



Interprofessional Fellowship Training for Emerging Global Health Leaders in Africa to Improve HIV Prevention and Care: The Afya Bora Consortium

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HIV continues to challenge health systems especially in low and middle income countries in Sub-Saharan Africa. A qualified workforce of transformational leaders is required to strengthen health systems and introduce policy reforms to address the barriers to HIV testing, treatment and other HIV services. The year Afya Bora Consortium Fellowship in Global Health capitalises on academic partnerships between African and universities to provide interprofessional leadership training through classroom, online and service-oriented learning in countries in Africa. This fellowship program prepares health professionals to design, implement, scale up, evaluate and lead health programs that are population-based and focused on prevention and control of HIV and other public health issues of great importance to African communities and health service settings. Afya Bora nurse fellows acquire leadership attributes and competencies that are continuously and systematically tested during the entire program. This multinational training platform promotes interprofessional networks and career opportunities for nurses.

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The burden of HIV continues to challenge health systems in high income as well as low and middle income LIC countries especially those in sub-Saharan Africa. While the United Nations Millennium Declaration of [United Nations](#) drew global attention to HIV and other communicable diseases by establishing the Millennium Development Goal G: combating HIV/AIDS, malaria and other diseases, several countries still face high disease burdens directly related to HIV and even more so in maternal and newborn populations. [Lomai Borisch-Laaser](#)

The success of many screening and scale up treatment initiatives has improved HIV management and treatment globally but has not achieved the

reach of Sub-Saharan Africa as of the world

Health Organisation [H](#) reported that Africa was home to more than 50% of people living with HIV in the world and where 25% of HIV-related deaths occurred. For nations falling short of meeting Goals [ubramanian Naimoli at subayashi and Peters](#) have questioned whether the right models were in place to scale up interventions. They proposed a practical approach suggesting more promising inroads to coming up with solutions through learning by doing in ways that engage key stakeholders, use data to address constraints and consider pilot or small scale projects to bring about needed changes in health care.

While advances in HIV testing continue to evolve, several areas are in need of improvement. For example, in certain parts of the African continent, lack of access to HIV testing is a direct result of deficiencies in procurement, supply, and management. Poor distribution of testing supplies, proper communication channels between key players in various regions and their central administrations, unclear definition of roles and responsibilities and ambiguous costing of poor distribution are all contributing factors to poor access to testing supplies as well as to antiretroviral therapy. Nurses as frontline care providers assume a major role in provider-initiated HIV testing and counselling (PITC) but lack of time, staff, space and resources and workload demands often operate to deter PITC. [Evans Ndirangu](#) In sub-Saharan Africa, nurses have expressed the need for training and managerial support and health systems reform to promote PITC. [Evans Ndirangu](#)

African health care leaders therefore require training to better understand the complexities of health care delivery, to strategically plan, implement, and test more efficient and sustainable PSM and distribution mechanisms and to affect policy reforms to positively influence changes at the point of care. [Evans Ndirangu, Heelerolf Kapesaurdo, allabetta](#) [H](#) has emphasised that transforming and scaling up health professions education is dependent on relational activities, interactions between education, health and other sectors and embedding training for leaders in health care settings. [H](#)

The Afya Bora Consortium

The Afya Bora Consortium was formed as a response to the urgent need for qualified African health care leaders. In leaders from eight academic health professions institutions four in Africa paired with four in the nited tates convened to envision a new partnership to advance training in global health leadership. [aniels et al Faruhar Nathanson](#) Each of the four Africapartnerships in BotswanaKenya gandaand Tanania [Figure](#) have had a long standing record of productive collaborations in researcheducationand training of health profes sions students and faculty. A fifth partnership was created recently when the niversity of Buea in Cameroon oined the consortium

uring the early conception of a formal infrastruc ture to unite and African academic partnersthe name Afya Bora wahili for Better Healthwas adopted to reflect an Afrocentric initiative that would leverage eisting partnerships in a global consortium to build a sustainable training program for health care leadership. The program was envisioned to develop a powerful collaboration by merging and consolidating educationtrainingand research eperiences and resources. A focused mission was set to prepare future global leaders for careers in health care settings and governmental and nongovernmental organiations NGsto transform health care deliv ery systems and serve health care communities

Afya Bora used academic partnerships to engage nursingmedicaland public health schools from multiple African and universities [Figure](#) to provide the breadth and depth of leadership training beyond the reach of any individual institution or discipline. The Fellowship in Global Health Leader ship program employs innovative and eperiential approaches to training that promote the integration of core leadership topics into academic and service oriented leader mentorship training at five African institutions. Leadership programs in Africa that augment academic degree granting programs can have a profound effect on epanding a worforce of emerging transformational leaders capable of health systems reform. The ability to bridge learning from academic institutions with serviceoriented training

in leadership developmentprogram management and evaluationand uality improvement and out comes measurement is critical to prevent and control HIV in African countries. Alliances between African and academic institutions are ideally suited to provide such training because they create effective interprofessional and nursing collaborations between and African universitiesgovernment organia tionsNGsand health care settings [aniels et alFaruhar Nathanson](#)ring [et al](#) These partnerships capitalie on shared human, financial, and institutional resources to scaleup health professions leadership training and its impact on transformational changes in health care delivery. In additionprofessional networks can form to epose trainees to a cadre of researcher and clinician mentors to support leadership training

Afya Bora Fellowship in Global Health

In 2010, the Afya Bora Consortium piloted the first cohort for leadership training. Following a successful trialin the consortium was fully funded for a year period July to June by the Health esources and ervices Administrationthe Presi dents Emergency Program for Aieliefand the Office of AIDS Research, a unit of the U.S. National Institutes of Healthoring group mem bers from each African and academic institution have served as the leaders for the consortium in collaboration with health care leaders across the African country siteswho assume roles as mentors for fellowsore indepth information about the Afya Bora Consortium can be found at <http://afyaboraconsortiumorg/new/aboutshtml>

Afya Bora offers an innovativecomprehensive and interprofessional curriculum and service training eperiences to prepare future African and health care leaders to affect systemsbased changes in the delivery of HIV care. The 5-year specific aims of the fellowship programalong with measures of suc cessare outlined in [Table](#) Each yearnursesphy siciansand public health professionals are selected for a year fellowship from regional Centers for Disease Control and Prevention (CDC) offices, inistries of Healthand participating universities in Africa and the nited tates. Eligible applicants

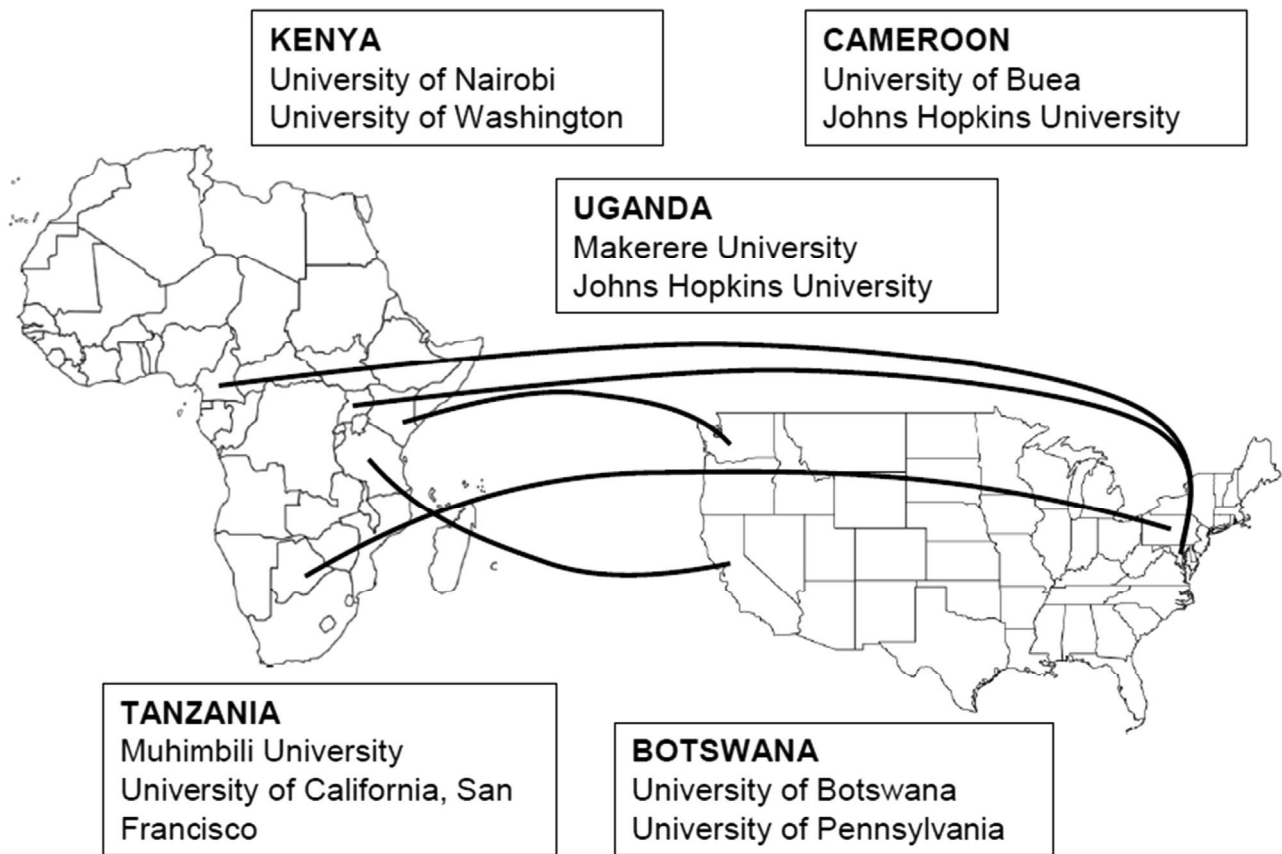


Figure Afya Bora Consortium academic partnerships

must be citizens of Kenya Botswana Uganda Tanzania Cameroon or the United States and must meet one of the following education requirements:

- *Medical applicants need to have an MD or BChB with an MPH or Masters degree in a related field.*
- *Nursing applicants need to have a Masters degree in Nursing, Public Health, or a related field (PhD preferred or substantial work experience)*
- *Other Public Health professionals those without a clinical degree must have an advanced degree in Public Health or a related field.*

The Afya Bora Fellowship in Global Health offers postgraduate formal leadership and engagement training through a series of innovative skills building modules and placements in industry of Health or health oriented NGOs attachment sites

that allow intensive mentorship from African expert researchers, clinicians, and influential leaders Equally important the multinational training platform promotes interprofessional networks that position fellows for career opportunities that might otherwise not be realized or possible for fellows who have completed the Afya Bora program and who responded to a survey in response rate reported career advancement and of those attributed their promotions to experience gained from completing the Afya Bora fellowship fellows immersed in African health care settings fully appreciated the realities facing African health systems when responding to HIV and they too have developed productive relationships with African colleagues working side by side in situ Because of the Afya Bora fellowship fellows contemplate careers in African countries

Table 1. Specific Aims for the Afya Bora Fellowship in Global Health

Specific Aims	Indicators
AI: recruit and train highly qualified African and fellows	<ul style="list-style-type: none"> • Number and qualifications of applicants from medicine, nursing, other health fields • Qualifications and gender of fellows selected to participate • Learning objectives achieved • Practical skills gained by fellows • Performance objectives achieved by fellows at Attachment sites • Frequency and quality of mentorship
AI: Build capacity with African partnering institutions to provide leadership training	<ul style="list-style-type: none"> • Content and innovative teaching methods included in modules • Background and experience of African and instructors • Relevant Attachment sites and meaningful Attachment site support • Quality and relevance of fellow Attachment site experiences to public health priorities • Number of African instructors trained and courses transferred
AI: demonstrate short and long term impact of the program	<ul style="list-style-type: none"> • Feedback provided to the program leads in real time and incorporated to improve project implementation • Interdisciplinary collaboration and involvement in the Afya Bora Consortium post fellowship • Institutionalization of Afya Bora fellowship program in host institutions • System in place to facilitate networking of Afya Bora alumni, faculty and mentors • Afya Bora fellowship influence on leadership positions of alumni • Alumni impact on institutional and health systems

The Afya Bora fellowship is predicated on Knowles classic theory of andragogy which posits that adult education is most efficient and effective when learners are self-directed, draw on their personal experiences, are motivated, and can immediately apply learning to relevant problems faced by the learner. Knowles The months of didactic content combined with months of practicum experiences in Africa referred to as Attachment sites or health service sites bridge classroom and service-based learning and mentorship from Afya Bora Organizing Group members, faculty from African institutions, and influential leaders at health service sites ensure the success of fellowship experiences. Learning is augmented by ongoing independent guided debased modules with opportunities for online discussions with faculty experts. Aniels et al Learning modules are used to organize instruction content in topical areas such as Leadership, Communication, Project Management, Health Information Systems, Monitoring and Evaluation, and Implementation Science. Each module maintains opportunities for case-based, participatory and interactive learning, and the application of content to real-life situations. All modules and training resources are accessible at <http://afyaboraconsortium.org/newmaterials/html/modules>

Service learning occurs during month practicum experiences. Immediately after entering the fellowship, information is provided about Attachment sites to help fellows select sites where they have the flexibility to focus on areas of interest for their fellowship projects. Fellows are assigned to Attachment sites with suitable and accessible mentors who work with the fellows to facilitate their project work. Fellows are encouraged to target HIV testing, care, and/or populations of greatest importance to improve health outcomes and the quality and efficiency of care delivery at the Attachment sites. Table illustrates the number of projects and specific topics that fellows have addressed in the past. Examples of the scope, depth, and breadth of projects conducted in specific African countries by the fellow cohort are shown in Table.

Afya Bora Narrows Gaps in Leadership Training

Effective leadership has been identified as key to promoting health care reform in low-income countries. Enubuge and Isenyane Bishaw A recent systematic review of transformational leadership training for physicians revealed few interprofessional and transprofessional training programs in the United States and no such programs in Africa.

Table Attachment ite Proects elated to Key Issues in HIV TestingCareor Populations

<i>Number of Proects</i>	<i>ubset of Topics</i>
<i>Implementation of ption B</i>	
<i>Early infant diagnosis and PTCT</i>	
<i>Access to testing</i>	
<i>Care and treatment for pediatric HIV infections</i>	
<i>Adult access to care and treatment</i>	
<i>Care and treatment services in ey populations</i> (fishers, adolescents, GBV survivors)	
<i>AT adherence and treatment outcomes</i>	
<i>Note ption B</i>	<i>Lifelong AT to all pregnant and breastfeed ing women living with HIV regardless of C T cell count or orld Health rganiation clinical stagePTCT prevention of mothertochild transmissionGBV genderbased violence</i>
<i>AT</i>	<i>antiretroviral therapy</i>

trausoobiahLevinson The Afya Bora fellowship fills a major gap in leadership training for African and health professionals woring in global healthThese gaps include training in interprofessional leadershiphealth system strength eningtransformational leadershipand innovative leadership

Interprofessional leadership training Health care professions preand postlicensure academic programsboth in the nited tates and Africafocus on discipline-specific education, which often leads to education that occurs in silosIn generalAfrican academic curricula areby designoften inclusive of classroombased didactic content in the traditional pedagogy for academic degrees within established disciplinesPractical and service eperiences dedi cated to leadership development may be limited andas suchcurricula are often devoid of formal training in leadership sciencemanagementimple mentation scienceprogram evaluationhealth policy and other critical areas that are reuisites for effective leadershipPromising graduates of academic pro grams may not have sufficient exposure to govern mental organiations or NGs to launch careers in inistries of Health or other prominent organiations involved in delivery of preventioncurativeor disease management health services

A uniuue feature of the Afya Bora Fellowship in Global Health is its interprofessional model for

classroom and service learningThe Afya Bora Working Group and affiliate members represent nursingmedicineand public health disciplines and have epertise in epidemiologybiostatistics implementation scienceequality scienceoutcomes researchand eecutive and program leadership The consortium is structured to provide interprofes sional fellowship training beginning with the first module on leadership led by the ean of the Faculty of Health ciences at the niversity of Botswana whothrough his vast professional networks throughout Africaruns interactive sessions with accomplished influential leaders from multiple disciplines. Other faculty bring discipline-specific perspectives into dialogues and debates about strate gies and solutions for health systems thining about changeentors at Attachment ites have diverse academic credentials and are epert clinicians researchersandor health care administrators of health systems and programs for HIVThey serve as advisors and facilitate access to datapopulations cliniciansand resources to support fellow proects The fellow cohorts are eually diverseand Afya Bora nurse fellowswho comprise a substantial number of health professionalsenter the program with varied education bacgrounds and employment eperiences

Interprofessional education IPEand training in global health is paramount to the preparation of future health leaders H has endorsed IPE globallyespecially in resource constrained countries, to improve the efficiency of learning and to address the Human esources for Health HHcrisisHowever a recent systematic review of publications on IPE as lessons for developing countries yielded only two from univer sities in LIC countriesincluding the niversity of Namibiawhich has a partnership between the chools of edicine and Pharmacy unguya HinthongJimbaasuo In the nited tatesfor eamplethe Johns Hopkins niversity chool of edicine in Baltimorearylandoffers an elective in interprofessional global health for stu dents in the chools of Nursingedicineand Public Health oran et al imilarlyale niver sity in New HavenConnecticutahas epanded oppor tunities for interprofessional global health education across health schools by also creating an elective

Table Afya Bora Fellow Proects

Country	Attachment ites	Proects
ganda	edical esearch CouncilVirus esearch Institute	Access to HIV prevention methods for fishing communities in Uganda
Botswana	BP	Cryptococcal meningitis characteriation and prevention in Botswana
Botswana	ITECH	Evaluating eternal uality assurance for rapid HIV testing in Botswana
Botswana	inistry of Health	Perceptions of schoolgoing adolescents about substance abuse in amotswa
Botswana	inistry of Health	Integrated management of HIV and NonCommunicable iseases: Knowledgeattitudespracticeseperiences of health care worers in GaboroneBotswana
Kenya	AEF	uality improvement of care and treatment services at Comprehensive Care Centre in amburu County eferral Hospital in Kenya
Kenya	AEF	Immunological and virology all outcome among HIV patients in Kibera AEFAT Proect
Kenya	CCKisumu	HIV service deliveryuptaeand gaps among Fisherfolin the Nyana region
Kenya	CCNairobi	Kenyas ourney towards the eTCT target
Kenya	ITECH	Improving the uality of data available in Kenya Efor C
Kenya	Kenyatta National Hospital Comprehensive Care Clinic	The impact of HIV inservice training programs on health care worer knowledgeattitudesand practices at the Kenyatta National Hospital
Tanania	EastCentraland outhern African College of Nursing	Eperiences from supporting CPfor nurses and midwives in Tanania through electronic eb site
Tanania	anagement evelopment for Health	ho should discloseInconsistencies in child HIVinfected status disclosure by health care providers in ar es alaamTanania
Tanania	inistry of Health and ocial elfare	Assessment of the magnitude of secondline AT failiure in HIVinfected patients in ar es alaam
Tanania	inistry of Health and ocial elfare	Prevalence of HIV infection and factors determining early infant diagnosis in Lae oneTanania
Tanania	inistry of Health and ocial elfare	Assessment of uality of PTCT program data in Tanania
ganda	Infectious iseases Institute	otivators and barriers to VC in partners of women attending ANC in Kampala
ganda	inistry of Health	Assessment of factors associated with HIV transmission in HIVeposed infants at Jina egeional eferral Hospitalganda
nited tates	AEF	afe Birth atters: Evaluating the acceptabilityusabilityand feasibility of Hsafe childbirth checklist tool in hinyanga egeional Hospital

Note BP niversity of Botswana and niversity of PennsylvaniaAEF African edical and esearch FoundationCC Centers for isease Control and PreventionITECH International Training Education Center for HealththeTCT elimination of mothertochild transmissionE electronic medical recordC clinical decision support systemCP continuing professional developmentPTCT prevention of mothertochild transmissionAT antiretroviral therapyVC voluntary medical male circumcisionANC antenatal CareH orld Health rganiation

course option Peluso, Hafler, Sipsma, & Cherlin, ale niversity faculty have eamined studentsperceptions of such education and models for curriculanoting that studentfaculty collaboration and professional development are ey themes for establishing meaningful interprofessional partnerships in global health educationThe Afya Bora fellowship program has established IPE and interprofessional training beyond degreegranting programs

and the classroomand has embedded learning in interdisciplinary African health care settings and organizations such as NGs and CC sites According to a recent reportleaders from across the world envision IPE and training as transformative learning and a reuisite for transforming health systems Frenet al Instructional reforms rely on interdependence in educationwhich will reuire a new professional era to breadown professional

silosenhance collaborative and nonhierarchical relationshipsengender highperforming teamseexploit the power of information technology for learning and emphasie faculty development **Frenet et al**

The Institute of edicines **Global Forum on Innovation in Health Professional Education** *calls for actions to designimplementand test innovative interprofessional models for global health education with partners outside of the nited tates The report also underscored the need for these models to reflect the diseases and societies that trainees will eventually servewhich is exactly what the Afya Bora fellowship program service learning model accomplishes*

Health systems strengthening **A recent report from the Agency for International evelopment**

AI *has called for action to eamine in frastructures of health systems to improve health and to generate evidence to support leaders of LICs in implementing strategic initiatives to build stronger health systems to promote the health and wellbeing of their citizensThe report analyed systematic reviews of health systems n and concluded that health systems strengthening played a pivotal role in achieving priority health goalsThe report consolidates health systems strengthening functions believed to be of greatest importance and impact in transforming health systemsThese includebut are not limited to, finance, governance, information, and service delivery* **AI**

Each of these functions was further defined by types of interventions substantiated by research that resulted in desired outcomes such as improved service ualityincreased inservice utiliationand reduced morbidity and mortalityuccess in systems strengthening for education in underresourced areas of ubaharan African countries has been a priority of partnerships between and African academic institutions through faculty collaborations to improve the training of nurses and physicians **Kolars et al** *Inter national health school partnerships are striving to teach students to worin interdisciplinary teams and learn management sillsHowevermore wor must be done to determine how this type of training will strengthen health care systems*

The developmentimplementationand evaluation of serviceoriented proects conducted by Afya Bora

fellows generated evidence for small tests of change Afya Bora fellows learned to do rapid situational analyses that allowed them to identify ratelimiting steps to their implementations and to develop mea sures of success for their proectsThe results of these projects have been used to improve efficiencies in HIV care and testingovercome barriers to access to careand inform new health policiesIn these waysthe Afya Bora Fellowship in Global Health used the ind of model suggested by ubramanian and colleagues who contended that learning by doingwas an effective method for health system changeThe type of proects that Afya Bora fellows developed and implemented **Table** *have been aligned to healthsystemstrengthening interventions that result in health impacts and outcomes in areas of improved service provisionualityincreased financial protection, increased service utilization, and uptae of healthy behaviors* **AI**

Transformational leadership training **Transfor mational leaders are reuired to transformreform and strengthen health systemsNursesas the largest global worforce and bacbone of health systems worldwideare ey components in transformation** **Ferguson**

To prepare transformational leadershealth profession education must be revamped to include new curricular framewors for leadership training and eperiencesand organia tions and initiatives must provide formal programs to expand the scope and influence of global nurse leadersThe International Council of Nurses is an in ternational pioneer ensuring that global nurse eecutives possess the nowledgesillsand abilities to lead effectively, and are qualified to meet global health challenges **Ferguson** *The Nursing Education Partnership Initiative NEPIand edical Education Partnership Initiative EPIstrive to strengthen and transform education in nursingmed icineand health sciences in ubaharan African countries burdened by HIV to prepare a more uali fied health professions workforce to confront the challenges of HIV care* **Glassaaaid**

Goosby von inernageliddleton et al *NEPI and EPI were built on the assumption that African academic institutions must ecel in education and serviceNEPI has strengthened nursing education programs in*

Table 1. Distribution of Male and Female Fellows by Country Citizenship and Discipline

	Males			Females				Total
	Nurses	Physicians	PH	Nurses	Physicians	PH	Pharmacists	
United States								
Botswana								
Kenya								
Uganda								
Tanzania								
Cameroon								
Total								

Note: PH = public health

Lesotho, Democratic Republic of Congo, and Ethiopia conducted work to build an evidence base to inform global policy guidance to scale up nursing and midwifery education to prepare a more qualified nursing workforce (Idleton et al). NEPI supports the development of new masters programs in nursing and midwifery, provides scholarships, addresses faculty development training, and facilitates regional faculty networks across schools of nursing.

The Afya Bora fellowship complements these initiatives by helping health professionals design, implement, scale up, evaluate, and lead health programs, particularly those that are population based and focus on prevention and control of HIV and other public health issues of greatest importance to communities and health service settings.

Innovative leadership training Innovative leadership is another requisite for introducing positive and sustainable changes in HIV care in African countries. A review by KaniKaati and Imao

highlighted examples from Botswana, Nigeria, and Uganda of leaders at all levels of government, organizations, academia, and health services successfully transforming health care systems to meet the demands for HIV care. In Botswana, leaders forged an academic partnership with Harvard University in the United States, which led to an HIV clinic for education and research. Nigerian leaders engaged the international community to scale up HIV prevention and treatment programs and mounted countrywide outreach responses. Leaders from Uganda catalyzed community-level engagement in and ownership of a program to reduce HIV stigma and discrimination by breaking down

barriers to HIV care. Innovation is a major part of the Afya Bora fellowship training. Fellows are encouraged to design innovative service-oriented projects with solutions that will have the greatest and most lasting impact for improved systems redesigns, workflow and processes, and population outcomes.

Afya Bora Fellows

To date, the consortium has reached its specific target to recruit fellows. Table 1 illustrates the numbers of male and female fellows by discipline. The composition of Afya Bora fellows shows an encouraging trend toward narrowing the gender gap for rising African health care leaders with female Afya Bora fellows. The gender gap in HH in Africa continues to pose a serious challenge to health systems across the continent. The gender gap is caused by factors such as the heavy burden of HIV on women on the continent and sociocultural and economic factors that relate to the African continent. Experts in HH have indicated that health workforce gender imbalances are a major challenge for health policymakers. Urnal Potilwell Adams. Additionally, improving gender equity can strengthen workforce numbers, distribution, and skills, but human resource policy and planning failures have been traced to HH leaders' failures to account for gender. Eichenbach, Ownseif, Hoororo, and Fitzgerald summarized the root causes for the underrepresentation of African women as global health leaders. The obstacles they found included challenges with career advancement due to discrimination, salary inequities between men and women, difficulties balancing family

responsibilities and lack of women role models. The Afya Bora fellowship program empowers women with solutions to overcome these barriers and insures that women benefit from exposure to and mentoring from successful African women role models who are Afya Bora oring Group members, collaborators and Attachment ite mentors.

f the Afya Bora fellowshave been nurses and of these held doctoral degrees Ph or NP when entering the fellowship, the others all had masters degrees. The fellowship includes training that is directly aligned to what African nurse leaders believe to be most important to successful leadership careers in health policy. hariff conducted a elphi survey with national nurse leaders from Kenya, Tanzania and ganda who served as informants to define the attributes of nurse leaders needed to influence health policy. Consensus revealed essential leadership ualities including the abilities to influence, communicate effectively, build relationships, feel empowered and demonstrate professional credibility. Afya Bora nurse fellows acured these leadership attributes throughout training, competencies in these areas were continuously tested through module case based and inter active learning and during service oriented eperiences in HIV population health.

Program Evaluation

Formal monitoring and evaluation have been critical components of the Afya Bora fellowship program since its inception. Each module is evaluated through participant feedback as well as by the direct observation of a program evaluator. Each cohort of fellows evaluates their Attachment ite eperiences including the mentoring they received at the midpoint and end of the year. These data were analyed and reported bacto Afya Bora leaders in realtime for the purpose of program improvement.

Additional evaluation methods were used to assess program effectiveness as well as support the fellows learning eperiences. Fellows completed bi-weekly journal entries, which prompted reflection on the leadership the fellows observed and practiced at their Attachment ites. The urning activity thus encouraged the development of metacognition

onovan Bransford, Pellegrino

and because the entries were submitted to the evaluation team, the ournals also provided evidence of leadership development. aniels et al Isaac, Kaat, Lee, Carnes. Fellows also completed sills logboos which included performance domains lined to learning module competencies. The logboos helped guide fellows to practice essential leadership sills during the attachment eperience and the completed logboos signed by Attachment ite mentors provided evidence of the fellows progress and how well they were able to implement didactic and service learning.

Finally, to evaluate the impact of the Afya Bora program, a biannual survey was sent to alumni to collect information on what if any improvements the fellows had made to health systems in their home countries. hile self-report is a common method of leadership training evaluation, aniels et al, Fernande Noble, Jensenteffen.

Afya Bora attempted to reduce inherent limitations of the method by asing fellows to provide concrete details of changes they had catalyedas well as metrics of their successes. Competency based assessments were also conducted with fellows specific to modules and service learning experiences in specified content and performance domains reflected in the overall fellowship program: leadership and management, health systems management, health service delivery, program evaluation, communications, bioinformatics and research. Fellows regularly completed evaluations of modules, faculty presenters and Attachment ite mentors.

As part of the ongoing monitoring and evaluation proces, the achievement of indicators aligned to specific aims were regularly assessed. (Table For example, Aim 2 specifies building capacity with African partnerships to provide leadership training. The epansion of new partnerships is now being forged in Cameroon at the niversity of Buea and the Cameroon Baptist ission. For Aim a comprehensive survey of alumni has been conducted to assess the success of past fellows in securing leadership positions and the fellowsoverall impact on health systems.

Based on ongoing evaluation data from fellows, faculty and mentorsteaching and learning strategies have been introduced, modified, and enhanced to

strengthen the training experience. For example, fellows have indicated the need for more interactive learning. Faculty have transitioned from reliance on PowerPoint slide presentations for didactic classroom instruction to seminar formats, case-based learning, and reflective learning achieved by fellows sharing their experiences. Attachment sites, Fellow collaborative learning groups are used to develop, dissect, and analyze solutions to complex systems issues, challenges, and barriers to health care. Interactive discussions with African health care leaders have been used to expose fellows to role models influencing change in health care systems. Faculty have been assigned to modules to bring diverse perspectives on content and to provide more faculty-fellow interactions. Faculty evaluations of modules for data management, analytical techniques, and software programs reflected the need to tailor learning to varying levels of expertise among the fellows. Teaching is now directed to basic and more advanced learners. Service-based learning has been strengthened by recruiting more original group members from Africa and Attachment site faculty mentors. Attachment site mentors have conducted more debriefing sessions with fellows to critically analyze effective and ineffective leadership strategies. Afya Bora mentors encourage stronger engagement with health care professionals and administrative personnel at Attachment sites to ensure feasible solutions for fellow projects to ensure success in improving health systems and HIV care delivery.

Conclusion

The Afya Bora fellowship program trains leaders from public, private, and academic organizations by empowering partnering universities to offer leadership training directly relevant to the needs of non-academic organizations, including ministries of Health. Leadership training conducted by Afya Bora fellows has made meaningful contributions and impacted HIV prevention and services at Attachment sites. In this way, the fellowship goals have been synergistic with recent initiatives to build training capacity at African nursing and medical schools, including those of the International Council of Nurses (ICN) and EPI, while the International Council of Nurses (ICN) and EPI have concen-

trated on implementing health programs within academic institutions. The Afya Bora Fellowship in Global Health takes this approach one step further by creating leadership training opportunities and resources that can be adapted to both university-based education and postgraduate professional development. As other health training programs evolve in Africa, it is anticipated that the fellowship will be a model program for new initiatives and will maintain the success of all health training programs through collaboration and shared resources.

Disclosures

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Key Considerations

- Key areas to improve HIV care include but are not limited to: access to care, antiretroviral therapy adherence, testing, health systems improvement through workforce development and capacity building.
- Afya Bora's interprofessional training is specifically geared toward addressing HIV in Africa.
- The Afya Bora training model has empowered nurses and women who are critical to the health workforce in Africa to be transformational leaders capable of being effective change agents in HIV prevention and care.
- The Afya Bora interprofessional and innovative leadership training through didactic module, case-based, and practical on-site training in select Attachment sites addresses various components of HIV care that can lead to health system strengthening.

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