Published in final edited form as:
Infect Dis Clin North Am. 2011 June ; 25(2): 399–409. doi:10.1016/j.idc.2011.02.005.

The Afya Bora Consortium: an African-U.S. partnership to Train Leaders in Global Health

Carey Farquhar, **Neal Nathanson**, and **the Consortium Working Group**[a]

Synopsis

The Afya Bora Consortium is a partnership of eight academic health institutions, four in Africa and four in the United States. The Consortium members have a history of collaboration in four African-U.S. pairs: Makerere University, Kampala, Uganda, and Johns Hopkins University, Baltimore, Maryland, USA; Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania, and the University of California in San Francisco, California, USA; the University of Botswana, Gaborone, Botswana, and the University of Pennsylvania, Philadelphia, Pennsylvania, USA; the University of Nairobi, Nairobi, Kenya, and the University of Washington, Seattle, Washington, USA.

The Consortium is developing a *Global Health Leadership Fellowship* for medical, nursing, and public health professionals, largely drawn from the four African partner countries. The primary purpose of the fellowship is to provide trainees with practical skills that will prepare them for future positions leading the design, implementation and evaluation of large, high impact programs in governmental agencies, non-governmental organizations, and academic health institutions in their own countries.

In this overview, we describe a Pilot of the proposed program, which includes three components: a six-week Core Curriculum taught in modules that focus on foundational skills in leadership, management, evaluation and other relevant topics; a six-month assignment to two Attachment Sites, that provides hands-on experience in a programmatic, clinical, or research area; and a post-training support and mentoring phase. We believe that the Afya Bora Fellowship is an innovative model, which, when fully implemented, could contribute significantly to training future leaders in global health and reducing “brain drain” of health professionals.

Keywords

global health; Africa; education; training; research; HIV/AIDS; leadership; partnership

Corresponding author for proof and reprints: Carey Farquhar, MD, MPH, Associate Professor, Departments of Medicine and Epidemiology, Division of Allergy and Infectious Disease, University of Washington, 325 Ninth Avenue,Box 359909, Seattle WA 98104, phone: 206-543-4278, fax: 206-543-4818, cfarq@u.washington.edu.
Co-author: Neal Nathanson, MD, Associate Dean, Global Health Programs, School of Medicine, University of Pennsylvania, 1007 Blockley Hall, 423 Guardian Drive, Philadelphia, PA 19104-6021, 610 667 0153, 610 667 8578 (fax), nathansn@upenn.edu
[a]See Acknowledgements for membership of the Working Group

The authors have nothing to disclose.

Introduction

In the last 10 years, the sub-Saharan African AIDS epidemic has been a major stimulus for rapidly increasing investments in newly developed and existing health programs. These burgeoning programs have generated an increasing demand for African leaders in global health. The largest program is the President's Emergency Program for AIDS Relief (PEPFAR), launched in 2003. Many other health programs have recently been launched in Africa, supported by national and international agencies, such as the Global Fund, the Global Alliance for Vaccines and Immunization (GAVI), UNAIDS, the World Health Organization (WHO), the World Bank, and others. In addition, there is a panoply of health programs supported by foundations, private philanthropy, and other non-government organizations (NGOs). It has been estimated that there are more than 1,000 NGOs operating in Kenya alone (1).

Rapid expansion of these programs has created a need for African medical, nursing, and public health professionals who can design, manage, and evaluate large health programs. Similar growth in the research arena has resulted in an increased demand for trained investigators to lead complex research programs. At present, too many programs depend upon expatriates who have been recruited because of the shortage of local professionals with appropriate skills. Several independent groups have recognized the need for African leadership, and have called for new training initiatives (2–4). The Afya Bora Consortium is a response to this call to action. It is founded on the premise that a consortium of African and international health institutions can pool resources to develop an innovative, robust, and sustainable program to train future leaders in global health. We present this interdisciplinary, experiential approach to leadership training as a model that could be adapted to meet the needs of other regions, and expanded to include additional institutional partnerships.

History of the Afya Bora Consortium

The vision for a consortium of U.S. and African institutions dedicated to building leadership capacity in global health was born in May, 2008 when a group of U.S. faculty members, who are leaders of global health programs at their four institutions, met in Washington, DC. Each university has an established "twinning" relationship with an African academic health center, and all 8 institutions have both schools of medicine and nursing, and many have schools of public health (Table 1). As a next step, it was decided to convene a workshop for an exploration of needs and opportunities (5–7).

In April, 2009, representatives of the 8 institutions met at a two-day workshop in Nairobi, Kenya. After much collegial discussion, the group decided to create a Consortium to develop a two-year Fellowship. This Fellowship was designed for medical, nursing, and public health professionals who had recently completed their training, and were judged to have leadership potential. A one-year fellowship, and individual short modules for in-service training were also included in response to requests for options that would meet a broader array of leadership training needs. The following month, the proposal was presented to potential sponsors at a meeting in Washington, DC. A one-year planning grant was funded by the Fogarty International Center of the U.S. National Institutes of Health, beginning in September 2009.

We have named this African-U.S. partnership the Afya Bora (Swahili for "Better Health") Consortium. At a meeting in Nairobi, Kenya, in January, 2010, it was decided that a one-year Pilot of the Fellowship should be conducted to test its components, evaluate outcomes, and prepare for a sustainable program. In July, 2010, we submitted a grant proposal for a

Pilot of the Afya Bora Leadership Fellowship, a summary of which is the subject of this chapter.

Description of the Pilot program

The Pilot program is a scaled-down version of the full Afya Bora Fellowship, designed to "beta test" the key elements of the full fellowship within the limits of a one-year funding period. The Pilot program structure includes three components:

- **i.** *Core Curriculum didactic blocks*. A didactic Core will be taught during two separate 3-week sessions through direct participation and problem-solving learning methods.
- **ii.** *Attachment Site Rotations*. This phase consists of an experiential, mentored assignment in which each fellow will be attached to a host government agency, non-government organization (NGO), or academic institution, to complete two 3-month assignments.
- **iii.** *Post-training Program*. The third phase will provide virtual and in-person opportunities to continue to interact and collaborate with faculty, other fellowship graduates, and incoming fellows.

The proposed Fellowship is focused on African fellows, but also includes some U.S. fellows, because we believe that this mix will enhance the training experience for both groups of fellows. Furthermore, we hope to create an international network of leaders that will be sustained long after completion of the Afya Bora Leadership Fellowship.

Pilot Program Structure

The structure of the Pilot program is summarized in Table 2.

Orientation—Prior to the first section of the Core Curriculum, a two-day orientation will be held for fellows and primary mentors. This orientation will present the overall goals of leadership training, and the desired outcomes for fellows, mentors, faculty, and Afya Bora Consortium members. It will describe expectations for Attachment Site rotations, and explain the role of the primary mentor and the mentoring team. Orientation will emphasize effective mentoring and menteeship, and the timeline for Attachment Site project reports. This session will also stress the importance of full participation by trainees, mentors, and Consortium members.

Core Curriculum blocks

The Core Curriculum will be taught at the African partner institutions, and will bring together the new cohort of 20 African and U.S. trainees. The first 3-week segment will be conducted at the University of Nairobi in Kenya, and will consist of three one-week modules: (i) Leadership Skills; (ii) Program and Project Management; and (iii) Implementation Science and Health Systems Research. The second segment will be carried out at Muhimbili University of Health and Allied Sciences in Tanzania, and will consist of three additional one-week modules: (iv) Monitoring and Evaluation; (v) Technology and Bioinformatics; (vi) Communications and Media Skills. These topics are essential to global health leadership, yet are rarely included in medical and nursing curricula.

Courses will be taught by African and U.S. instructors who will work collaboratively to develop training materials, make presentations, and lead discussions. A variety of teaching methods will be used, including problem-based learning in small groups and face-to-face didactics, supplemented, in some instances, by video-taped lectures and other distance

learning resources. All modules will highlight gaps in healthcare delivery and disease prevention, and emphasize the research and policy priorities that are most relevant at the national and regional levels.

The Core Curriculum modules will also be available for in-service training. There are employed African health professionals who would like to take short courses to build their skills and increase their career opportunities. However, many of these health professionals cannot be released for a full 1- or 2-year fellowship. To respond to this need, in the Pilot we are including four places for trainees who will take only the Core Curriculum modules. If successful, this aspect of the program will be expanded in the future.

Attachment Site rotations

"Attachment Site" is the term we have coined for organizations that operate in our African partner countries. Entities with the potential to serve as Attachment Sites include Ministries of Health; NGOs; PEPFAR missions; CDC field stations; USAID missions or offices; WHO regional offices or sites; and Universities. Because AIDS is currently such a cross-cutting, salient problem in our African partner countries, all of the training projects will involve HIV/AIDS issues. Working Group members visited more than 25 potential Attachment Sites between January and March, 2010 in Botswana, Kenya, Tanzania and Uganda, and met with directors and senior staff who were uniformly enthusiastic about participating in the Afya Bora Fellowship.

A 3-month Attachment Site rotation will take place after each of the Core Curriculum blocks. During these rotations, fellows will conduct independent projects. Potential areas of focus include: Clinical research; Public health and disease prevention; Health policy formulation; Health systems research; Implementation science; and Program management and evaluation. All projects will include some type of applied research experience. A final report, which will vary in length and format depending on the type of project and needs of the Attachment Site, will be required at the end of each rotation.

Our overarching goal is to prepare fellows to assume leadership roles in a variety of large-scale health programs, whether they are focused on specific diseases or on strengthening health systems. This experiential training will provide fellows with skills that are relevant to effective leadership in many health areas, so that they will have the flexibility to respond to evolving health needs of their countries.

During their time at their Attachment Sites, fellows will also be encouraged to take occasional short courses, attend scientific meetings, and engage in skill-building activities that will support their career goals and job aspirations. Weekly meetings for fellows with their primary mentor will be mandatory to discuss progress and review challenges. In each African partner country, a member of the Consortium working group will serve as the country program leader. The program leader will meet monthly with fellows in that country. This will provide a forum for fellows to present their work and obtain input as they come together to review their projects, share experiences, and receive mentorship and group instruction. These meetings will also help the trainees bond and form professional networks across Africa.

Fellow Recruitment and Selection

African Fellows—For the Pilot, our African partners will advertise widely at all the in-country health centers and within their own Fellowship programs for health professionals interested in the Pilot program. Attachment Sites will also have the opportunity to nominate their professional staff for the Pilot program. We aim to select twelve African applicants to

complete the Pilot Fellowship, three from each African partner country, at least one of whom is a professional in nursing or public health. As indicated above, an additional four African applicants will be enrolled only in the Core Curriculum blocks.

We recognize the challenges inherent in identifying "potential future global health leaders" and also the importance of selecting the most promising fellows in order to maximize success of the fellowship. A major criterion for selection will be the commitment of candidates to work in-country for two years after completion of the Pilot and this will be assessed during the interview. In addition, the selection process will seek to optimize the gender balance among our trainees from each profession. The Consortium is committed to recruiting qualified graduate nurses, to insure a balance of trainees from different health professions. The Schools of Nursing at our African institutions are particularly enthusiastic about the Afya Bora Fellowship and will make a major effort to identify appropriate candidates for the program.

The recruitment process will begin with a written application form and letters of reference. Selected applicants will be brought in for an interview with the Selection Committee. The Selection Committee will be composed of three members of our Working Group, three representatives of potential Attachment Sites, and one or two members from collaborating academic health centers. The Committee will seek evidence of prior leadership activities and characteristics such as initiative, creativity, and strong interpersonal skills. Once candidates are selected, there will be a subsequent matching process in which trainees are interviewed by representatives of Attachment Sites and then are ranked to optimize alignment between the objectives and interests of fellows and Attachment Sites.

U.S. Fellows—For the Pilot, we aim to accept a total of four U.S. trainees. The goal is to recruit individuals who will not only benefit greatly from the experience, but will contribute unique perspectives and different approaches that will enhance the learning experience for all. Among the four U.S. institutions, we will search for physicians and nurses who are already enrolled in post-doctoral fellowships or doctoral or master's programs and who have demonstrated a strong interest in global health. The U.S. Consortium members have access to potential recruits through existing fellowship programs and those working in a number of specialties, such as adult and pediatric infectious diseases. The application process and selection of U.S. fellows will otherwise be similar to that described above for African fellows.

Mentoring

The success of experiential work at the Attachment Sites will be critically dependent upon supervision of each trainee by a Primary Mentor and a Mentoring Team. The Mentoring Team will work with the Primary Mentor and fellow to select and develop the project, and determine the skills and collaborations needed to complete it within the available time. Mentors will be selected from the Attachment Sites to which trainees have been assigned and from our Consortium institutions. They will include both African mentors who can provide on-site support, and U.S. mentors chosen for their expertise relevant to the activities of the trainees. Mentoring team composition will also consider the career interests of each fellow, history of successful mentorship, and the nature of the project. Ideally, the Primary Mentor will be identified prior to beginning the first Core Curriculum block. To emphasize the importance of this activity and maximize their active participation, African mentors will be paid for their time.

All African mentors will attend a one-day mentoring workshop which will be held within two weeks before the Attachment Site rotation start date. U.S. mentors will be asked to attend selected portions via teleconference. During the first part of the workshop, mentors

will be given an intensive briefing regarding the goals of the program and their responsibilities. They will be given a Mentoring Manual that sets forth established mentoring guidelines. This Manual was developed and refined at mentoring workshops that were held between April and September, 2010 in Kenya, Botswana, Tanzania, and Uganda.

Program Evaluation

A formal monitoring and evaluation plan will be tested during the Pilot program. For this purpose we are collaborating with the International Training and Education Center for Health (I-TECH). I-TECH is a collaborative center operated jointly by the University of Washington and the University of California in San Francisco. I-TECH has established a global network for building healthcare delivery capacity and training a skilled health workforce, and has extensive experience in program evaluation. We have commissioned I-TECH to conduct an *internal assessment* using data they collect from faculty, mentors, Attachment Site staff, and fellows. The I-TECH evaluation will include an I-TECH observer who will attend the Core Curriculum modules and may visit some of the Attachment Sites. I-TECH personnel will collect and compile data throughout the Pilot program, and will prepare a summary for the wrap-up meeting to be conducted at the completion of the program.

As part of the *internal assessment*, trainees will be evaluated for their achievement of competencies that are needed to operate effectively in domains such as leadership and management, health systems management, health service delivery, program evaluation, communications, bioinformatics, and research. Faculty, Attachment Site staff, and mentors will also be asked to assess the performance of each fellow after each 3-week Core Curriculum Block and Attachment Site Rotation.

At the conclusion of the Pilot program, there will be a wrap-up meeting of fellows, key faculty, Attachment Site staff, and mentors. One purpose of this meeting will be to evaluate the Pilot program by identifying its strengths, and weaknesses, and recommending approaches for improvement. During the meeting, I-TECH will conduct an anonymous evaluation by fellows of instructors, mentors, faculty, and Attachment Sites.

As part of the wrap-up meeting, we will also convene a group of experts to conduct an *external assessment.* The external assessment committee will include experts in program evaluation, as well as African health leaders who have had experience with fellowship programs. The external assessment will utilize data collected by I-TECH and summarized in their preliminary report.

Roles and Responsibilities of African and U.S. Partners

For the Afya Bora Consortium to be successful, it is essential to define the responsibilities and rewards for both the African and U.S. partner institutions. The African partner institutions are putting their reputations and support behind the vision of the Consortium to provide a novel type of training for future health leaders in their countries. In addition, they are committing faculty effort, recruitment of outstanding trainees, and institutional resources to the program. The participating African faculty have contributed critical thinking to developing the vision for the Fellowship, with a combination of innovative ideas and reality testing, to ensure a culturally appropriate plan for the Fellowship. Potential rewards include access to external funding; an expanded role for their academic health training institutions; and a training opportunity that may help counter the “brain drain” problem.

The U.S. institutions have contributed to the Afya Bora Consortium in several critical areas. They have provided some of the concepts that have inspired the Consortium vision, enthusiastic participation of global health faculty, and funding opportunities. The U.S.

institutions bring access to a wide array of schools in their Universities, including expertise in program development and management, monitoring, evaluation, and research technologies, both in health and non-health fields. The Afya Bora Consortium provides the U.S. institutions with an important new opportunity to expand their global health programs, and a robust global network that offers many resources for service, training, and research.

Concluding Comments

We believe that the proposed Afya Bora Leadership Fellowship is an innovative model, which has a number of features that distinguish it from other existing fellowship programs:

- *An African-centric focus emphasizing HIV/AIDS*. The majority of trainees, training sites, faculty, and mentors will be African or located in African partner countries. Training in research relevant to HIV/AIDS will provide skills that can be used to address the current AIDS pandemic in Africa, and will serve as an entry point for addressing other health challenges in developing countries.
- *Emphasis on leadership, evaluation skills and practical experience to prepare trainees to lead large, evidence-based health programs*. The model provides an integrated program to fill a critical health leadership gap that currently exists in many African nations, including the four African partner countries. It will deliver leadership training and management skills to a select group of African and U.S. health professionals early in their careers. Trainees will be prepared to design, implement, evaluate, and iteratively improve large scale programs that link research, preventive and curative health services, training, and policy development.
- *Links to future employment.* To pro-actively address the problem of "brain drain" among this talented pool of future leaders, the Fellowship emphasizes experiential learning assignments to in-country Attachment Sites during which trainees would conduct projects at organizations or agencies that could provide future employment. This will be coupled with the clear responsibility of Mentoring Committees to facilitate post-training placements. The commitment of African trainees will be reinforced by a written agreement to work in-country for at least two years after completion of the program.
- *The power of a Consortium*. As stated earlier, the Consortium involves eight academic health training institutions, each of which has a medical school, a nursing school, and (in many instances) a school of public health. In aggregate, the different partners will bring a broad array of resources and opportunities to the Consortium, much more than any single twinning partnership. The involvement of multiple institutions will greatly strengthen the fellowship program and increase its sustainability.
- *Interdisciplinary framework across medicine, nursing and other health-related disciplines*. We believe that training across disciplinary, geo-cultural and gender lines is critical to the development of effective health leadership in Africa and around the globe. Therefore, integrating trainees from Medicine, Nursing, Public Health and other relevant disciplines from the five participating countries to learn and work together is a crucial component of the program. The emphasis on nursing will also help advance interdisciplinary training and collaboration, as well as achieve gender equity.
- *Targeting sustainable African training capacity, not just trainees*. A key long-term goal is to establish the training capacity of African institutions, rather than just launching one more program to provide additional trainees. It is our eventual goal to move primary direction of this training program to our African partner

institutions. We view the fellowship program as a catalyst for institutional development in research, education, clinical practice and policy development. To this end, most of the training will take place in our African partner countries. The South-South partnership will play a major role in establishing a sustainable training program led by African institutions.

- *Experiential training for U.S. trainees in African programs*. Another long-term goal of the program is to establish the capacity of U.S. institutions to train U.S. trainees in real life programs of global health relevance. There is a cadre of junior U.S. health professionals with a career interest in global health, who strongly desire immersion experiences in African health programs. Furthermore, training in a cohort with their African peers will markedly enhance the impact of their international experiences. It will offer emerging African and U.S. global health leaders opportunities to develop critical thinking skills in cross-cultural negotiation and collaboration, and launch the next generation of sustainable North-South and South-South partnerships.

Significance

During our frequent meetings and conference calls, it has become clear that the Afya Bora Consortium has enthusiastic support from our African partner institutions, which has endowed the proposal with significant credibility. In addition, the participation of a large number of African and U.S. institutions markedly increases the probability that the program can be sustained on a long-term basis. The proposed Fellowship, once evaluated and refined, could be scaled up in a number of ways, such as (1) expanding the program by including other interested academic institutions in Africa and the U.S.; (2) replicating the program by initiating similar consortia, perhaps in other geographic areas; (3) utilizing specific components of the program for in-service training of health service professionals in established positions, or for strengthening existing training programs; (4) including opportunities for fellows to do rotations outside Africa at international organizations, such as WHO, CDC and UNAIDS. Thus, this model has the potential to have an impact that reaches beyond the immediate scope of the present Consortium, both in Africa and in northern countries (8–10).

Acknowledgments

This work was supported by a supplement to Grant No. D43TW000007-22S3 from the Fogarty International Center of the U.S. National Institutes of Health.

The Working Group of the Afya Bora Consortium includes: Robert Bollinger, Carey Farquhar, Nancy Glass, Ephata Kaaya, James Kiarie, Yohana Mashalla, Gorrette Nalwadda, Marjorie Muecke, Neal Nathanson, Oathokwa Nkomazana, Teresa Odero, Thomas Quinn, Esther Seloilwe, Christopher Stewart, Nelson Sewankambo, Gloria Tshweneagaeg, Joachim Voss, and Judith Wasserheit.

Mailing addresses

NAME	email	ADDRESS
Robert Bollinger	rcb@jhmi.edu	Johns Hopkins Medical Institutions 600 N. Wolfe Street Phipps 540 Baltimore, MD 21287, USA
Carey Farquhar	cfarq@u.washington.edu	International AIDS Research and Training Program Departments of Medicine, Epidemiology, and Global Health University of Washington

NAME	email	ADDRESS
		325 Ninth Avenue, Box 359909 Seattle WA 98104, USA
Nancy Glass	nglass1@son.jhmi.edu	Johns Hopkins University School of Nursing 525 N. Wolfe Street, Rm 439 Baltimore, MD 21205–2110, USA
Ephata Kaaya	ekaaya@muhas.ac.tz	Muhimbili University of Health and Allied Sciences PO Box 65001 Dar es Salaam, Tanzania
James Kiarie	jkiarie@swiftkenya.com	University of Nairobi, College of Health Sciences, Dept of Obstetrics & Gynaecology P.O Box 19767-00202 Nairobi 00202, Kenya
Yohana Mashalla	yohana.mashalla@mopipi.ub.bw	School of Medicine, University of Botswana Kgogolamoko House, Private Bag 00713 Gaborone, Botswana
Gorette Nalwadda	gnalwadda@gmail.com	Department of Nursing, School of Health Sciences, Makerere University P.O Box 7072, Kampala 256, Uganda
Marjorie Muecke	muecke@nursing.upenn.edu	School of Nursing, University of Pennsylvania, 257 Fagin Hall Philadelphia, PA 19104 6020, USA
Neal Nathanson	nathansn@upenn.edu	Global Health Programs 1007 Blockley Hall, School of Medicine, U Pennsylvania Philadelphia, PA 19104-6021, USA
Oathokwa Nkomazana	Oathokwa2000@yahoo.com	School of Medicine University of Botswana P.O.Box 40670, Gaborone, Botswana
Teresa Odero	Oderoteresa@yahoo.com	University of Nairobi, School of Nursing, Box 30197-00100, Nairobi, Kenya
Thomas Quinn	tquinn2@jhmi.edu	Johns Hopkins University School of Medicine Hampton House 180 624 N. Broadway Baltimore, MD 21205, USA
Esther Seloilwe	SELOILWE@mopipi.ub.bw	School of Nursing, University of Botswana, Private Bag 0022, Gaborone, Botswana
Christopher Stewart	CStewart@sfghpeds.ucsf.edu	University of California San Francisco Box SFGH, MS 6E/SFGH (nh) San Francisco, CA 94143–SFGH, USA
Nelson Sewankambo	sewankam@infocom.co.ug	College of Health Sciences, Makerere University Kampala 7072, Uganda
Gloria Tshweneagae	tshweneagaeg@mopipi.ub.bw	University of Botswana, School of Nursing, Private Bag 0022, Gaborone, Botswana
Joachim Voss	vossj@u.washington.edu	School of Nursing, University of Washington, Box 357266, Seattle, WA 98195-7266, USA,
Judith Wasserheit	jwasserh@uw.edu	Department of Global Health Schools of Medicine & Public Health, University of Washington 325 Ninth Avenue Seattle, WA 98109, USA

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Table 1

The Afya Bora Consortium Institutions and Health Sciences Schools

Country	African-US Partner Institutions	Medical School	Nursing School	Public Health School
Uganda	Makerere University	X	X	X
United States	Johns Hopkins University	X	X	X
Tanzania	Muhimbili University of Health and Allied Sciences	X	X	X
United States	University of California San Francisco	X	X	X
Botswana	University of Botswana	X	X	
United States	University of Pennsylvania	X	X	
Kenya	University of Nairobi	X	X	X
United States	University of Washington	X	X	X

Table 2

Structure and timeline for the Pilot fellowship

CORE CURRICULUM 3 weeks	ROTATION 3 months	CORE CURRICULUM 3 weeks	ROTATION 3 months
• **2-day Orientation**	• **Independent Projects at Attachment Sites**	• **1-day Project Presentation**	• **Independent Projects at Attachment Sites**
• Core Curriculum 3 one-week modules – Leadership – Program Management – Implementation Science	• *1-day workshop for Mentoring Teams within first 2 weeks* • Weekly meetings with primary mentor • Semi-monthly meetings with Country Lead and Fellows in-country • Monthly meetings with Mentoring Team • Project report due last day of rotation	• Core Curriculum 3 one-week modules – Monitoring and Evaluation – Technology and Bioinformatics – Communications and Media Skills	• 1-day workshop for Mentoring Teams within first 2 weeks • Weekly meetings with primary mentor • Semi-monthly meetings with Country Lead and Fellows in-country • Monthly meetings with Mentoring Team • Project report due last day of rotation