

Non-Communicable Disease Regional Infrastructure Core Planning Grants

Edward L. Trimble, MD, MPH

Director

Center for Global Health

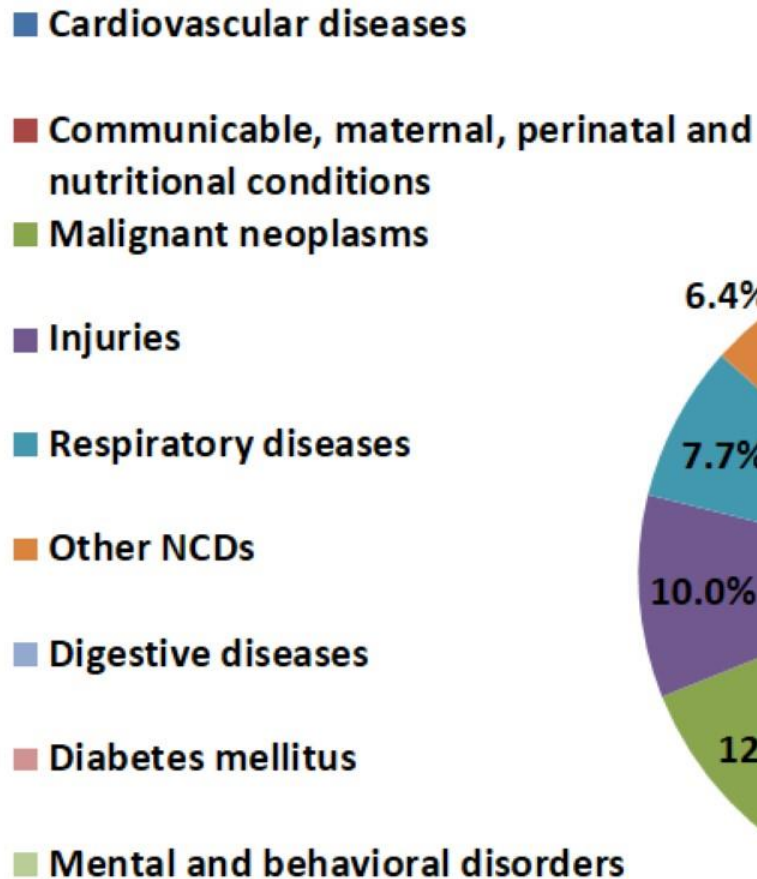
National Cancer Institute

National Institutes of Health

Concept Summary

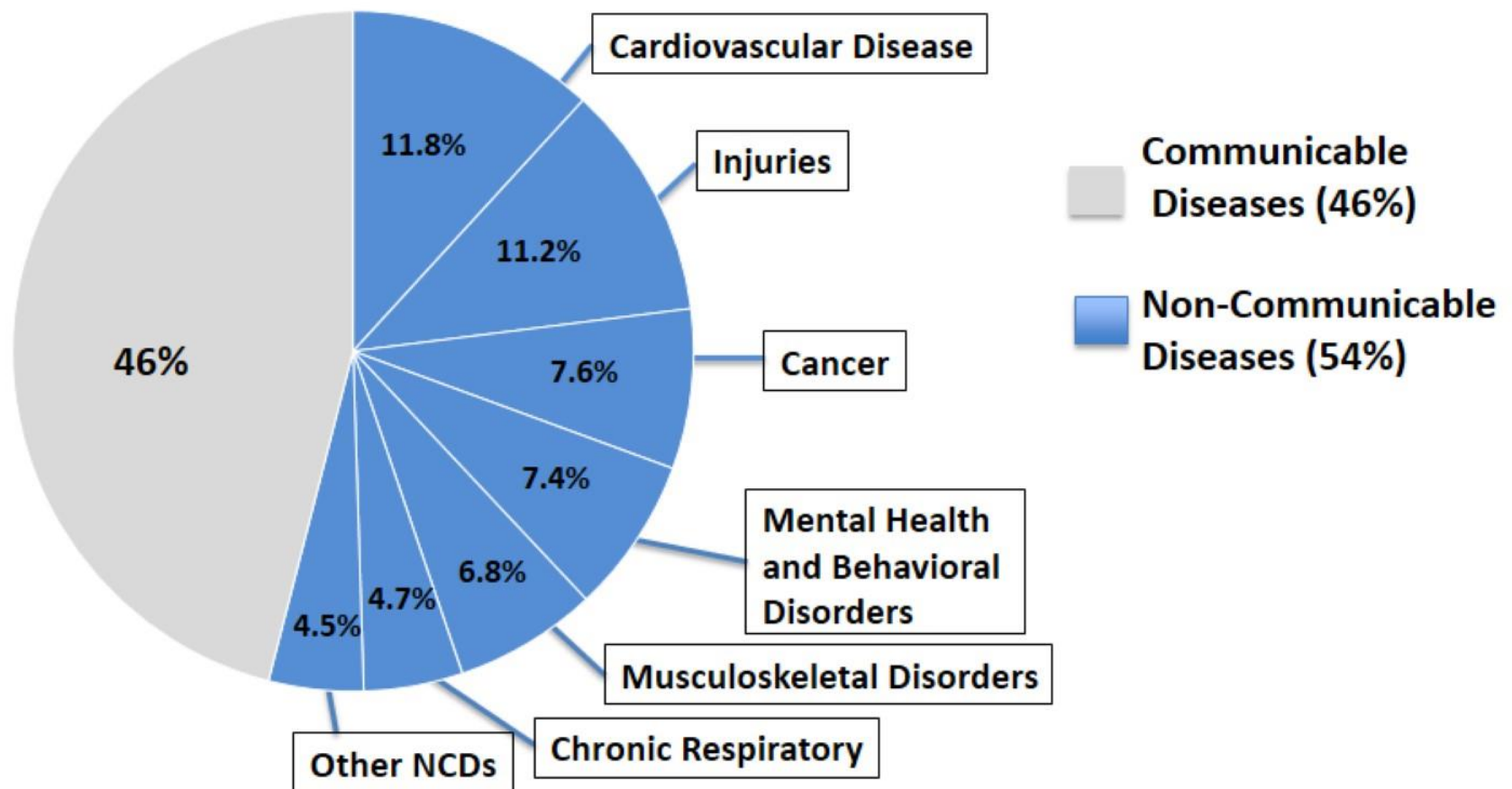
To support activities for the planning and design of sustainable, regional research infrastructure core (RICs), established to build, strengthen, and coordinate research and training of non-communicable diseases (NCDs) in low- and middle-income countries (LMICs) or regions.

NCDs and Injury in LMICs



More than 70% of premature deaths in LMICs are caused by NCDs and injury

DALYs for Communicable Diseases vs. Non-Communicable Diseases



NCDs Have Common Risk Factors

1. Tobacco use
2. Physical inactivity
3. Unhealthy diet
4. Harmful use of alcohol
5. Environmental factors
 - a. Outdoor air pollution
 - b. Indoor air pollution



Current Challenges to Addressing NCDs in LMICs

1. Limited in-country financial support for research and training
2. Inadequate research infrastructure
3. Poor healthcare delivery services, limiting the ability to conduct clinical research
4. Lack of surveillance regarding the management of NCDs
5. Lack of coordination across activities for addressing NCDs at country and regional-levels

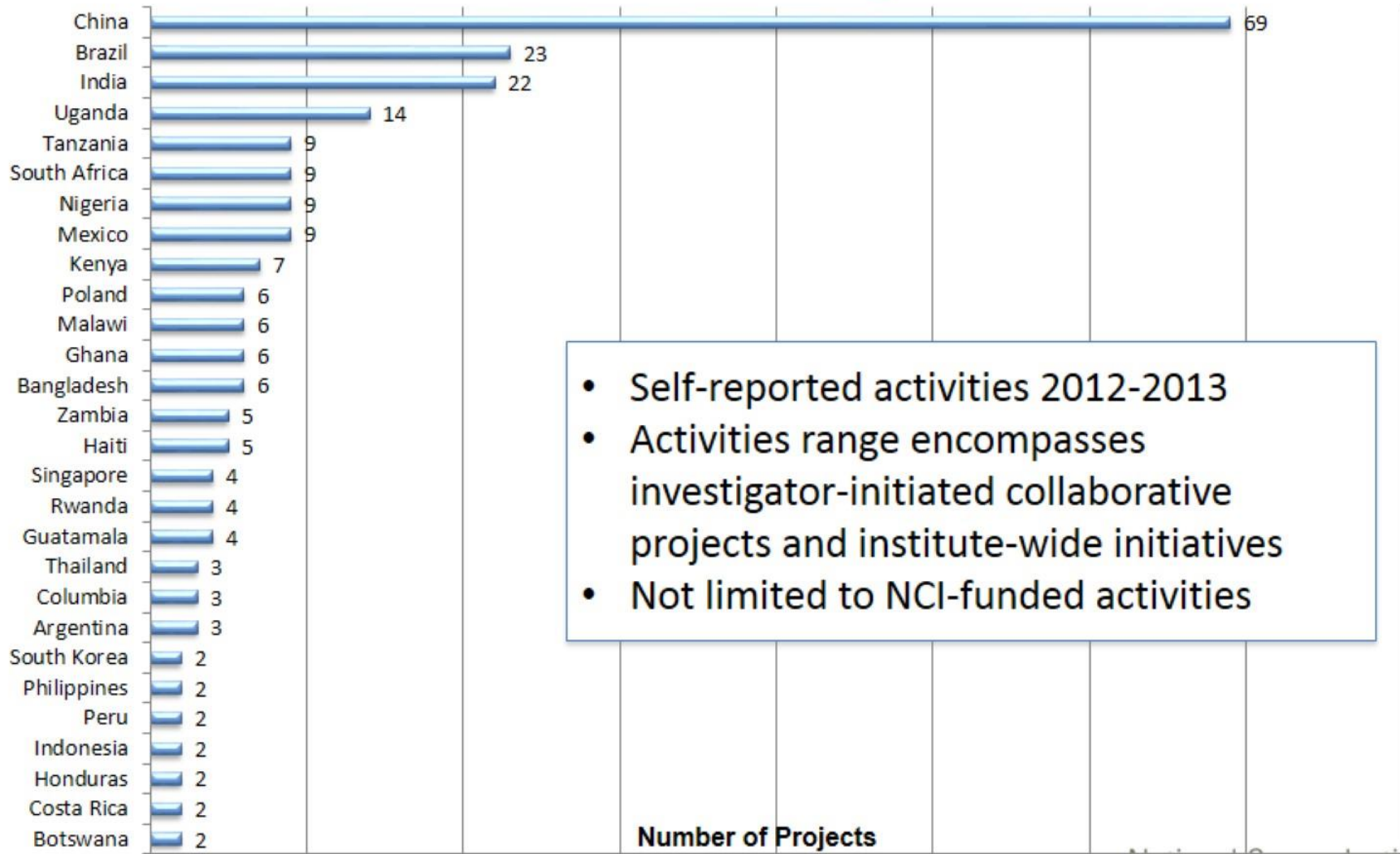
Leverage Existing USG and Other Infrastructure

1. **PEPFAR** *President's Emergency Plan for AIDS Relief*
2. **NIAID** *Clinical Trial Units for NIAID Networks*
3. **NHLBI** *Centers of Excellence*
4. **NICHD** *Biomedical/Biobehavioral Research Administration Development (BRAD) Award*
5. **NIMH** *Collaborative Hubs for International Research in Mental Health*
6. **FIC** *Medical Education Partnership Initiative (MEPI)*
7. **NHGRI** *H3 Africa – Human heredity and health in Africa*

Leverage Existing USG and Other Infrastructure

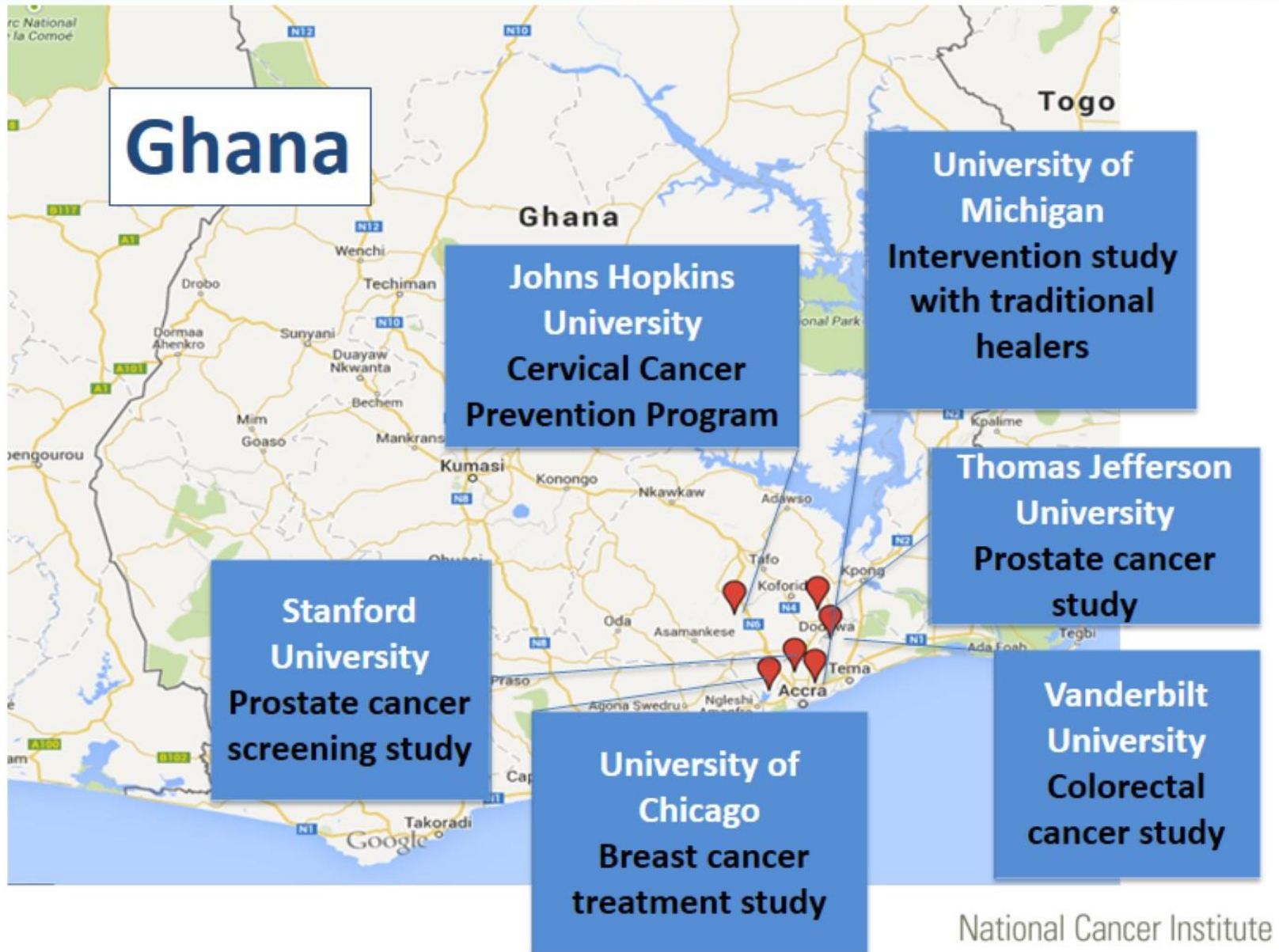
1. **OAR-NIAID-NCI, et al.** *Centers for AIDS Research (CFAR)*
2. **NCI-OHAM** *Strengthening Capacity for Research on HIV-associated malignancies in Africa*
3. **FIC-NCI-NHLBI** *TOBAC partnerships for tobacco control research*
4. **FIC-NIH ICs** *GEOHealth Network*
5. **CDC** *Field Epidemiology Training Programs*

International Activities of NCI Designated Cancer Centers



- Self-reported activities 2012-2013
- Activities range encompasses investigator-initiated collaborative projects and institute-wide initiatives
- Not limited to NCI-funded activities

Number of Projects



UK Universities Working in Ghana

1. University of Bristol
2. University of Cambridge
3. University of London,
Imperial College
4. University of Glasgow
5. University of Manchester
6. University of Reading
7. University of Oxford
8. University of Southampton
9. University of Surrey
10. Barts Cancer Institute
11. Institute for Cancer
Research, London
12. Kings College, London
13. Leeds
14. NICE
15. Queens University, Belfast
16. Royal Marsden Hospital
17. University College, London
18. University of Warwick

AMPATH Model

Founders:

- **Goal:** To create a sustainable research program including Research Program Office; Research and Sponsored Programs; Institutional Review Board; and ISO certified laboratory
- **Overarching Principle:** Each Research Project must have both a North American and a Kenyan principal investigator
- **Established:** In 1998; based in El Doret, Kenya



*Indiana University, Moi University SOM
Moi Teaching & Referral Hospital*

AMPATH Model

- 1. Current Leadership:** Dr. Rachel Vreeman, Indiana University and Dr. Winstone Nyandiko, Moi University
- 2. Kenya Partners:** Moi University School of Medicine and Moi Teaching and Referral Hospital
- 3. USG Partner:** USAID-PEPFAR and five NCI-designated Cancer Centers
- 4. North American Partners:** Indiana Univ., Brown Univ., Duke Univ., Lehigh Valley Hospital, Provident Portland Medical Center, Purdue Univ., Univ. of Massachusetts, Univ. of Toronto, and Univ. of Utah

AMPATH Program Structure

- **5 Co-Field Directors for Research**
 - 3 are full-time in Kenya
- **9 Research Working Groups**
 - Adult medicine, Basic science, Behavioral & social science, Cardiovascular and pulmonary disease, Oncology, Pediatrics, Public health & primary care, Reproductive health, and Tuberculosis
- **7 Core Facilities**
 - Operations, Data management, Biostatistics, Clinical informatics, Pharmacy, Laboratory, and Bioethics

AMPATH Outcomes, 17 Years Later

1. Over 90 active research projects
2. More than \$83.4M in research funding
3. Collaborators from > 19 universities and academic institutions in Africa, Europe, and North America
4. More than 275 publications

Long-Term Goals of NCD RICs:

1. Strengthen commitment of LMIC countries to public health research and implementation
2. Build evidence base for NCD prevention and control in LMICs
3. Build global health career track for investigators focused on NCDs
4. Facilitate individual research projects through use of Regional Research Cores
5. Strengthen multidisciplinary research across NCDs

Specific Activities of the Planning Grants

1. Assess NCD research needs and opportunities in the region of interest
2. Encourage the coalescence of a consortium of universities/cancer centers willing to work together in a region or country
3. Plan coordination of:
 - a. Research projects
 - b. Infrastructure core development
 - c. Research training
4. Develop strong application for core funding

Characteristics of a NCD Regional Infrastructure Core (RIC)

1. Partnership between a consortium of US/HIC institutions and multiple LMIC institutions in specific country or region
2. Development of research core facilities
3. Training and career development
 - a. US/HIC countries: global health research career track
 - b. LMIC countries: cancer and NCD research
4. Research to policy
 - a. Links between research community, government, and civil society
 - b. Address critical cancer & NCD public health issues
 - c. Use evidence to guide public policy and clinical practice

Potential NIH Partners:

1. Fogarty International Center
2. NHLBI (similar proposal in internal review)
3. NICHD
4. NIDDK
5. NIGMS (surgery & injury)
6. NIMH
7. NINDS
8. NINR
9. Etc.

Potential Research Areas

- Epidemiology and risk factor modification
- Genetics, genomics, and epigenetics
- Molecular and cellular biology
- Implementation science and knowledge sharing
- Health disparities/ social determinants of health
- Prevention and health surveillance
- Behavioral science
- Detection, diagnosis, and treatment
- Symptom management & survivorship
- Informatics/ UPIN/ data linking
- Health surveillance, including cancer registries, death registries, HBV & HPV vaccination, cancer risk factors
- mHealth, eHealth

Potential Core Resources

1. Grants & contracts management
2. Research ethics oversight (IRBs)
3. Bioinformatics & data management
4. Biostatistics
5. Biobanking
6. Health communications
7. Health economics/ comparative effectiveness research

Evaluation Criteria for the Planning Grants

1. Quality of the comprehensive needs assessment of NCD-related research needs for the region
2. Caliber of the research plan to support NCD research needs of the region
3. Training plan aligned with the proposed NCD research
4. Appropriate infrastructure cores to support NCD research
5. In-depth metrics for monitoring and evaluating the quality and scientific impact of the research, training, and infrastructure

Evaluation Criteria of the Planning Grants, con't.

6. Strong, authentic community engagement to identify and addresses the local research needs
7. Strengthened administrative capacity of the LMIC institution to support the research
8. Credible plan for building self-sustaining, internationally-competitive research program

Network of NCD Consortia

1. Learning network
 - Can share best practices and lessons learned
2. Central NIH coordination
 - Similar to NCI Provocative Questions model

Potential HIC and UMIC Country Partners

High-income countries

- Australia (focus on SE Asia)
- Canada
- France
- Germany
- Ireland
- Japan
- Korea
- Norway

Upper middle-income countries

- Brazil (Portuguese-speaking countries)
- China
- India
- South Africa

Potential RIC Locations



Mechanism and Funds Available

1. RFA – P20
2. NCI expects to make 6, 2-year, \$200,000 dollar direct cost awards (\$330K, total costs)
 - a. Other ICs may make additional awards or co-sponsor awards
3. \$2.4 million dollars, direct costs (\$4M total costs)
 - a. \$1.2 million dollars, direct costs, in each FY16 and FY17

Thank You

CGH

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OCC

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DCCPS

Brenda Edwards
Damali Martin

DCTD

Miguel Ossandon

OHAM

Kishor Bhatia
Geraldina Dominguez

CCT

Susan Perkins