

# The Past, Present, and Future of Harvard-Tanzania Collaborative Research Training

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## Current Situation in Tanzania

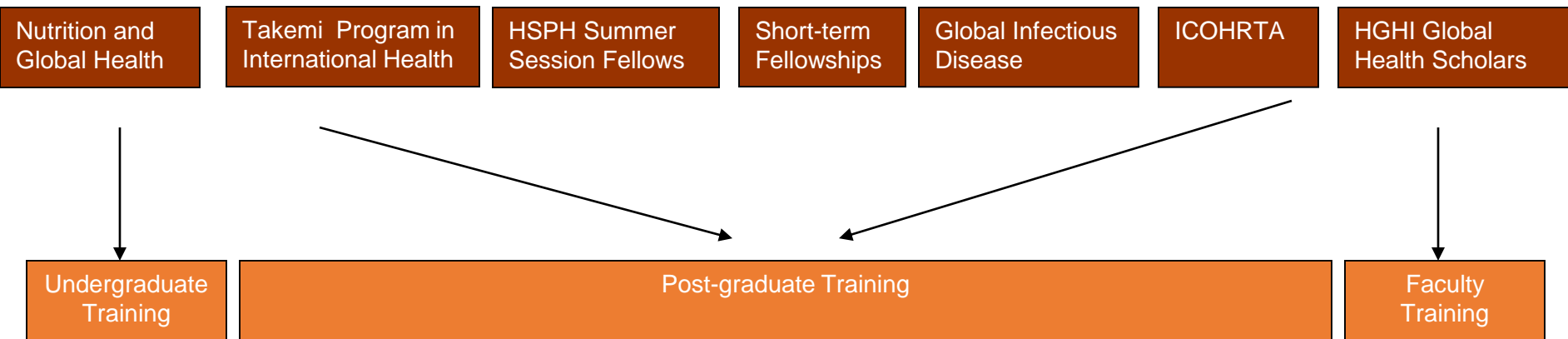
- Tanzania has successfully expanded undergraduate training opportunities in health sciences
- A significant number of Master's training programs are offered at various universities
- Existing capacity for post graduate (PhDs and post doctoral) training in health sciences is low compared to the capacities of institutions for other sciences / fields

# Harvard-Tanzania Partnership

- HSPH has a long-standing collaboration with a number of public health research and training institutions in Tanzania, including MDH, MUHAS, IHI, and other leading institutions.
- Fostering sustainable research capacity has been a long-term goal of this collaboration and has resulted in:
  - 1) Degree training at HSPH (including Master's and Doctoral degrees)
  - 2) Post-doctoral training in innovative laboratory methods in virology, immunology, epidemiology, and biostatistics at Harvard
  - 3) Short-course training at HPSH and in Dar es Salaam in topics like research methods, biostatistics and epidemiology , and public health
  - 4) A south-to-south laboratory training program in collaboration with the Harvard-affiliated research group in Botswana

# Current Training Programs

## Stages of Academic Opportunity



# International Collaborations

- Harvard University, and other partner institutions of higher learning, can play a role in providing training in areas of technical expertise, research, and leadership necessary to support the health system
- Expansion of such critical collaborative training programs can produce a critical mass of skilled and innovative scientific leaders at PhDs and post doctoral levels
  - This critical mass is needed to support and sustain emerging public health demands for the 21st century

# Linking training to ongoing research

- Increase funding for M&E and operations research
- Increase funding for discovery research
- Strengthen data systems – quality, analyses, and data skills
- Enhance research capacity - library services, IT facilities, IRBs, lab infrastructure, administrative and financial capacity

# Training Challenges

- Funding level of grants fluctuates, making it difficult to support continuous ongoing training and create a long term strategic plan
  - Government support is needed to maintain elements of training programs in order to increase capacity of Tanzania's health workforce
- Need to enhance the network of training alumni in Tanzania and support their efforts as mentors

# Training Opportunities Synthesized

- Boston Deliverables
  - MS, MPH, or PhD Degree students at HSPH
  - Short and Long Term Fellowships for trainees at HSPH (mentored research experiences)
  - Summer Session Fellowships
- Dar es Salaam Deliverables
  - Annual short courses
  - Annual Symposia
  - Research mini-grants
  - MPH or PhD degree students at MUHAS
  - Post-Doctoral Fellowships for trainees at MUHAS
  - Mentored research experience for medical or public health students
  - South-South collaborations



# Harvard-Tanzania Collaborative Training Program Results

Training Type	Number Trained at HSPH
Doctoral Level Training	5
Masters Level Training	26
Post-doctoral Fellowships	29
Short-term Fellowships	18
HSPH Summer Session Scholars	56
MUHAS Short courses	3-4 courses conducted annually with approx. 20 participants/course
MDH Short Courses	> 3,200 trained in 2010-2013. Over 50 courses conducted for study physicians, nurses, pharmacists, and study

Graduates return to Tanzania. Alumni working in places like MDH, MUHAS, BUCHS, KCMC, IHI, the Ministry of Health and others.

# Training Programs

- There have been several collaborative training programs through the Harvard-Tanzania AAPH partnership, the majority of which have been supported by the Fogarty International Center at NIH, in partnership with MUHAS. Selected examples include:
  - Tanzania HIV/AIDS and TB Research Training Program
  - AIDS International Training and Research Program
  - Global Infectious Disease Research and Training Program
  - Clinical Research Training, Scholars and Fellows
  - Frameworks Program for Nutrition and Global Health
  - Africa Leadership Academy Fellows

*Ongoing training sessions as part of the capacity development of public health researchers and health care professionals.*



National Institutes of Health  
Fogarty International Center

FOGARTY

# Training Infrastructure Development is Critical

- Increase funding for M&E and operations research
- Increase funding for discovery research
- Strengthen data systems – quality, analyses, and data skills
- Enhance research capacity - library services, IT facilities, IRBs, lab infrastructure, administrative and financial capacity

# Selected Training Success Story

- *Mary Mwanyika Sando, MD, MPH*
  - Maternal and Child Health Coordinator, MDH
  - HSPH MPH graduate (2013)
  - Awarded prestigious Albert Schweitzer Award at HSPH graduation
  - Inaugural class of The New Voices Fellowship (Gates Foundation) focusing on maternal and child health
  - UNICEF Health System Strengthening Specialist
  - Now: Chief Executive Officer of AAPH

# Summary

- To address basic and epidemiologic aspects of various public health problems, with a focus on nutrition and disease prevention, the collaborating teams at SPH and in Tanzania are multi-disciplinary.
- Partnerships between SPH and Tanzanian partnering institutions have been very fruitful for all collaborators in three main areas: public health research/interventions; implementation research in programmatic care/treatment services; and training.
- Combined efforts have been mutually beneficial with respect to investments in critically important nutrition research, capacity building of health professionals and the practice of public health in Tanzania.
- Great potential for this collaboration to continue to grow for the benefit of public health in Tanzania and beyond.

# Global Infectious Disease (GID) Training Program

The goal of this training program is to develop skilled researchers in Tanzania in the area of **pediatric infectious diseases, specifically childhood diarrheal diseases and acute respiratory infections, and malnutrition**. The program aims to provide research training to public health leaders in epidemiological, operations and health services, laboratory, and clinical areas, with a focus on childhood diarrheal diseases and acute respiratory infections. The specific aims are to:

- (1) Develop a cadre of public health and medical professionals who can address critical nutrition and pediatric infectious disease issues, preparing them to advance public health research in Tanzania;
- (2) Provide focused and collaborative mentoring that enhances the career trajectory of participants while building a community of trainees and future leaders;
- (3) Support the advancement of training-related research that is directly relevant to identified gaps in pediatric infectious disease and nutrition training.

# HIV Implementation Science (HIS) Training Program

**The long-term goal of this training program is to develop skilled researchers in Tanzania in the areas of Implementation Science, Impact Evaluation, and Health Systems Research for HIV treatment, prevention of mother to child transmission (PMTCT), and nutrition interventions. The specific aims are to:**

- (1) Train a critical mass of mid-level and senior researchers to (a) Work as principal investigators leading independent research programs focused on questions of implementation and evaluation of HIV treatment, PMTCT, and nutrition interventions (b) Teach HIV-related Implementation Science, Impact Evaluation, and Health Systems Research in Tanzania.
- (2) Build a critical mass of junior public health and medical professionals who can design and successfully carry out rigorous research projects in HIV Implementation Science, Impact Evaluation, and Health Systems Research.
- (3) Develop a sustainable Master's program in HIV Implementation Science and Impact Evaluation in Dar es Salaam, Tanzania, to train the next-generation African HIV researchers for sub-Saharan Africa over the coming decade.

# The Partnership for Global Health Research Training

Harvard University, Boston University, Northwestern University, and University of New Mexico(HBNU)

**A consortium of institutions that will contribute to global health research capacity building and the use of research** to improve the health outcomes related to priority health areas including HIV/AIDS, non-communicable diseases (including cardiovascular disease and diabetes), maternal and child health and nutrition, and mental health in 13 low- and middle- income countries (LMICs) throughout Africa and Asia. The Program addresses the need to develop a connected network of early stage investigators from the U.S. and LMICs who are committed to careers in global health. The specific aims are to:

- (1) Recruit a diverse pool of qualified predoctoral and postdoctoral applicants from the global health and allied fields at all U.S. and LMIC partnering institutions.
- (2) Deliver a comprehensive education and research support program that will combine intensive in-person, cohort-based training with synchronous and asynchronous online learning and access to innovative collaboration and networking tools to support trainee individual professional development and research project implementation.
- (3) Provide trainees with rigorous mentored research experiences at LMIC research sites with a very strong track record of peer reviewed publications and NIH research outputs.
- (4) Build LMIC and Global Health research capacity at consortium member institutions and internationally.



# **Example of mental health** training track record and plans (and links to research) with Harvard

**HIV-Psychosocial issues (focus Major Depression) in PMTCT:** Supplementary funds for additional data collection – TOV studies (Mini 1 and Mini 2 studies; WAF study)

- MCH International Research and Training Program Award – Harvard School of Public Health (2004 & 2005) Independent study qualitative data and scale analyses – Dr. Sylvia Kaaya

**Comorbid depression in persons with chronic physical illness: Interventions for access to depression screening and treatment:**

- MUHAS Masters Thesis – Depression prevalence in HIV ART and diabetes clinics
- Fogarty Fellowships – Dr. Samwel Likindikoki PhD ongoing (DANIDA) HIV transmission prevention in PWIDS & Dr. Fileuka Ngakongwa (HBNU)
- ICHORTA Fellowship (n=1) – Dr. Hellen Siril PhD ongoing - Hopelessness to Hopefulness

**HMS/HSPH/MUHAS/AAPH Collaborative studies - ongoing:** a) Positive Change Agents Programme in Tanzania - analysis; b) Healthy Options- Group psychotherapy for HIV positive depressed pre-natal women - analysis

## Looking Ahead – Training Growth Aims

- AAPH to serve as regional training hub
- Explore future opportunities, partnerships and modals for increased mentoring capacity for health sciences PhDs and post doctoral training in Tanzania
- Enhance distance learning opportunities to engage and reach a wider audience
- Increase north-south-south institutional partnerships

## Training Growth Aims (cont'd)

- Double the number of students receiving graduate training at HSPH and MUHAS
- Formalize short-courses into a connected curriculum and apply for accreditation
- Increase the number of annual short-courses to approximately 10 each academic year
- Formalize post-doctoral and sabbatical opportunities to increase publications and data analysis

# Training Growth Aims (cont'd)

- Centralize Training Program at HSPH and AAPH
  - Short-Courses
    - Courses will occur cyclically, between Oct-Dec and Mar-April
    - Curriculum will be developed leveraging each training program in order to synthesize materials creating a coherent selection of courses
    - Short-courses will move through the MUHAS accreditation process
  - Research Mini-Grants Awarded Annually
    - Developed procedure will provide a framework for the provision of research mini-grants
    - Mini-grants will support students exiting various training opportunities (graduate training, post-doctoral efforts) in order to launch new research activities
  - Single Global Health and Nutrition Symposia Annually at AAPH
    - Annual Global Health and Nutrition symposia will be co-sponsored by each program, highlighting all AAPH-HSPH activities

# HSPH Degree Recruitment Calendar

- Centralize Training Program at HSPH and AAPH
  - Develop cyclical recruitment calendar for all Students and Trainees at HSPH and MUHAS
  - Training Coordinator at HSPH and Training Manager at AAPH/MUHAS will manage recruitment activities to ensure elite applicant pool by December 15th each year

# Example Cyclical Recruitment Process

