Fogarty International Center AIDS International Training and Research Program (AITRP) Outcome Evaluation:

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Overview

- Program Background
- Evaluation Framework
- Data Collection Sources/Methods
- Program Demographics
- Findings

The AIDS International Training and Research Program (AITRP): Program Background

- Launched in 1988 by Fogarty International Center (FIC)
  - First of new generation of training programs
  - In response to spread of the global HIV/AIDS epidemic
- Original Goal: *To provide training and foster international collaborations in the field of epidemiology to scientists from developing countries*
  - Offered long-term training in US academic institutions and short-term training in the US and other countries
  - Provided support for US faculty to continue collaborations with trainees who have returned to their home countries
  - Goals and operations have since evolved and adapted to the changing landscape of the epidemic:
    - Shifted focus of research training in epidemiology to multidisciplinary prevention research
    - Shifted emphasis from short-term instruction of many to long-term training of few leading to advanced degrees or postdoctoral training
    - Established 're-entry grants' to support projects of trainees returning to their home countries
    - Limited geographic expansion

Evaluation of AITRP 1988-2004

- Current Outcome Evaluation followed Feasibility Study conducted in 2003-2004

- Main Evaluation Questions:
  1. What are the lessons learned and challenges of AITRP **program management**?
  2. How well does AITRP **develop expertise** of foreign scientists?
  3. How well does AITRP **enhance collaboration** between the US and foreign scientists/researchers?
  4. How well does AITRP **build capacity** of foreign scientists/researchers to deal with the AIDS epidemic?

- Evaluation design used a cross-sectional approach since no previous evaluation or data was collected on outcomes
  - Blended qualitative and quantitative data collection strategies

Data Sources/Methods

- Administrative Data Review: grants, applications, progress reports
- Publication Collection and Bibliometrics
- Trainee Roster
- Site Visits to South America, Asia, and Africa
  - Discussions with Trainees, In-Country Collaborators, Experts
- Discussions/Interviews
  - Matched Cohorts (29 non-AITRP trainees)
  - USPIs
  - NIH Partners

Program Demographics

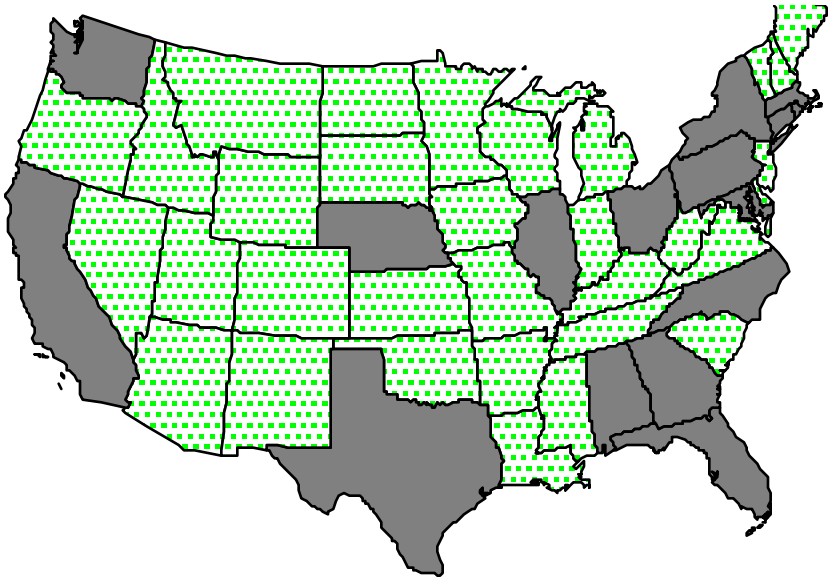
- Grantees
- Trainees

Program Demographics:
Current AITRP Grantees

- 25 AITRP awards (1988 – 2004)

  (Actual current is 26 including University of Texas, awarded in 06)

- Current Geographic Distribution of USPI Institutions in 17 States:
  - 6 in New York
  - 2 in California
  - 2 in Maryland
  - 2 in North Carolina
  - 1 each in remaining 13 states



Program Demographics:
Long-Term Trainees

From 1988-2004, AITRP has resulted in…

- 1,352 trained individuals
- 1,547 *training experiences*
- Constant number of trainees per year with a steady increase after 1998

Program Demographics:
Geographic Distribution of LT Trainees

Trainees are from 83 countries and all regions of the world.

The Americas (32%)

Africa (31%)

Asia (24%)

Eastern Europe and Russia (11%)

Highly Developed Countries (3%)

More than half are from 9 countries:

Brazil

Haiti

Uganda

China

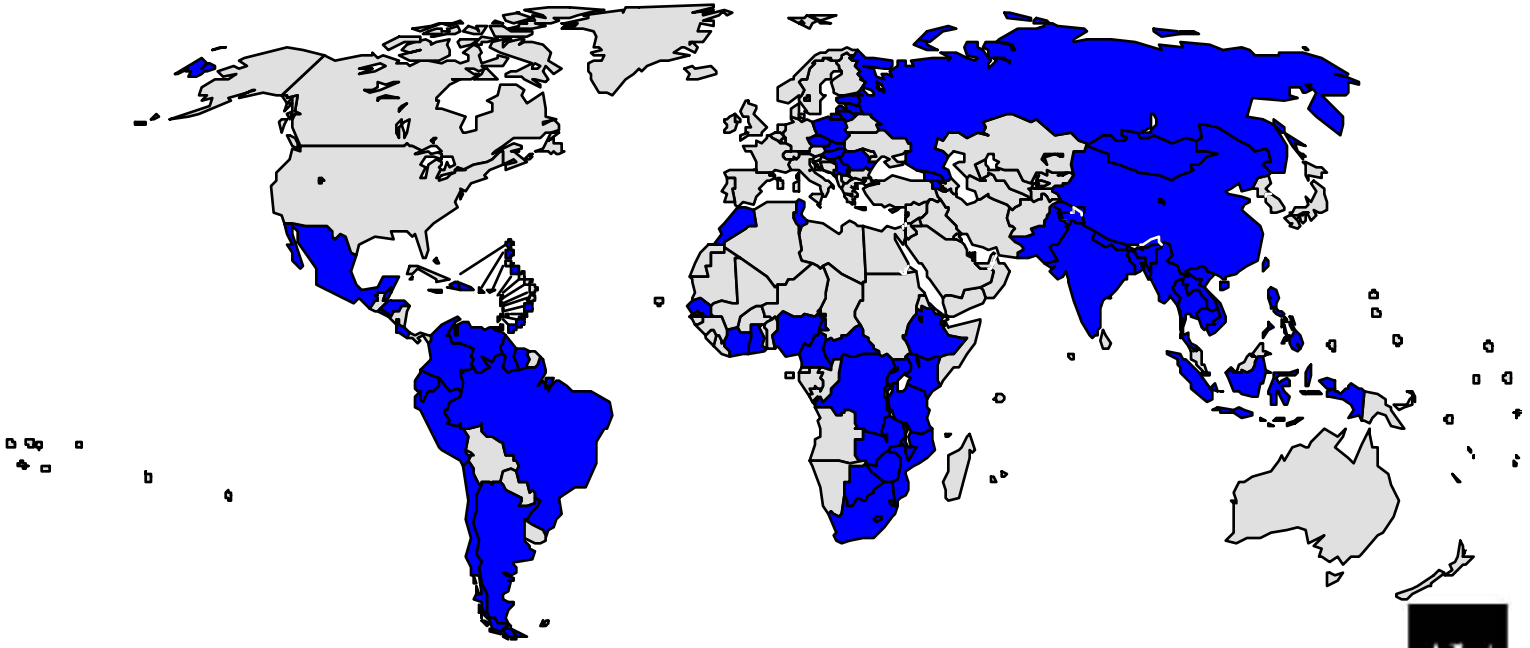
India

Kenya

Thailand

Peru

South Africa



Findings

- Program Management
- Developing Expertise
- Building Capacity
- Enhancing Collaboration

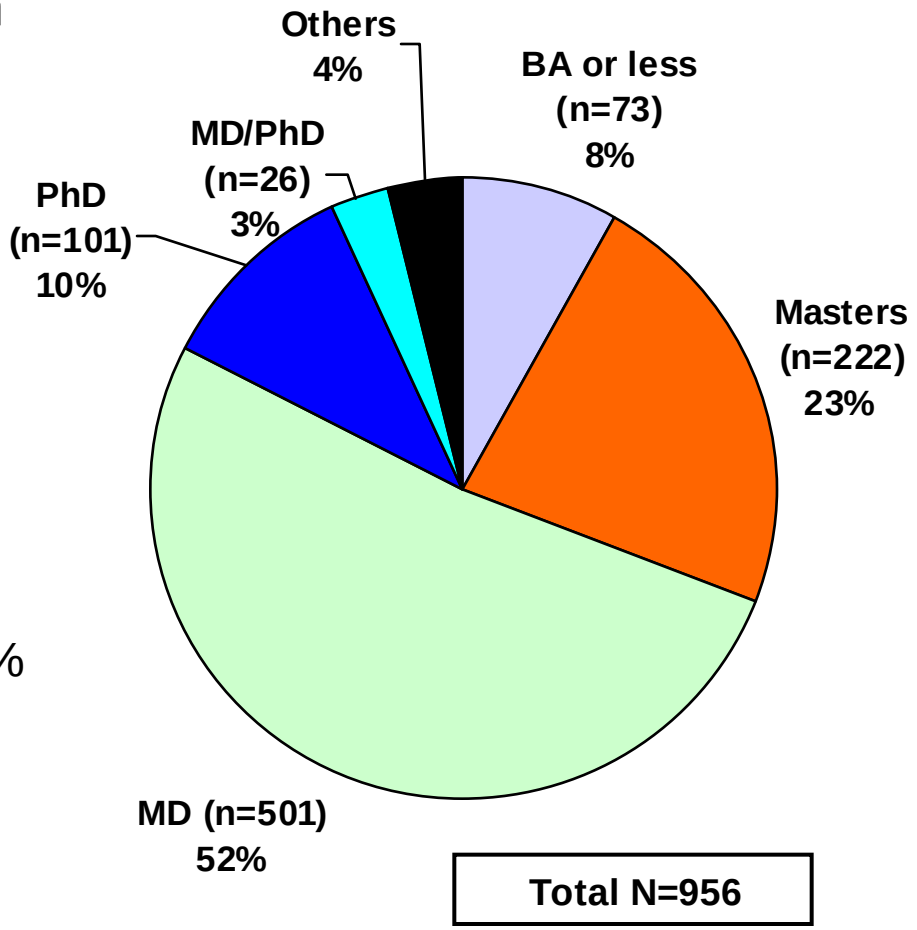
Program Management: Trainee Selection

- Trainees' country selection is based on history and context
  - Driven by PI connections
- Methods of recruitment vary
  - From networking to advertising via collaborating institutions or ads in community papers and radio
- Models of trainee selection derived from need for FLEXIBILITY and ADAPTATION to meet country's needs
  - Propelled by desire to select trainees most likely to return & stay home
- Selection criteria
  - Qualifications, standardized testing, proficiency in English
  - Research interest, availability of mentors
  - Potential to assist in future recruitment, job placement
  - Potential to provide mentoring, research environment for returning trainees, and trainings to multiple groups in country

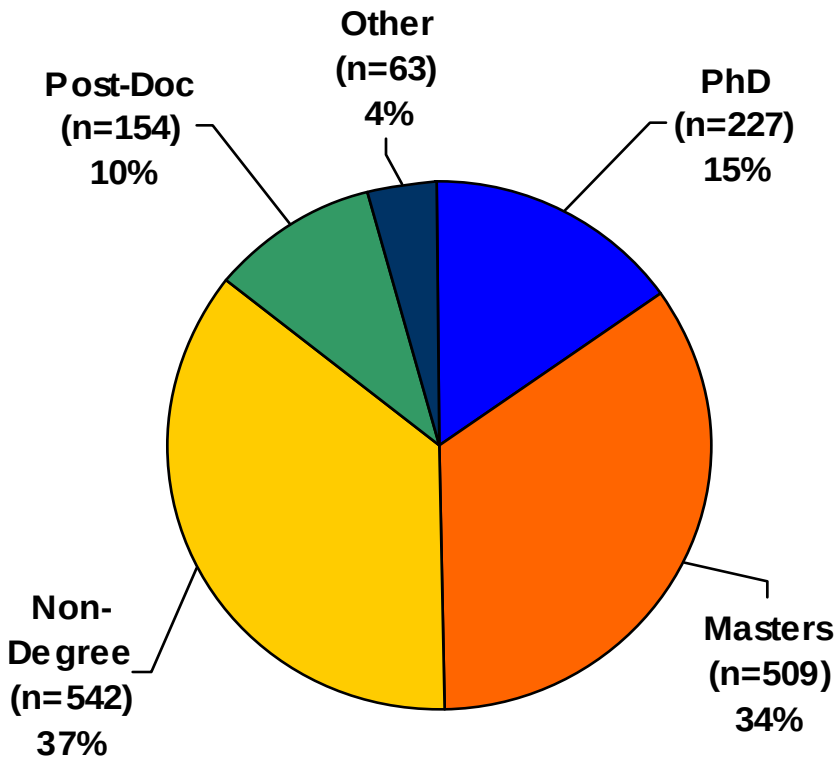
Developing Expertise: Degrees Held Upon Entry

- Half of trainees held an MD upon entering first AITRP experience

- Variation by region:
  - The Americas: 70% MDs
  - Africa: 42% Masters, 30% MDs
  - Asia: 56% MDs, 21% Masters
  - Eastern Europe: 57% MDs, 24% PhDs
  - OECD: 51% MDs, 25% PhDs



Developing Expertise: Degrees Received



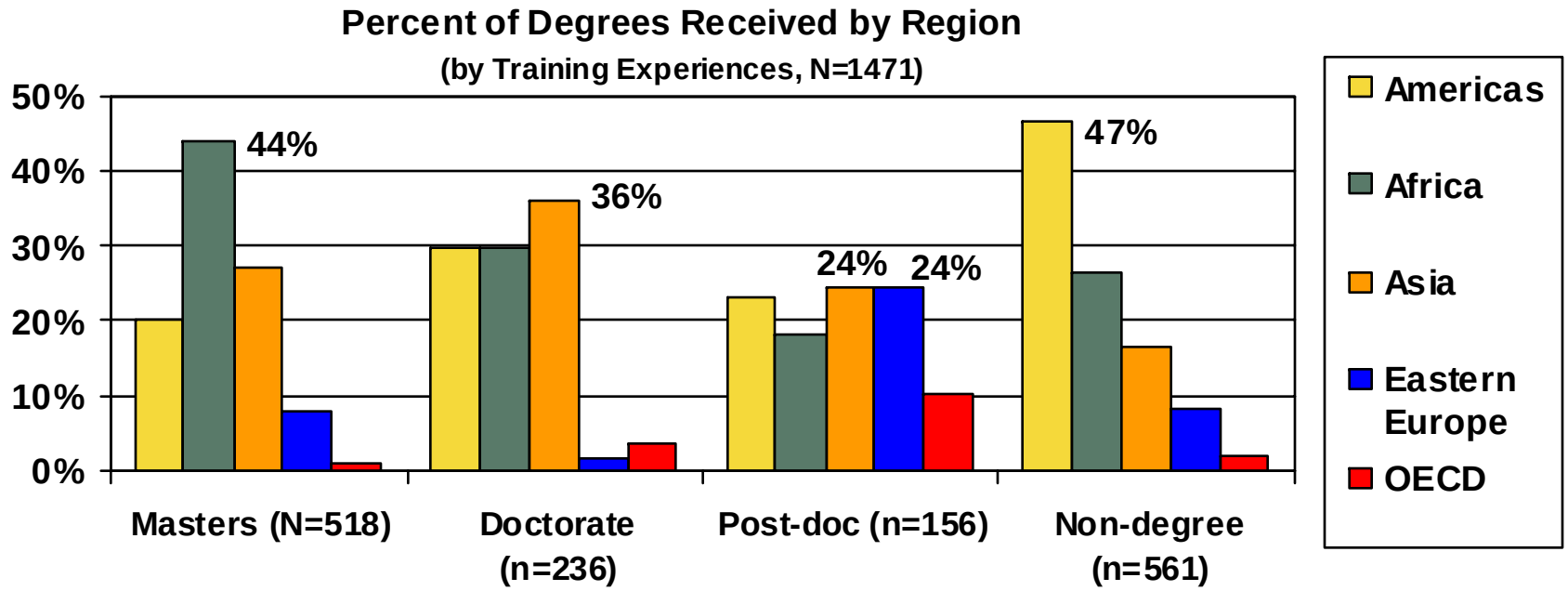
Total N=1495

- Most AITRP training experiences resulted in a non-degree training or Master's degree

- Variation by degree upon entry:
  - MDs pursued Master's (40%) or non-degree training (35%)
  - Masters received another Master's (44%) or non-degree (32%) or PhD (21%)
  - PhDs pursued non-degree (48%) or *post-doc (41%)

Developing Expertise: Degrees Received By Region

- Types of degrees received varies by region
  - 44% of Masters trained are from Africa
  - 36% of Doctorates trained are from Asia
  - 48% of Post-docs are from Asia or Eastern Europe
  - 47% of Non-degrees are from the Americas

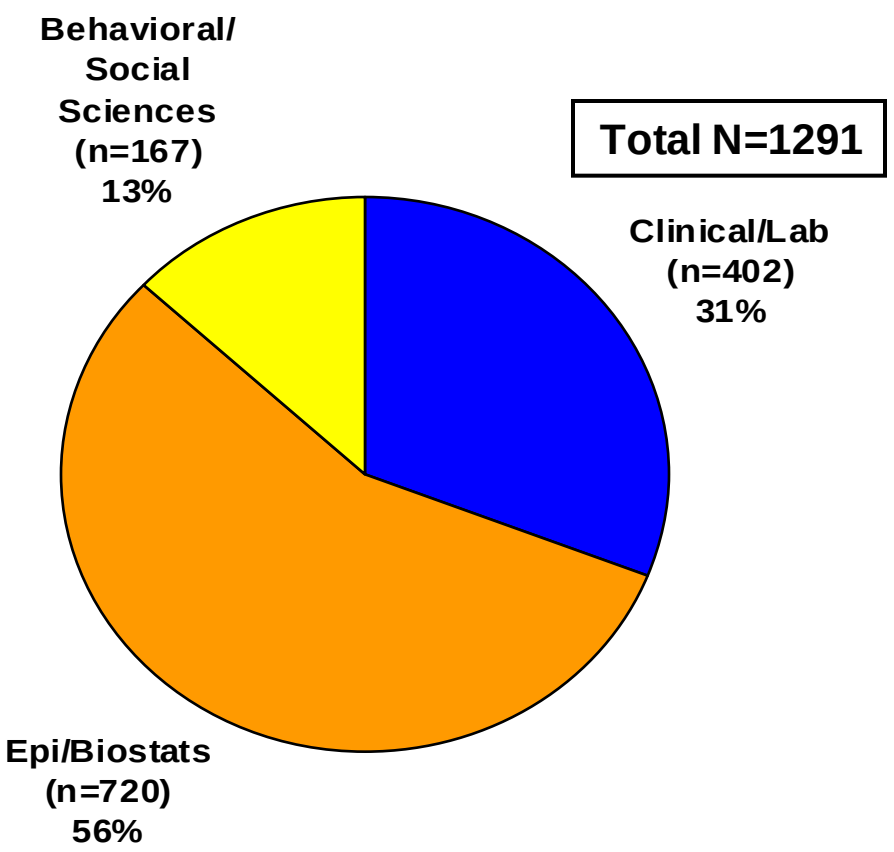


*Other (4%) not shown.

Developing Expertise: Field of Study

- Nearly half of all trainees trained in epidemiology/biostatistics

- Variation by region
  - Trainees from Asia (65%), Eastern Europe (62%) and Africa (58%) most likely to train in epi/biostats
  - Trainees from OECD (42%) and the Americas (38%) trained in clinical/lab or epi/biostats (42%, 47%)



*Two (2) trained in Business; not shown.

Building Capacity

- Measures
  - Trainee presence and expertise
  - Publications
  - Collaborations beyond formal training

Building Capacity: Publications

- 2114 reported peer-reviewed articles (Years 1-15)
  - Authored or co-authored by 29% of AITRP trainees
  - Most (80%) stem from institutions in Cohort 1
  - 82% pubs found in high-income journals
  - AIDS specific journals comprise largest number of AITRP publications
    - *AIDS* (n=195)
    - *Journal of Infectious Diseases* (n=162)
    - *Journal of AIDS* (n=117)
    - *AIDS Research & Human Retrovirus* (n=77)
    - *International Journal of STD and AIDS* (n=51

A Model for Building Capacity:
The Foci of Research

- Highly centralized networks
- Provide structured mentoring opportunities
- Support development of ‘critical mass’
- Ability to retain skilled researchers

Main Source: Site Visits

Building Capacity: Case Example

Peru *(54 Trainees, 3 grantees)*

- Three leading scientists fund, train and recruit AITRP trainees
- Lead centers of nationally recognized Centers of Excellence
  - IMPACTA
  - San Marcos University
  - University of Peru - Cayetano Heredia
- Each of them represent different training focuses (laboratory, epidemiology, and social/ behavioral respectively)
- Serve as leaders and regular contributors to training and development of research capacity in their respective areas of expertise
- Actively contribute to national policy

Obstacles to Building Capacity
Across Site Visited Countries

Average rating across all groups on a 1-7 scale	Overall Average (N)	Trainees (n)	Matched cohorts (n)	USPIs (n)
Ease of securing funding to support work*	3.4 (90)	3.9 (49)	2.9 (24)	2.4 (17)
How well country can retain clinicians & experts	4.0 (97)	3.9 (52)	3.4 (28)	5.1 (17)
Policymakers interested in research*	4.4 (93)	4.9 (48)	3.6 (28)	4.5 (17)
Extent of policymakers use of scientific evidence in setting HIV/AIDS policy	4.4 (95)	4.5 (52)	3.9 (26)	4.6 (17)
*Statistically significant different found at p<.05.				

- Securing funding to support work
- Competing demands for trainees
- Lack of commitment and application of research
  - Gaps between policy, research and practice
- Top three research areas most needed ***in future*** to combat HIV
  - Services Systems, Policy Research, Efficacy/Effectiveness Research

Increasing Partnerships and Collaboration

- Blurry definitions and usually demarcated via the AITRP circle
- Few independent partnerships of trainees with other non-AITRP groups, including clinical
  - Primarily based on PIs' networks
  - Partnerships most common with other AITRPs and with AIDS training programs (some of which may be funded by NIH)
- High variation in numbers and types of relationships

Perceived Importance and Impact on Trainee by Trainees

Question (Ratings on a scale of 1 (low/worst) to 7 (high/best)	Trainee Average Rating	Median	Min-Max
Overall rating of AITRP (n=44)	6.5	7	5-7
How well AITRP came to meeting trainee's goals/expectations (n=54)	6.1	6	3-7
Satisfaction with career before AITRP (n=48)	4.3	4	2-7
Satisfaction with career now, after AITRP (n=55)*	**6.0**	6	3-7

*Compared to Matched Cohorts (N=29) average rating of 4.9
(statistically significant difference at p<.05)

PI Views of Successful Outcomes of AITRP

- Trainees are leaders in research centers and policy development
  - Trainees are senior investigators of international trials and can compete with US and European researchers
  - Trainees develop/improve “high level” contribution to AIDS research
- Increased numbers of testing (due to trained clinicians and technicians)
- Reduction in HIV prevalence
- Development of new research applications and programs
- Hard to define on country level
  - Changed policy in international journals

AITRP Trainees vs. Matched Cohorts

Average Rating (Scale of 1-7)	Trainees (N=59)	Matched Cohorts (N=29)
Satisfaction with career now*	6.0	4.9
Ease of securing funding*	3.9	3.0
Policymakers interest in research*	4.9	3.7
Policymakers use of scientific evidence	4.5	3.9
How well country meets it needs in addressing epidemic	4.4	3.9
How well country retains expertise	3.9	3.4

*Statistically significant difference at p<.05

Summary Highlights: AITRP Success

- High success in traditional outcomes:
  - Degree training, publications, presentations, continued work in research
- Increased likelihood that AITRP trainees can play key role in policymaking at national, local and institutional levels
- Highly valued among trainees, PIs and IC collaborators
- Model for diverse international research training and research capacity programs that respond to global health threats
- Hard to measure true “impact” given many “intangible” benefits and changing context – probably underestimates

Summary Highlights: Lessons Learned

- Funding and types of training must be responsive, yet nimble, to country policy and resources
- Certain program management features are key, such as mentoring, but may need more
- Limited opportunities for highly trained trainees to participate in translational research = disconnect between practice and research
- Outcome of independent research funding hard to reach (many still involved are not PIs)
- Need more sustained 'connectedness' for collaboration across and within all groups
- Need for new partners

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