The overarching goal of GEMNet-Health's capacity building plans has been to position the network to serve as a key resource for providing M&E services at the local, regional, and global levels, while also providing a platform for information sharing and collaboration among member institutions. By investing in strengthening technical capacity of member institutions in rigorous evaluation and HIS and simultaneously consolidating the network's infrastructure, GEMNet-Health has been well-positioned as an instrument for achieving MEASURE Evaluation Phase IV results. Strengthening the technical capacity of GEMNet-Health members and the network are essential to conduct the training programs, provide technical assistance to countries, and conduct research on technical priority areas in a sustainable way. A range of interventions, including formal training programs, mentoring, co-teaching, curriculum development, providing opportunities for field experience, and facilitating research, have been used to strengthen GEMNet-Health's capacity in MEASURE Evaluation priority areas. Faculty exchange options among GEMNet-Health partner institutions likewise served to enhance technical capacity of member institutions. Collaborative research, external thesis advisors, guest/visiting lectures, adjunct appointments, fellowships for junior faculty/post docs, external examiners, joint publications/reports, and sabbatical placements are some of the collaborative activities that could continue to be pursued more vigorously in the future.

Focusing on Operational Sustainability

Network Finances

Although GEMNet-Health has benefitted from the security of sustained funding from a single donor for seven years, network members recognized early on that it would be prudent for the network to plan for diversification to receive funds from multiple sources.

GEMNet-Health has agreed to rely on several funding streams to support its activities. In-kind contributions from network members, in the form of representation on all committees and technical groups will continue as a key source of revenue.

Profits from joint GEMNet-Health workshops have been and should continue to be a growing source of revenue for network activities. Although GEMNet-Health experts have engaged in technical assistance and collaborative research activities, these are areas that have much room for expansion. GEMNet-Health already has a solid reputation for delivering high quality, customized workshops, such as the impact evaluation workshop for the National Institutes of Health in Malaysia. As this reputation grows, by becoming known as

the source for providing contextualized M&E training programs at the institution, country, or regional level, GEMNet-Health should be able to count on this as a steady, significant stream of revenue. GEMNet-Health should be more proactive about pursuing other technical assistance opportunities, such as serving as a technical resource to local implementing partners for donor-funded M&E activities. With donors such as USAID adopting self-reliance as a priority for their development assistance and looking to institutions in low-and middle-income countries to serve as direct award recipients, GEMNet Health members are well placed to step into these roles, either individually or by leveraging their cross-partner linkages.

Collaborative research is another potential source of revenue where there is room for expansion. GEMNet members have already submitted collaborative proposals for small grant programs but should explore this revenue stream more vigorously. Opportunities for joint research should be investigated more systematically, and a culture of collaboration and sharing around M&E research activities promoted more actively. Focused efforts should be directed to building skills and competencies in research. Activities could include developing a repository of relevant research resources, developing a moderated community of practice on evaluation, sharing or circulating donor requests for proposals, data sharing, and maintaining an up-to-date inventory of institutional research capacity to promote future collaborative research activities.

With the end of MEASURE Evaluation funding ending, network members recognized the need to move forward quickly to plan for and diversifying funding sources and will be actively engaging in fundraising from external sources. The fundraising subcommittee, reaching out to potential donors interested in supporting the network's technical and operational activities. Fortunately, the availability of GEMNet-Health-earmarked revenue from joint workshop surpluses generated during 2016 to 2019, and some limited bridge funding from MEASURE Evaluation will serve as a valuable cushion to cover expenses until adequate funds are secured from external sources. In addition to looking for donors to support the network's secretariat functions, GEMNet-Health should also explore funding from external sources for some network activities, such as fellowship support for joint workshop participants, cost sharing for GEMNet-Health workshops, collaborative research/curriculum development activities, technical assistance from external expert instructors and keynote speakers, and TOT workshops on specific topics.

Network Structure

The presence of an effective and well-resourced secretariat has been an essential component of the network's success. GEMNet-Health's achievements would not have been possible without USAID's vision and long-term commitment to supporting institutional capacity building of MEASURE Evaluation's network of regional training partner institutions. USAID provided funding through MEASURE Evaluation, not only to develop and offer GEMNet-Health's initial workshops, but also covered the network's secretariat expenses fully.

As a result of astute and farsighted leadership, the network has been able to follow a phased secretariat transition plan, allowing UG to assume secretariat functions fully before MEASURE Evaluation Phase IV ends, thereby letting network activities continue without interruption.

Smooth leadership transitions have taken place at regular intervals, as stipulated in the network's by-laws. These seamless transitions were made possible because of successful efforts by steering committee representatives to involve a deep pool of faculty/researchers in their home institutions who were interested in GEMNet-Health's activities. The depth of involvement at each institution allowed for the grooming of a

second and even third wave of faculty members who were ready to assume roles on the steering committee and other standing committees and task groups, when the original members retired, left the institution, or decided to step down for other reasons.

It is remarkable that GEMNet-Health has been able to not only weather the departure of some of the original group of dedicated representatives who launched the network but managed to grow and flourish with those that followed them. The new cohorts of representatives have managed to sustain the enthusiasm of the founding group and build on their accomplishments.

Culture of Partnership

GEMNet-Health has implemented creative and successful ways to work toward technical and operational sustainability. An equally important and essential ingredient of the network's success has been the trust and rapport among member institutions. The camaraderie and positive energy were evident at the network's launch meeting. These relationships evolved and grew as the network matured and were displayed at every in-person gathering of network representatives. There was genuine respect for fellow network members, and an appreciation of the benefits of network membership.

The founding members' representatives who attended the launch meeting were senior researchers and/or administrators at their home institutions. They generated support for GEMNet-Health in their home institutions, were in positions where they could commit their institutions to in-kind contributions, and to speak and vote on behalf of their institutions on GEMNet-Health policies, procedures, and technical activities. This original cohort of representatives were staunch supporters of the network's mission and believed in its purpose. Over the years, they have proven to be true champions and advocates for the network in their home institutions and beyond.

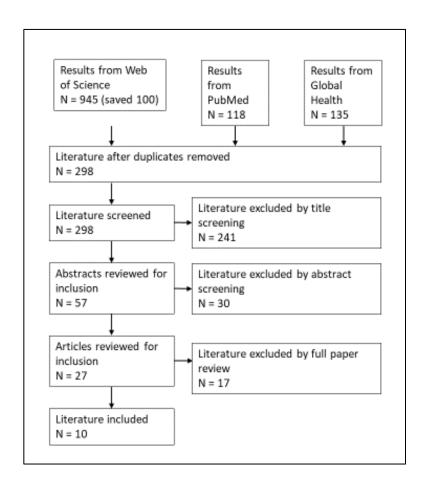
Another reason for how well the network members fit together could be because they spoke "a common language." All network members already had several years of bilateral partnership with MEASURE Evaluation, and were familiar with and generally followed the same approach to M&E of health programs promoted by MEASURE Evaluation. This shared approach to M&E made it easy for faculty and researchers to interact, relate to each other professionally, and collaborate on activities of common interest.

The Future

The future for GEMNet-Health is uncertain, but hopeful. Several advantages put GEMNet-Health in good stead, including high-quality technical capacity, a culture of partnership, low direct cost structure, a diversified set of financial sources that has room to expand, an increasing global demand for a workforce trained to use information to guide health programs, and a corresponding recognition that local organizations are best suited to act as repositories for the expertise needed to meet local public health needs. At the same time, GEMNet-Health faces some daunting challenges, most immediately generating enough stable revenue to support a highly competent secretariat, and not far behind, the task of adapting and right-sizing the organization to maintain high member participation and technical quality while anticipating future opportunities.

There are always challenges. But as GEMNet-Health looks to the future, the prospect of a mature, independent network with an expanding global footprint and a robust portfolio of collaborative activities, serving as a global resource for capacity building, technical assistance, and research in monitoring and evaluation, is within reach.

APPENDIX A. LITERATURE REVIEW SEARCH STRATEGY



APPENDIX B. LITERATURE REVIEW ARTICLES MEETING INCLUSION CRITERIA

Aikins, A. d. G., Arhinful, D. K., Pitchforth, E., Ogedegbe, G., Allotey, P., & Agyemang, C. (2012). Establishing and sustaining research partnerships in Africa: a case study of the UK-Africa Academic Partnership on Chronic Disease. *Globalization and Health*, 8(1), 29. Retrieved from https://www.researchgate.net/publication/230684526 Establishing and sustaining research partnerships in Africa A case study of the UK-Africa Academic Partnership on Chronic Disease.

Amde, W. K., Sanders, D., & Lehmann, U. (2014). Building capacity to develop an African teaching platform on health workforce development: a collaborative initiative of universities from four sub Saharan countries. *Human Resources for Health, 12,* 31. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24886267.

De Castro, P., Marsili, D., Poltronieri, E., & Calderon, C. A. (2012). Dissemination of public health information: key tools utilised by the NECOBELAC network in Europe and Latin America. *Health Information and Libraries Journal*, 29(2), 119–130. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/22630360.

Ezeh, A. C., Izugbara, C. O., Kabiru, C. W., Fonn, S., Kahn, K., Manderson, L., . . . Thorogood, M. (2010). Building capacity for public and population health research in Africa: the consortium for advanced research training in Africa (CARTA) model. *Glob Health Action*, *3*, 5693–5693. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/21085517.

Frankenberger, T.R., & Nelson, S. (2011). Ex-post impact assessment review of the Regional Network on AIDS, Livelihoods, and Food Security (RENEWAL), Impact Assessment Discussion Paper No. 33. Washington, DC, USA: International Food Policy Research Institute. Retrieved from http://www.ifpri.org/publication/ex-post-impact-assessment-review-regional-network-aids-livelihoods-and-food-security.

Gitta, S. N., Mukanga, D., Babirye, R., Dahlke, M., Tshimanga, M., & Nsubuga, P. (2011). The African Field Epidemiology Network-networking for effective field epidemiology capacity building and service delivery. *The Pan African Medical Journal*, 10 Supp 1, 3. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/22359691.

Guzman, J. A. C., Espinal, R., Baez, J., Melgen, R. E., Rosario, P. A. P., & Mendoza, E. R. (2017). Ethical challenges for international collaborative research partnerships in the context of the Zika outbreak in the Dominican Republic: a qualitative case study. *Health Research Policy and Systems, 15*(1), 82. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/28946911.

Schneidman, M., Matu, M., Nkengasong, J., Githui, W., Kalyesubula-Kibuuka, S., & Silva, K. A. (2018). Building cross-country networks for laboratory capacity and improvement. *Clinics in Laboratory Medicine, 38*(1), 119–130. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/29412876.

Sharma, M., & Razzaque, B. (2017). Research capacity strengthening in South Asia: based on the experience of South Asian Hub for Advocacy, Research and Education on Mental Health (SHARE). *Global Mental Health* (Cambridge, England), 4, e9. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/28596910.

Toscano, C. M., Jauregui, B., Janusz, C. B., Sinha, A., Clark, A. D., Sanderson, C., . . . ProVac Network of Centers of Excellence. (2013). Establishing a regional network of academic centers to support decision making for new vaccine introduction in Latin America and the Caribbean: the ProVac experience. *Vaccine*, *31 Suppl 3*, C12–8. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/23777685.

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