

# TANZANIA

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**PROGRAM/ RESEARCH GROUP:** Tanzania Cancer Registry

**LOCATION:** Dar es Salaam

**INSTITUTIONAL PARTNERS:**

Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam, Tanzania  
Global Health Research Foundation, Palo Alto, CA  
Department of Defense (DoD) Joint Pathology Center, Silver Spring, MD

**OBJECTIVES:**

- Rebuilding a population-based cancer registry for Dar es Salaam, Tanzania

**PRINCIPAL INVESTIGATOR(S):**

Katherine Van Loon (UCSF)  
Amos Mwakigonja (MUHAS)

**COLLABORATORS:**

Robert Hiatt (UCSF)  
Ann Marie Nelson (DoD Joint Pathology Center)

**PROJECTS:**

- Measurement of principles critical to cancer registry data quality, including:
  - 1) *Completeness* of reporting to the cancer registry; and
  - 2) *Validity* of pathologic interpretations of malignancies
- Implementation of remote data entry/mobile health technology, capitalizing on the open-source capabilities of CanReg5<sup>®</sup> cancer registration software and the existing cellular phone infrastructure in East Africa.
- Training and development of cancer registry staff

**PRIMARY FUNDING:** UCSF-GIVI Developmental Core

**AFFILIATED STUDIES:**

- Building a Population-Based Cancer Registry in Dar es Salaam, Tanzania: A Pilot Project to Evaluate Completeness and Validity of Pathologic Data

# TANZANIA

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**PROGRAM/ RESEARCH GROUP:** **leDEA-East Africa Regional Consortium (International Epidemiologic Database to Evaluate AIDS)**

**LOCATION:** Sites throughout Kenya, Tanzania, and Uganda

**INSTITUTIONAL PARTNERS:**

- USA: UCSF, Indiana University, Columbia University, New York University, NIH
- Kenya: Moi University School of Medicine, Kenya Medical Research Institute (KEMRI)
- Tanzania: National AIDS & STI Control Programme (NASCOP)
- Uganda: Mbarara University of Science and Technology (MUST), Rakai Health Sciences Program, Infectious Diseases Institute (IDI)
- Ministries of Health of Kenya, Tanzania, and Uganda
- Seven regional cross-continent leDEA consortia (East Africa plus Central Africa, West Africa, South Africa, North America, South America, and Asia)

**OBJECTIVES:**

- Establish an international research consortium in East Africa to address unique and evolving research epidemiologic and clinical questions in the field of HIV/AIDS which are unanswerable by single cohorts;
- Establish protocols to harmonize routine data collected during the course of clinical care at a variety of care facilities for HIV throughout East Africa;
- Develop methods to overcome limitations in accuracy and completeness of data collected in routine care sites in resource-limited areas;
- Provide training and mentoring to emerging African scientists and data managers;
- Share data within the leDEA worldwide consortium (7 regions throughout the world)

**PRINCIPAL INVESTIGATOR(S) at UCSF:** Jeffrey Martin and Craig Cohen

**PROJECTS/ SPECIFIC AIMS:**

This dynamic cohort follows over 120,000 HIV-infected adults and 20,000 HIV-infected children who receive their clinical care at one of 42 different health care facilities throughout Kenya, Uganda, and Tanzania. Data collected during the course of routine clinical care are captured in electronic medical record systems at each site and then harmonized centrally. These data plus other enhanced measurements made for purposes of research form the basis of the leDEA database. A wide array of projects are ongoing, including:

- Trends over time in which patients begin ART
- Sampling-based approaches to eliminate biases conferred by losses to follow-up
- Durability of first-line ART regimens and predictors of treatment failure
- Patterns of pregnancy and reproductive outcomes
- Incidence and determinants of mortality after starting ART
- Time and motion studies in the evaluation and treatment of TB
- Impact of ART on the incidence of KS and survival after KS diagnosis.
- Cost-effectiveness strategies for optimizing HIV infection management

**PRIMARY FUNDING:** NIAID, NCI, NICHD

# TANZANIA

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## **PROGRAM/ RESEARCH GROUP:**

**MUHAS-UCSF Partnership and MUHAS-UCSF Academic Learning Project**  
(ended in 2011)

**LOCATION:** Dar es Salaam

## **INSTITUTIONAL PARTNERS:**

Muhimbili University of Health and Allied Sciences (MUHAS), University of Dar es Salaam, other Tanzanian partners

## **OBJECTIVES:**

- Through the sharing of human resources and knowledge MUHAS expanded its capacity to meet Tanzania's health workforce needs, while strengthening UCSF's capacity to contribute to global health and the global workforce crisis.

## **PRINCIPAL INVESTIGATOR(S):**

Sarah Macfarlane (UCSF)  
Ephata Kaaya (MUHAS)

## **PROJECTS:**

- Construction of a center at MUHAS for health professions education and research excellence for all of East Africa, named the Professor Haile Debas Centre for Health Professions Education
- Competency-based curriculum development for health professionals,
- Faculty development program
- Surgical skills laboratory for all medical students
- Training post-graduate students as educators
- Development of research agenda to harness faculty expertise to address gaps in knowledge and achieve national development goals
- Research administration
- Modeling human resources for health: developed quantitative tool entitled Increasing Clinically Active Doctors in Tanzania (ICAD tool) to facilitate policy makers to make realistic plans to increase the quantity and quality of health professionals in Tanzania.

**PRIMARY FUNDING:** Bill and Melinda Gates Foundation

# TANZANIA

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**PROGRAM/ RESEARCH GROUP:** Prevention & Public Health Group (PPHG)

**LOCATION:** Dar es Salaam

**INSTITUTIONAL PARTNERS:**

CDC-Tanzania, National AIDS Control Program (NACP), Ministry of Health and Social Welfare (MOHSW), Zanzibar AIDS Control Program (ZACP), National Institute for Medical Research (NIMR), Muhimbili University (MUHAS), Mzumbe University, TACAIDS

**OBJECTIVES:**

- To provide the training, technical assistance, and long-term capacity building to improve HIV treatment, care and prevention programs and surveillance systems; the capacity to monitor and evaluate these programs; and the ability to use the results to guide program planning, program improvements, and allocation of resources.

**PRINCIPAL INVESTIGATOR(S):** George Rutherford

**KEY PROGRAM STAFF:** Karen White, Susie Welty, Roger Myrick, Willi McFarland

**PROJECTS:**

**1) Monitoring and Evaluation:** Cooperative Agreement with CDC-Tanzania to Provide training and capacity building in monitoring and evaluation (to CDC-Tanzania, NACP, ZACP and CDC IPs)

**A. Improve Capacity in Data Use**

- Regional Cohort Training with NACP (redesign curriculum for Tanzania and train IPs and Regional AIDS Coordinators)
- Conduct HIV Testing and Counseling (HTC) and other program data use and mapping exercise for strategic planning for mainland Tanzania and Zanzibar
- Regional triangulation/data synthesis activities in 5 regions (also recently completed national level data triangulation to map epidemic)
- Data Quality Assessment Trainings
- Early Warning Indicator training

**B. M&E Training**

- Support implementation of M&E Masters Program at Mzumbe University (needs assessment, curriculum design and faculty development)
- Teach short courses in M&E as required
- Design and conduct evaluation of feasibility and acceptability of Brief Motivational Interviews (BMI) for alcohol use
- Capacity building in manuscript writing (mainland Tanzania and Zanzibar), including Scientific Writing workshops

# TANZANIA

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- Work with stakeholders to develop National M&E Plans in mainland Tanzania and Zanzibar, then continue to support and update these plans for NACP and ZACP (we are working on our second 5 year M&E plan in mainland Tanzania and recently completed our first in Zanzibar)

## **C. Provide Support for Gender Based Violence (GBV) M&E Activities**

- Indicator definitions and target setting
- M&E plan and support to local Mbeya partners

## **D. Other M&E Support as required**

- Support HSS activities (indicator definitions, partner surveys)
- MCH evaluation (data collection, entry, management and analysis)
- EPI/EID data entry and cleaning
- Zanzibar Elimination (Assist with indicator selection for monitoring elimination activities)

**2) Surveillance:** Cooperative Agreement with CDC-Tanzania to provide training and capacity building in surveillance (to CDC-Tanzania, NACP, ZACP and CDC IPs)

- Technical assistance to ZACP in conducting BSS surveys among IDUs, MSM and sex workers in Zanzibar, and assistance in analyzing data (including several data analysis workshops)
- IDU mapping exercise in mainland Tanzania
- Technical assistance for BSS among FSWs in Dar es Salaam
- Assistance with ANC/PMTCT comparison

**PRIMARY FUNDING:**

CDC

# TANZANIA

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**PROGRAM/ RESEARCH GROUP:** Global Health Group

**LOCATION:** Zanzibar and Dar es Salaam

**INSTITUTIONAL PARTNERS:**

Zanzibar Ministry of Health, Zanzibar National Malaria Control Program, Clinton Health Access Initiative (CHAI); Population Services International, African Malaria Leaders Alliance (ALMA)

**OBJECTIVES:**

- The UCSF Global Health Group is an “action tank,” dedicated to translating major new paradigms in global health into large-scale action, to positively impact the lives of millions of people. Since its establishment in 2007, the Global Health Group has conducted new research, synthesized evidence, and convened high level groups of experts to inform critical policy decisions and answer practical questions. Leveraging the expertise of its small team based in San Francisco, the Global Health Group works with a wide network of partners to gain insight, forge broad consensus, catalyze action, and implement solutions in countries. The Group’s three core initiatives focus on:
  - Providing practical and intellectual support for the **elimination of malaria** (MEI)
  - Strengthening the **role of the private sector** in delivery of healthcare (PSHi)
  - **Translating evidence into policy** to support informed debate on current global health issues (E2Pi)

**PRINCIPAL INVESTIGATOR(S):** Sir Richard Feachem  
Roly Gosling (MEI)  
Bryan Greenhouse (MEI)  
Michelle Hsiang (MEI)  
Dominic Montagu (PSHi)  
Gavin Yamey (E2Pi)

**KEY PROGRAM STAFF:** Elizabeth Brashers (overall Global Health Group)  
Allison Phillips (MEI)  
Anna De La Cruz (PSHi)

**PROJECTS:**

- The Global Health Group’s **Malaria Elimination Initiative** (MEI) provides intellectual and practical guidance and support to the 34 countries worldwide that are working to eliminate malaria and prevent its reintroduction within their borders. Since 2009 the Global Health Group and other partners including CHAI have worked with the Zanzibar National Malaria Control Program (ZMCP) to assist the country in assessing the operational, technical and financial feasibility of eliminating malaria in the country, and to strengthen its malaria diagnosis and surveillance policies and systems.
  - Partnering with the ZMCP to develop and test use of molecular, spatial and temporal data to identify source of malaria infection (local or imported)

# TANZANIA

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(Global Health Group member Dr Michelle Hsiang and colleague Dr Bryan Greenhouse from the UCSF Malaria Lab, 2009-11)

- Partnering with the ZMCP to assess the quality of the Rapid Diagnostic Tests (RDTs) used in health facilities in Zanzibar to diagnose malaria. Findings resulted in the ZMCP switching to a different RDT that is more effective in their setting.
- The **Private Sector Healthcare Initiative** (PSHi) specializes in documenting and advancing understanding of innovative platforms to engage the private sector in strengthening delivery of health services in low- and middle-income countries. Since 2008 the Initiative has conducted a significant program of research on social franchising, in collaboration with implementers and other partners, to document and evaluate this innovative platform, including: supporting a community of practice of 55 social franchises around the world, documenting scope, scale and impact of services provided, evaluating service expansion and cost effectiveness, and supporting development and implementation of quality standards and reporting.
  - In Tanzania, the PSHi liaises with the Population Services International social franchise, *Familia*, launched in 2009, which provides reproductive health and HIV screening and treatment services through 255 outlets in 12 states.
- The **Evidence to Policy Initiative** (E2Pi) works to narrow the gap between evidence and policy in global health, creating the tools and information that policymakers need for informed decision-making. Areas of focus: MNCH and reproductive health, malaria control, and global health financing and architecture.
  - In 2010-11 E2Pi partnered with CHAI and the African Leaders Malaria Alliance (ALMA) to synthesize evidence on the need for malaria-endemic countries to sustain their control programs even when they have reduced their malaria burden. Tanzania and Zanzibar were two of the five focus countries. CHAI is continuing the project, working in Tanzania and elsewhere to develop and test new innovative financing mechanisms.

## PRIMARY FUNDING:

Malaria Elimination: ExxonMobil Foundation; Bill and Melinda Gates Foundation  
Social Franchising: Rockefeller Foundation; Results for Development (Gates Foundation)

## AFFILIATED STUDIES:

- Partnering with the Kilimanjaro Christian Medical College-Kilimanjaro Clinical Research Institute, (Moshi, Tanzania) and the Ifakara Health Institute, Bagamoyo Research and Training Centre (Bagamoyo, Tanzania) and colleagues at the Radboud University Nijmegen Medical Centre, London School of Hygiene and Tropical Medicine, and MRC Centre for Outbreak Analysis & Modeling at Imperial College London to conduct research on spatial targeting of malaria “hot spots” for malaria control and elimination (Roly Gosling, ongoing).

# TANZANIA

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**PROGRAM/ RESEARCH GROUP:** GHS Program in Emergency Medicine

**LOCATION:** Dar es Salaam

**INSTITUTIONAL PARTNERS:** Muhimbili National Hospital; Muhimbili University of Health and Allied Sciences (MUHAS)

**OBJECTIVES:**

- Create Tanzania Institute for Emergency Medicine in Africa (TIEMA), a center of excellence for research and clinical training in emergency medicine.
- Support Emergency Medicine clinical training and research at Muhimbili
- Support the development of emergency medicine in Africa
- Serve as an entity able to receive outside grant funding for research and training activities at Muhimbili and elsewhere in Africa

**PRINCIPAL INVESTIGATOR(S):** Teri Reynolds (Project Director)

**KEY PROGRAM STAFF:** Donna Langston

**PROJECTS:**

- Administer visiting clinical faculty and nurse mentor program at Muhimbili Emergency Medicine Department
- Oversee residency and clinical training curricula
- Review and coordinate research in the Emergency Medicine Department
- Help local researchers secure funding
- Pair funded foreign researchers with onsite collaborators

**PRIMARY FUNDING:** Abbott Fund

**AFFILIATED STUDIES:**

- Feasibility and Diagnostic Impact of Bedside Ultrasound Training in a Limited-Resource Setting
- Ultrasound Measurement of the IVC to Evaluate Volume Status and Fluid Responsiveness
- Feasibility and Clinical Impact of Emergency Physician Performed Ultrasound-Guided Nerve Blocks
- Factors Affecting Implementation of Trauma Data Collection at Muhimbili National Hospital The Tanzania Emergency Physician Tracking Study
- The Tanzania Emergency Capacity Site Survey



# TANZANIA

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**PROGRAM/ RESEARCH GROUP:** I-TECH (International Training and Education Center for Health)

**LOCATION:** Dar es Salaam

**INSTITUTIONAL PARTNERS:**

University of Washington's Department of Global Health, Tanzania Ministry of Health and Social Welfare (MOHSW), National AIDS Control Program (NACP), CDC ,the National Tuberculosis and Leprosy Program (NTLP); Benjamin Mkapa HIV/AIDS Foundation; American International Health Alliance (AIHA); Family Health International (FHI); AIDS Services, Prevention, Intervention, Research and Education (ASPIRE); PharmAccess; and PEPFAR Tanzania care and treatment partners.

**OBJECTIVES:**

- Development of human resources and infrastructure for training of healthcare workers, to be integrated as sustainable components of the national health care system.

**PRINCIPAL INVESTIGATOR(S) at UCSF:** Michael Reyes

**KEY PROGRAM STAFF:** Tom Foster

**PROJECTS:**

- Technical assistance to develop teaching materials to integrate HIV and TB/HIV coinfection resources as components into curricula at pre-service training institutions.
- Technical assistance on the use of distance learning resources and technology to meet healthcare worker training needs.
- Strengthen the capacity of the Zonal Health Resource Centres (ZHRC) Network, a hub for MOHSW-governed training activities to coordinate, support, monitor, and evaluate decentralized HIV and AIDS training for healthcare workers.
- Support the MOHSW's Human Resources for Health Scale-up program to train critical cadres of healthcare workers, particularly nurses, clinical assistants, clinical officers, and laboratory technicians.
- Implement TrainSMART, a database system to track healthcare worker training.
- Integrate competency-based training on infection prevention and control and gender-based violence into new and existing pre-service training programs and teaching materials.

**PRIMARY FUNDING:** HRSA, USAID, CDC, DOD, PEPFAR, and others