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Presenter Name: Reham Abdelmaksoud
Grant number and title: NIH Grant Number 5 D43 TW009102-03 (Rawson)
Abstract
Characteristics of Tramadol-dependent Patients Compared to Heroin- dependent Patients
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Objective: To evaluate the clinical characteristics of patients with current tramadol dependence disorder compared to heroin dependence disorder, examine association between sociodemographic variables and dependence disorder of each substance, identify the risk factors correlated to dependence disorder of each substance and correlate the quality of life to severity of dependence of each substance in addition to other characteristics.

Method: A cross sectional observational study including 100 treatment seeking patients with either tramadol or heroin as a primary substance of dependence. Recruited from patients attending Kasr AlAin hospital addiction department (inpatient and outpatient) and Maadi private hospitals for treatment of addiction Psychometric assessment included: Psychiatric assessment using MINI, Addiction severity index (ASI), assessment of Quality of life using WHO QoL BREF, motives of initial and continued substance use and history of traumatic life events.

Results: Tramadol patients had lower educational level, more manual work, initiated any substance at older age, less previous treatment trials (including inpatient admission), more seizures, less legal complications, better environmental QoL, more childhood trauma and less number of lifetime trauma. Kasr AlAin hospital received less education, had manual work, started cigarette smoking and the use of any substance at younger age. The inpatient groups had worse medical condition, longer addiction treatment history, seizures, more deterioration in occupational, drug and psychiatric domains of ASI, more co-morbid mood disorders, ADHD and substance induced psychiatric disorders and were exposed to multiple lifetime trauma. In the regression models, heroin use predicted worse environmental and social quality of life. Being KA inpatient predicted more lifetime trauma and childhood trauma. Both heroin and KA inpatient predicted worse medical condition.

Conclusion: Heroin patients are worse in most of the aspects of medical, psychiatric, social and legal domains. Tramadol are more likely to suffer from seizures. There is a difference based on recruitment site, inpatient/outpatient.
**Abstract:** The objective of the Argentine Doctoral Training in Implementation Research across the Lifespan (ADTIRL) program is to provide doctoral training in implementation research in Argentina, thereby building a sustainable, in-country doctoral program allowing Argentine researchers to become successful independent investigators. Implementation research evaluates approaches to implement evidence-based interventions, and hence to improve the quality and effectiveness of health care. Implementation research includes the use of randomized controlled trials and rigorous operational research to evaluate the effectiveness of interventions designed to promote the uptake of research findings into routine healthcare. It also includes a multi-disciplinary approach to understand the determinants of non-communicable diseases and the cultural, socio-economic, and behavioral barriers to implementation of effective interventions. Our approach starts in the pre-conceptional period and includes the entire lifespan.

The training program is focused on two areas of strength at both the host institution, the Tulane University School of Public Health and Tropical Medicine (SPHTM), and the foreign collaborating institution, the Institute for Clinical Effectiveness and Health Policy (IECS) in Buenos Aires, Argentina: maternal and child health and cardiovascular health, linking them in a lifespan approach. Five trainees were required to complete coursework in evaluation research, epidemiologic methods, and biostatistics, as well as courses in related subject areas, including reproductive and chronic disease epidemiology and behavioral sciences.

**Training innovations** include accomplishing the program’s objectives via a “sandwich program” between the Tulane SPHTM, IECS, and the University of Buenos Aires School of Medicine (UBASM). Trainees are PhD students enrolled at UBASM who spent the first year of their training at the Tulane SPHTM before returning to complete their second year of coursework at UBASM. After completing the program, trainees have collaborated with IECS faculty in ongoing research activities, especially those related to NIH-funded projects, in order to ensure their abilities to become independent researchers.

**Capacity building activities** include the development of two new courses at IECS, which were based on doctoral-level courses taught at Tulane and adapted to the Argentina context. Tulane faculty supported the development and delivery of the courses, which were entirely taught by IECS faculty and program trainees in 2016 and 2017. This will allow the PhD program to be entirely taught in Argentina in the future. Graduates of the program are currently playing an active role in teaching the new courses to new trainees in Argentina.
Abstract

Many Indian medical schools are not part of a university and lack a research culture. This D43 training program was developed to provide a model for developing a research culture in an Indian medical school, and to stimulate widespread change in order to tap into the unrealized research capacity in Indian medical schools.

At SHARE INDIA/MediCiti Institute of Medical Sciences, a 750 student medical school, we focused on research training for the faculty and research support staff. The major components of our approach included: an annual research methods course, at SHARE INDIA, which included interactive ethics training, and group projects focused on development of a three page grant application patterned after the Indian Council of Medical Research (ICMR) Concept Note; one or two three week sessions at the Johns Hopkins Graduate Summer Institute of Epidemiology and Biostatistics; training in interactive teaching methods; intensive, long-term mentoring; and practical research experience in large collaborative research projects conducted between SHARE INDIA and the University of Pittsburgh.

We are very proud of the success of our training and research program as evidenced by publication of cohort profiles for two large studies being conducted in collaboration with the University of Pittsburgh, numerous other publications, several small and moderate size research grants from the Indian government, two trainee-led Fogarty administrative supplements, two in-country grants provided through our D43, an advanced trainee who is completing a PhD in epidemiology funded by University of Pittsburgh non-Fogarty funds, and submission of a Fogarty K43 and a brain R21 application. A research culture has developed which cuts across the academic hierarchy, across departments, and across institutions. In addition to medical faculty, others receiving training included the Director of Research Administration, the Grants Manager, the Director of Computer Resources and Data Management, two research project coordinators, and the researcher who was key in developing the SHARE INDIA Ethics Committee and who now is working on development of a research ethics training and certification program.

Each year, SHARE INDIA faculty trainees have assumed an increasing role in presenting the annual week-long research methods course. In 2017, the trainees assumed full responsibility for the course which was presented to new faculty, residents, and medical students to very high acclaim. There was a record level of interest in enrolling in the course and a number have already expressed interest in taking the 2018 course.
CHINA-ROCHESTER SUICIDE RESEARCH TRAINING PROGRAM (CRSRT):

GRANT 5 D43 TW009101-04

PI: E.D. Caine, MD

Major Collaborators

- Xiangya School of Public Health, Changsha: Xiao Shuiyuan, MD, PhD; Luo Dan, Ph.D., Gong Wenjie, MMS, PhD
- West China School of Public Health, Chengdu: Qiu Peiyuan, PhD
- Dept. of Psychology, Zhejiang University, Hangzhou: Chen Shulin, MD, PhD
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- Dept. of Psychiatry, Chinese University of Hong Kong, Hong Kong: Helen Chiu, MBBS, FRCPsych

The CRSRT has built since 2001 collaborations between the URMC Center for the Study and Prevention of Suicide and a diverse array of collaborators across China. Suicide prevention has served as an “entry key” to broader areas of public health, mental health promotion and service delivery, as well as more fundamental research that better defines contributing risks. The CRSRT has been devoted to: (1) building training and research infrastructure, (2) identifying and training excellent scientists, and (3) developing new research findings that will inform efforts to prevent suicide in China.

We have considered with colleagues how best to maintain and promote ongoing ties. One approach builds on collaborative projects involving past trainees and mentors.

- Studies of perinatal depression (PND)
- Work to use social media to engage men who have sex with men, in order to enhance care and reduce mental health burdens
- School and community based suicide prevention programs
- Screening in primary care for depression among elders with co-morbid medical problems, and in primary care for persons with dementia
- Assessing mental health burdens associated with family stress and intimate partner violence rural women
- Conducting community surveys among elders to assess mental health and medical burdens
- Epidemiological studies of suicide in Asia-Pacific nations
Since 2015, we have conducted the **eCapacity Development & Growth in the ASPIRE Network (eC.ASPIRE)**. **ASPIRE** (**Asia-Pacific International Research and Education Network**) involves the Departments of Psychiatry from the University of Rochester and the University of Melbourne (Australia) and 11 Asia-Pacific nations, including 7 LMICs (Cambodia, Lao PDR, Vietnam, Myanmar, Philippines, Mongolia, and Indonesia), as well as China and Hong Kong SAR, Thailand, and Brunei). eC.ASPIRE focuses on two elements of information and communication technology (ICT) – “**social epidemiology**” as explored through Internet-based social media and mobile health (“**mHealth**”) using technology-augmented methods to enhance mental health integration into primary care settings, women’s health services, and related community activities.
Two Decades of Building Capacity for Behavioral, Brain and Nervous System Disorders in India

Despite the current burden of behavioral, brain and nervous system disorders across the lifespan, there is a lack of adequately trained researchers in low and middle income countries (LMIC). This deficit of trained research workforce limits advances in research that can lead to new and improved interventions for those dealing with behavioral, brain and nervous system disorders. Thus, there is an immense need for strengthening research capacity at the individual, institutional and country levels in LMICs to mitigate the growing burden of behavioral and brain disorders.

With the support of the ICOHRTA/Fogarty International Center (FIC), in 2001 we initiated our first research capacity building efforts in India (2001-2011) partnering with the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore. Fifteen short and long-term fellows from India with a MD or PhD received Post-Doctoral Training in areas ranging from social, psychiatric and genetic epidemiology to neuro-imaging. Based on the capacity that was built at NIMHANS, in our second Fogarty training program on non-communicable diseases (2011-2017), we expanded our research capacity to the NorthEast Region (Assam and Sikkim) of India where the need for mentoring is great. In this second training program, moved from Washington University to the University of Florida, eighteen fellows pursued their training and have returned to India. The Indo-US team has made considerable progress in building research capacity in India. In total 32 fellows from India received training at Washington University/University of Florida. As of February, 2017, the post-training outcomes for these fellows include 649 publications in peer reviewed journals, 160 research grants from the Government of India and NIH, and 122 awards and honors recognizing their contribution to their field. Our former ICOHRTA/FIC fellows have set up advanced laboratories in fMRI and psychiatric genetics, and they are mentoring a new generation of scientists at their home institutions. Advanced in-country support has strengthened and sustained training efforts (Cottler et al, 2015). The talk will summarize our fifteen years of capacity building efforts in India, lessons learned, challenges in implementing capacity building programs and strategies to overcome obstacles and ensure long-term sustainability.

Title: Multidisciplinary Training Program on Neuropsychiatry and Behavioral Disorders in First Nations. Experience through the first cohort.

Presenter: Gabriel A. de Erausquin, MD, PhD, MSs

Abstract:

The first cohort of trainees from the NEUFIN program included two from Perú and two from Argentina. They completed the requirements for the Master of Science at University of South Florida in December 2016. They are currently back in their sites of origin preparing to enroll in the Ph.D. program at Universidad de Buenos Aires. We had 100% retention through the transition, and will use D43 funding to support their early research and reinsertion. Their proposed dissertation projects focus on neuroscience research in Andean first nations, and include mentorship by NEUFIN faculty locally and from the US-based universities (Harvard Medical School, University of South Florida, University of Texas Rio Grande Valley and Washington University School of Medicine). The second cohort of trainees includes two fellows from Bolivia, one from Argentina and one from Peru. They all successfully enrolled in the Masters program at USF and will begin classes in the Summer. The successes and difficulties of the implementation, as well as the specific characteristics of the NEUFIN curriculum will be presented and discussed.
The Scholars in HeAlth Research Program (SHARP) is an interdisciplinary program established at the American University of Beirut (AUB) in 2012 in large part thanks to a four-year capacity building grant from the NIH/FIC and the Office of Dietary Supplements. It involves the faculty of Medicine, Health Sciences, Nursing, and Agriculture and Nutrition, and US colleagues at Harvard Medical School.

The Mission of SHARP is “To provide superior didactic education complemented with state-of-the-art interactive and practical training in health research, with a focus on Non-Communicable Diseases (NCD) research. It is intended for physicians and other health care professionals, engaged in clinical and translational research in Lebanon and the region”.

SHARP offers a 7 weeks, 12 credits, summer certificate program in quantitative methods and a 40 credits master of sciences degree in health research. Since SHARP launch, the program has grown in number of students graduating and productivity.

18 students attended the summer in 2013, 25 in 2014, 29 in 2015, and 31 in 2016. Students come from different disciplines: Medicine, Nursing, Pharmacology, Biology, Public Health, and Nutrition. International graduates are from Jordan, Palestine, Egypt, Pakistan, Libya, Iraq, and the United Kingdom. To date, SHARP counts three MS graduates, and 7 in various stages of MS completion.

Summer graduates have been recruited as research fellows, residents, and research associates at top institutions, such as Harvard Medical School, Johns Hopkins Medical Institutes, Duke University, and MD Anderson Cancer Center. Under capacity building, some graduates are now junior faculty at AUB, or at one of its affiliated medical centers.

Several SHARP graduates have received national and international awards. These include: induction of SHARP graduates into Alpha Omega Alpha Honor Medical Society (AΩA); intern of the year award, best junior resident teaching award, and highest absite score award from University of Maryland Medical Center General Surgery; the ASBMR Phoebe Leboy Professional Development Award; and selection/sponsorship by the AHA council to participate in the "US Ten day Cardiovascular Epidemiology Seminar".

SHARP also provides students with the opportunity to work on research projects. Graduates submitted abstracts selected for poster and oral presentations at major national and international scientific meetings. A total of 233 publications have been generated by students after having joined the program, 10 of which are directly supported by the grant. Many others were made possible thanks to the quantitative skills acquired from enrolling in SHARP.
Unhealthy eating is a major modifiable risk factor for obesity and multiple associated non-communicable diseases (NCDs), which are rising globally. The Caribbean has the worst NCD rate in the Americas and has targeted healthy eating, especially among youth, as a high priority action. The globalization-based nutrition transition toward an unhealthy Western diet high in fat, sugar, sodium, and refined carbohydrates has eroded healthy eating habits in the Caribbean. Additionally, in Jamaica, youth and mothers who adopt a part-American identity through a psychological process called “remote acculturation”, tend to watch more US cable TV, which put them at even higher risk of unhealthy eating. Most advertising on US television features energy-dense foods, and heavy television viewing has been linked to less negative beliefs about the consequences of eating unhealthy food. To address this problem, evidence-based programs fostering media literacy (i.e., ability to access, analyze, evaluate, and communicate messages in a wide variety of forms) have been designed for US youth and families to teach critical evaluation skills about unhealthy food advertising. Unfortunately, media literacy efforts in Jamaica are germinal and overlook the role of US cable programming/advertising and remote acculturation, although US Cable TV dwarfs local Jamaican TV in volume and popularity.

To address this problem, we developed a new multi-component food-focused media literacy intervention for families in Jamaica exposed to US food advertising – the J(amaican and) U(nited) S(tates) Media? Programme. This poster will outline the development of the JUS Media? Programme and describe the design of an ongoing experimental feasibility study evaluating its efficacy in Jamaica. The JUS Media? Programme comprises an interactive 2-session workshop for early adolescents and mothers teaching the main principles of media literacy relevant to food messages in US cable TV, as well as supplementary SMS ‘nudges’ for 8 weeks afterwards. The intervention is a culturally-sensitive adaptation of an evidence-based U.S. media literacy curriculum (Nelson, 2016) to the Jamaican context by 1) incorporating Healthy Eating guidelines from the Jamaican Ministry of Health, 2) reviewing remote acculturation theory and research, and 3) including pictures/videos of food-focused advertising from Kingston, Jamaica. Using Jamaica as a case study, it is our long-term goal is to implement effective, sustainable school-based health promotion and NCD prevention programs, which
address US media influences and remote acculturation, for LMIC youth and families. (Count = 390/400)
**Abstract:**

Non-communicable diseases (NCDs), including diabetes and hypertension, are becoming emerging health threats in Tanzania, especially among people living with HIV. The health of people living with NCDs and HIV could be significantly improved through interventions encouraging behavioral lifestyle changes, and family-based interventions to enact such change show exciting promise. However, little research has been conducted on these conditions and on interventions to address them in sub-Saharan Africa. In contrast, HIV has been extensively researched and has become a chronic condition in Tanzania. Due to the existing, well-developed infrastructure of HIV-related services and the commonalities in providing long-term care for HIV and NCDs, developing interventions that integrate screening and care for non-communicable diseases with HIV care is needed. However, more needs to be understood on the prevalence and risk factors of these conditions prior to developing an effective, feasible intervention. The purpose of the “Familia Kwanza” study is to (1) establish the prevalence and risk factors of diabetes and hypertension among people receiving HIV-related care in urban Tanzania and (2) understand families’ knowledge, beliefs, and actions relating to diabetes and hypertension and how this can lead to implementing a family-centered intervention to improve health for this population. To realize these objectives, we are currently screening 364 clients receiving HIV-related care for diabetes and hypertension and will be conducting further assessments with a sub-set of clients’ families. Within 30 families, we will conduct home-based screening for diabetes and hypertension for adult family members. These families will also be interviewed to assess their understanding of diabetes and hypertension, how the family environment contributes to NCD risks, and how the family can be used to increase support and decrease NCD risks for people living with HIV. We will also interview staff at the HIV clinic to understand how HIV and NCD services could be integrated. Results from this study will be used to develop and test a relevant, culturally-appropriate family-based intervention to improve patient health outcomes for HIV and NCDs.
Research Training in Gene-Environment Interaction in China

Jiang He, MD, PhD, Tulane University School of Public Health and Tropical Medicine, New Orleans, LA

The overall objectives of this research training program are to build capacity for gene-environment interaction research and training in chronic, non-communicable diseases and disorders across the lifespan in China and to strengthen partnerships between the US and Chinese investigators by training the leaders and the next generation of scientists in gene-environment interaction research.

Over the past five years, we have trained 7 PhD students from Peking Union Medical College, Soochow University, and Nanjing Medical University and 8 post-doctoral fellows from Peking Union Medical College, Soochow University, Shanghai Jiao Tong University, and Xiamen University. In addition, we have trained more than 200 clinical researchers through summer short courses in clinical and translational research methods. Trainees have published approximately 20 peer reviewed research articles during their training. All trainees are playing an important role in gene-environmental interaction research in chronic disease in China.
Principal Investigators:
K. M. Venkat Narayan, USA
K. Srinath Reddy, India
R. Rafael Lozano Ascencio, Mexico

Non-US Collaborating Institutions:
Public Health Foundation of India, India
National Institute of Public Health, Mexico

Presenter: Mark Hutcheson

Grant: D43TW009135 – Health Systems and Implementation Sciences Institute for NCDs in South Asia and Latin America

Low- and middle-income countries (LMICs) are experiencing a growing burden of non-communicable diseases (NCDs), and confront challenges of leadership, lack of local data and evidence, and gaps in implementation of successful interventions. To address these challenges, we designed an interdisciplinary training program, the Public Health Leadership and Implementation Academy (PH-LEADER) for NCDs. The year-long program has 3 components; a 2-month preparation period, a 3-week, in-person summer short course, and an in-country mentored project phase. The training was directed at mid-career, high-potential public health professionals from LMICs who are involved in NCDs prevention and control. Over 4.5 years (2012-2016), 90 NCDs professionals (mean age 38.7 years; 54% male) from 13 countries have been trained. The training program has promoted the design and implementation of 49 projects focused on implementation of programs and policies addressing NCDs. The PH-LEADER program promotes the design and implementation of evidence-based strategies to address NCDs in LMICs. An evaluation is underway with the 2016-17 batch of fellows to assess the impact of the course on participant knowledge, perceived competence and intentions to conduct implementation research.
a. PI name/PI country

Adnan A Hyder, MD MPH PhD/Baltimore, MD, USA

b. Major foreign collaborator name and country

SFO: Olive C. Kobusingye, MBChB MSc MMed MPH, Makerere University School of Public Health, Uganda

c. Presenters

Adnan A. Hyder, Abdulgafoor M. Bachani and Olive Kobusingye

d. Grant number and title

5D43TW009284

Chronic Consequences of Trauma, Injuries and Disability Across the Lifespan: Uganda

Building institutional capacity for injury & trauma research: a case study from Uganda

Despite the high burden of injuries, the problem has largely been overlooked in low-income countries. One of the reasons for this is that in many developing countries there is limited supply of trained human resources for addressing the problem. Furthermore, those who are trained receive very little formal training in injury control and prevention. Uganda is one such country where two critical gaps in addressing the lifelong consequences of trauma, injuries and disability are lack of trained human resources and the lack of data.

Through an innovative model of capacity development, the Johns Hopkins University-Makerere University Chronic Consequences of Trauma, Injuries and Disability (JHU-MU Chronic TRIAD) in Uganda program aims to strengthen research capacity on the long-term health and economic consequences of trauma, injuries and disability across the lifespan in Uganda. Since 2012, the program has been working to 1) develop a core group of researchers focused on Chronic TRIAD at MU; 2) promote research around key national priorities for Chronic TRIAD; 3) establish a national forum on Chronic TRIAD; and 4) create a program for research on the lifelong impact of trauma, injuries and disability at MU School of Public Health (MakSPH).

The program has had early success and for the first time there is new MPH track at the MakSPH that focuses on trauma, injuries and disability. Four cohorts have been enrolled in the 2-year TRIAD fellowship. As part of their fellowship, trainees have conducted independent research on a variety of topics of direct relevance to understanding and addressing the burden of trauma, injuries and disability in Uganda. The program has offered additional training opportunities to
students, faculty and staff at MU through short-term workshops. The program has also promoted national dialogue on the issue through *Uganda Injury Forum* and has hosted two symposia.

The program has worked to ensure its sustainability through establishing a program within MakSPH that serves as a locus for like-minded researchers within MU to interact and advance the field of TRIAD within Uganda. Through this program, we hope to build local capacity that will be critical in bridging the human resource gap and be a step towards addressing the burden of trauma, injuries, and disability in Uganda.
**Objectives:** Our training program was designed to expand research capacity in South America by providing training for researchers and health professionals in the design, conduct, and analysis of clinical and population studies in NCDs across the lifespan. The aims were: 1-Curriculum development and mid-career faculty training; 2-Development of a new track in NCD Epidemiology and Prevention across the Lifespan in the current MSc program at IECS; 3-Development of a new PhD in Public Health program focused on NCDs at IECS; and 4-Development of Short Courses and Workshops for mid-career researchers and practitioners throughout the region.

**Summary of results and achievements:** After finalization of a five-year training program, we have achieved the following goals: a successful PhD Program, with three doctoral candidates who have completed their doctoral program at IECS and HSPH; eight Master’s Degree candidates that have completed their training at the University of Buenos Aires; 12 short courses with students from Argentina, Peru, Paraguay, Chile, Uruguay, Ecuador, Mexico and Colombia; five faculties from IECS have completed their training at HSPH; four different short courses at IECS with faculties from IECS and HSPH, three of them replicated three times so far; a new course on Causal Inference; participation of faculties from HSPH in the Master’s degree Program in Clinical Effectiveness at IECS; participation of faculties from IECS in several training activities at HSPH; two joint research applications for competitive grants (HSPH and IECS); six joint publications; several dissemination activities in the region.

**Conclusion and future developments.** This Program has brought together outstanding researchers and mentors to chart a new direction in training that has provided an integrated and interdisciplinary experience focused on the investigation of risk factors for NCDs across the lifespan, including collaborative interactions with multiple faculty at both IECS and HSPH, specialized curriculum with core and elective coursework, individual candidate training plans, and ongoing Program evaluation. The training and mentoring successfully trained young investigators in both observational epidemiology and interventions on behaviors related to NCDs. HSPH as the main collaborator to this proposal has enhanced IECS capacity by receiving a selected pool of trainees. Trainees has spent part of their training experience at HSPH, for both mentored research and specific courses. IECS curriculum and mid-career faculty development in collaboration with HSPH faculty counterparts definitely increased specific research and teaching skills across different disciplines related to NCD research.
The Kenya Stroke Pilot Study: Key Findings and Lessons Learned

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Background: Despite the rising global burden of stroke, there remains a scarcity of information on the disease from sub-Saharan Africa. Hardly any prospective studies on stroke have been done in Kenya, with the resultant information deficit hampering evidence-based decision making. This study sought to determine the stroke types, risk factors and outcomes in Kenya’s leading public referral hospitals, with the ultimate aim of establishing the first ever national stroke registry.

Methods: This was a longitudinal study among stroke patients attended to at Kenyatta National Hospital (KNH) and Moi Teaching and Referral Hospital (MTRH) in Kenya. The study utilized a modified World Health Organization STEP-wise approach in collection of data on incidence, major risk factors, morbidity and mortality trends, and intervention strategies. Follow-up entailed assessing clinical outcomes at day 10, day 28 and every three months using the modified Rankin scale.

Results: A total of 714 patients (KNH: 56.1%; MTRH: 43.9%) were recruited within twelve months period (February 2015-January 2016) and followed up for a minimum one year. Patient mean age was 58.8 years and the male:female ratio was 1:1.3. Ischemic stroke (IS) accounted for 56% of the stroke cases. The leading vascular risk factors were hypertension (76.3%), smoking (16.2%) and diabetes (14.8%). The commonly observed neurological signs at first medical examination were weakness (87.2%), speech disturbances (70.4%) and unilateral headache (55.9%). Majority (65.8%) had a CT scan done between 24 hours and 7 days (IS: 63.5%; HS: 68.8%), while only 18.8% (IS: 18.2%; HS: 19.4%) had a CT scan within 24 hours. 72% inpatients received physiotherapy. Mortality at day 10, day 28 and months 3, 6, 9 and 12 was 18.5%, 26.8%, 34.2%, 38%, 40.5% and 41.9% respectively. Mortality at day 10 and 28 was high among HS, and thereafter among IS patients. Up to 66.6% of the inpatients had been discharged home by day 10 and 89.3% by day 28. Severe disability was highest (34.1%) at the time of discharge and 30.9% at day 10.

Conclusions: Findings highlight the need to create awareness on stroke at the community level and among decision makers, and advocate for allocation of adequate resources to stroke care. There is need to prioritize investments in acute care, enhance further research for development of locally informed patient care pathway models, and establish structures to support continued surveillance in the counties. (Supported in part by NIH grant nos.: TW009333.)
PI: Debra K. Litzelman

Built on nearly 30 years of partnership between Indiana University (IU) and Moi University and the training activities within the Indiana Clinical and Translational Sciences Institute (CTSI), this project seeks to strengthen training for careers in implementation research at Moi University's health science schools in Kenya. Lead by Debra Litzelman, MA, MD, MACP, Director for Education, IU Center for Global Health, and Paul O. Ayuo, MBChB, MMed, Past-Dean, Moi University School of Medicine and prior Director of the Academic Model Providing Access to Healthcare (AMPATH) Training Institute. This program established an institutional research training program to sustainably strengthen the research capacity of Moi University in the health sciences by training in-country experts to conduct research on chronic, non-communicable diseases and disorders across the lifespan, with the goal of implementing evidence-based practices in the AMPATH-Ministry of Health (MOH) health care delivery systems. Over the last 5 years, we created and implemented an innovative clinical and implementation research training program for Kenyan investigators, one built on the foundation of the highly successful and mature clinical and implementation research core curriculum for investigators within our IU-CTSI. The training curriculum includes 20 didactic courses and accompanying training materials. A total of 8 fellows were nominated by Moi faculty and selected through a competitive application and review process. The curriculum was initially implemented and refined by the project’s co-investigators but has since been continued by program alumni who are now serve as training leaders for the integrated curriculum. The 8 core trainees received resources to propose and conduct research in an implementation research practicum under the supervision of a tailored mentorship panel populated by Moi and international faculty. This research focused on chronic diseases of importance to the health of the populations in Western Kenya and will contribute to the improvement of health care processes, including village-based processes, medical and psychosocial services, and integration of care for chronic conditions within the MOH delivery system. This program's graduate training enabled Kenyan trainees to acquire knowledge and skills in health systems and implementation research, enhance their capacity to promote continuous improvement of health care, inform health policy, and acquire leadership and management skills needed to develop, manage and improve chronic disease control programs. Many of the graduates of the training program are already serving in leadership roles where they are employing their implementation science research training to improve care provided to chronic disease patients in Kenya.
Predicting Early Cardiovascular Risk among HIV-infected and Uninfected Kenyan Adults Study

Authors:

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Introduction
HIV infection has been shown to increase risk of cardiovascular disease (CVD) in US populations, raising concerns that the HIV epidemic will significantly accelerate rates of CVD in Africa as the HIV-infected population lives longer and there are fewer deaths from HIV-related causes. This study will assess the early risk factors for CVD and NCDs in a population of HIV-infected and uninfected adults in Kenya. The study aims to determine prevalence and predictors of metabolic syndrome (MetS) among HIV-infected and uninfected adults in Western Kenya. We will also compare the use of the Framingham risk score, metabolic syndrome assessment, inflammatory and immune activation and genetic markers, and carotid intima-media thickness (C-IMT) to predict CVD risk. The cost and cost effectiveness of using these various markers for assessing CVD risk in an integrated HIV and NCD management model will be determined.

Methods
Using a cross-sectional study design, 300 HIV infected and 300 HIV uninfected participants will be enrolled and evaluated for metabolic syndrome, systemic inflammation, immune activation and sub-clinical atherosclerosis in a county hospital in Western Kenya. All participants will be at least 30 years of age and live within a 50km radius of the hospital. HIV-infected participants must be engaged in care at the HIV Comprehensive Care Clinic (CCC) and must be on antiretroviral treatment (ART) for a minimum of 6 months. Participants may be on first or second line treatment. HIV uninfected participants will be recruited from the voluntary and provider-initiated HIV testing and counseling (HTC) services at the hospital and through outreach to the community. Interviews will be conducted using the validated WHO STEP wise approach to chronic disease risk factor surveillance (STEPS) modified to fit the Kenyan context. Abdominal girth, height, weight and blood pressure will be measured on all participants. Fasting lipids, fasting glucose, inflammatory markers (IL-6, high sensitivity CRP) and genetic markers will be collected. Comparisons using chi square tests and T tests will be made. Predictors will be evaluated using univariate and multivariate linear regression.

Discussion
Results from this work will inform policy decisions on risk assessment, prevention strategies, targeting interventions, and management of HIV infected and uninfected Kenyans. In addition, introduction of appropriate and effective screening assessments will build capacity to implement strategies that can lower the risk of NCDs in Kenya.
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**Presenter:** Kerim M. Munir, MD, MPH, DSc, Boston Children’s Hospital Division of Developmental Medicine, Harvard Medical School and the D43 NCD-LIFESPAN TW009680 Global Mental Health and Developmental Disabilities RTC

**Presentation Title:** Developing global frameworks serving children and families with autism spectrum and related neurodevelopmental disorders

**Description:** Identifies challenges facing communities worldwide in meeting the health and wellness needs of children with Autism Spectrum Disorder (ASD) and related neurodevelopmental disorders and their families. Five primary areas where action is required are public awareness and early detection, access to evidence-based therapies, access to public education and training opportunities across the lifespan; ensuring families have supports, and participation in research and health surveillance. Collaboration across health, education and social sectors are required if barriers are to be overcome in reaching these goals. Recommendations are made for national policy makers in health and education and social sectors, and were presented at the World Innovation Summit for Health in Doha, Qatar in November 2016, with the Fogarty International Center Director, Dr. Richard Glass in attendance, as well as various Fogarty and NIMH funded investigators.

**Abstract:** With the growing prevalence of ASD international communities and governments continue to struggle to meet the needs of individuals with ASD and related disabilities. **Method:** Semi-structured interviews were conducted with a convenience sample of clinicians, researchers and policymakers from across the world with professional knowledge regarding ASD services in their countries. Interviews included 23 professionals from 12 countries worldwide and were conducted over the winter of 2015 and spring of 2016. Questions related to: current levels of services provided, barriers to expanding access to those services, family needs, and how families and providers could enhance the provision of services and supports. Inquires into exemplary programs within countries were explored. **Results:** Five main themes emerged for ways to meet the challenges facing children and families due to growing prevalence of ASD worldwide. Emphasis should focus on early identification and diagnosis; the offering of evidence-based intervention needs to expand; and provision of broader family supports needs to be implemented; the enabling of public education, vocational training and employment opportunities should also be expanded; and participation in surveillance and research efforts should be enhanced.

We have three overarching recommendations for countries aiming to meet these goals, based on the challenges and opportunities presented by the research and by the relative success of
countries where access has been improving: 1) create an interagency coordinating commission to address ASD nationally, 2) establish interdisciplinary training and research centers of excellence in ASD, and 3) establish global partnerships to address ASD across the lifespan.

**Connection to Meeting Theme:** The project addresses all three themes but focuses on **Overcoming Barriers to Access** from a global policy perspective that is translated into local implementation. International surveillance of the prevalence of ASD is clearly a concern of higher income countries where over 85% of the cases of ASD are reported yet only 20% of the world’s population lives. The growing unaddressed needs of individuals and families from middle and lower income countries, requires information dissemination and early access to services in order to provide the most effective intervention and support services. Research of effective intervention and support models is translated into practice through policy recommendations, which in turn will impact health care disparities experienced across the communities.
Grant number: 1 R21 TW010471-01

Grant year: 2016-2018

Principle investigator: Dr Wilbroad Mutale, University of Zambia School of Medicine & School of Public Health.

Title: Assessment of capacity to prevent and manage major non-communicable diseases (NCDs) in primary care centres in Zambia: A health systems approach Impact Score

Collaborators: Vanderbilt University: VIGH: Dr Douglas Heimburger

Presenter: Dr Wilbroad Mutale

Abstract

Country-specific data on NCDs in Africa are scarce and most of the available data are based on estimations. This is true for Zambia, making it difficult to assess the burden of NCDs and the capacity of the health system to respond to the burden of NCDs. There are clear gaps in the evidence of successful implementation of NCD interventions within the primary health care setting in Sub-Saharan Africa, despite WHO putting forward recommendations through the WHO Essential Non communicable Disease Interventions (WHO PEN package) to tackle NCDs.

We propose a mixed-methods approach to assess health systems capacity to provide NCD related services by adopting and adapting a WHO recommended NCD tool in the Zambian context. This preliminary work will inform the design of a comprehensive long-term study to be supported through an R01 mechanism, which will adopt the WHO PEN package to improve NCD services in primary care within Zambia.

To accomplish these aims we have assembled a strong multidisciplinary team representing Vanderbilt University and the University of Zambia. Completion of this study and the follow-up trial will not only benefit the health system in Zambia but will also provide evidence on how to re-orient health systems in Sub-Saharan Africa, to address the growing NCD burden. To our knowledge this will be the first study to address health systems’ capacity to respond to the growing threat of NCD in Zambia.
Data regarding alcohol use among youth in Ukraine is generally lacking. This study examined rates and correlates of alcohol use among youth (ages 8-17) presenting to primary care clinics in Ukraine. Youth were surveyed anonymously (n=1002), being systematically sampled by age (8-17), sex, and region (rural/urban). Fifty participants received a $10 prize (random drawing). Parallel logistic regression analyses were used to examine correlates of alcohol consumption based on education: elementary, middle, and high school. Specifically, we examined correlates of alcohol consumption based on severity: no drinking, low risk drinking (no binge drinking), and high risk drinking (binge drinking). Overall, 57.3% (n=574) reported no alcohol use, 36.4% (n=365) reported low risk drinking, and 6.3% (n=63) reported high risk drinking. When comparing elementary students who were non-drinkers to those who were low risk drinkers, regression analyses showed that the only significant correlate was alcohol use by friends (p<.001). Among both middle school students and high school students, when comparing non-drinkers to low risk drinkers, significant correlates were cigarette use and alcohol use by friends. When comparing high school students who were low risk drinkers with those who were high risk drinkers, regression analyses showed that significant correlates were older age and male sex. Note that bivariate analyses also showed that marijuana use and CRAFFT score were significantly correlated with high risk drinking. Routine screening and intervention for substance use should be integrated into annual physicals for youth in Ukraine, with particular focus on peer influences.
Cross-fertilized research training for new investigators in Egypt and India. D43TW00911

V.L Nimgaonkar (USA), Mansour H.A. (Egypt) Deshpande, S.N. (India) Univ. of Pittsburgh School of Medicine, Pittsburgh, PA 15213 USA

This training grant is designed to build expertise in intervention research in schizophrenia (SZ), a common, chronic, disabling disorder that entails severe burden on patients and caregivers. Medications, the mainstay of treatment for SZ provide only symptomatic relief and fail in the majority of cases, but pharmaceutical firms have slowed their research efforts due to uncertainty about the pathogenesis of SZ. These problems are magnified in low/middle-income countries (LMIC) such as India and Egypt, where new medications are expensive and trained personnel are scant.

The overall goal of this research is to build human resource capital by enlarging and sustaining a cadre of ethical psychiatric intervention researchers who will conduct novel research and train future trainees in their countries after completing our training. Through competitive nation-wide searches, we identify and nurture highly motivated individuals for training in research for repurposed drugs for SZ and related themes. Each trainee receives didactic training, and then is teamed with an experienced mentor/s. Resources are provided to each trainee to initiate or build on ongoing local research. Recognizing the aspirations and priorities of LMICs, we also provide additional opportunities, such as ‘hands on’ ethics and laboratory based research tracks.

Our broad training will enable them to conduct future research in disorders other than SZ, if they so desire. Capitalizing on our funded research, we will mentor 40 professionals through medium (6 months) or long term (2-4 year) training. We support our trainees well beyond their grant-funded training.

Out of the target of 40, 26 have completed training and the third cohort of 11 trainees are expected to complete this summer. Three long term trainees have been enrolled. We have allocated three in country advanced research awards that are undergoing ethical committee approval.

Our innovative consortium spans 20 years and is based on a vision of international cross-fertilized research and training. Our work began in Delhi, India and has now spread across India and Egypt. Our LMIC collaborators have garnered local funds and resources for innovative research, assumed leadership roles and successfully initiated ‘south-south’ co-operation.
Title: Cardiovascular Research Training (CaRT) Institute

Contact PI: Gbenga Ogedegbe, Department of Population Health, NYU School of Medicine

MPI: Bamidele Tayo, Department of Preventive Medicine and Epidemiology, Loyola University School of Medicine, Chicago

MPI: Albert Amoah, University of Ghana Medical School, College of Health Sciences

MPI: Richard Adanu, University of Ghana, School of Public Health

CaRT Summary:

Cardiovascular disease (CVD) is the leading cause of death in Africa, accounting for an estimated 80% of the mortality and morbidity. In Ghana, the incidence of hypertension, diabetes and stroke-related mortality has increased tremendously in the past decade. It is estimated that the scant resources in Ghana, Nigeria and other Sub-Saharan African (SSA) countries would be depleted by the disability from cardiovascular-related complications in the next decade if this epidemic go unabated. Thus, building capacity in cardiovascular risk reduction in Ghana is a priority that is both critical and urgent. There is a need for research training targeted at the prevention, diagnosis and treatment of hypertension, diabetes, stroke and chronic kidney disease. The Cardiovascular Research Training (CaRT) Institute is a collaborative training program between New York University (School of Medicine, College of Nursing and Dentistry, Wagner School of Public Policy, and Global Public Health Program), Loyola University School of Medicine and the University of Ghana (College of Health Sciences, Noguchi Medical Research Institute and School of Public Health). The CaRT program has two tracks – a Health Services Research (HRS) track and a Patient-Oriented Research (POR) track. The unifying theme of both tracks is that the trainees express interest in cardiovascular research. Regardless of track, selected trainees receive the skills to conduct methodologically and scientifically rigorous research with the ultimate goal of improving cardiovascular health in Ghana, Nigeria and SSA. The training occurs primarily at the University of Ghana. Our deliberate strategy of providing the training in Ghana rather than the United States is to mitigate the risk of “brain drain” that is often inherent in sending African scholars abroad for training. Thus far, CaRT has trained a cadre of 64 Nigerian and Ghanaian scholars in the last four years. The long-term goal of the CaRT Institute is to produce a sustainable network of individuals who are exceedingly well trained in various aspects of cardiovascular research, and poised to assume leadership roles in academic cardiovascular medicine in Ghana, Nigeria and SSA.
Title: International Partnership for Interdisciplinary Research Training in Chronic non-Communicable Diseases and Disorders Across the Lifespan

Presenter: Oladosu Ojengbede

Grant #: D43TW009112

Abstract (400 words)

The Universities of Chicago and Ibadan Partnership for Interdisciplinary Training Program in Chronic Non-Communicable Disease and Disorders Across the Lifespan is a distinctive training program in Nigeria, which aims to build capacity for evidence-based interventions that improve health equity across Africa. Integrating interdisciplinary training in basic, clinical, population and translational research and emphasizing patient-oriented research in response to local NCD priorities, the program includes short-term intensive trainings at the University of Ibadan and 3-12 month training at the University of Chicago. The program’s priority areas in cancer, sickle cell disease, and environmental exposure-associated health problems produced tiered scientific leadership from a train-the-trainer model. In Nigeria, we supported workshops for 1,066 interdisciplinary trainees at all levels. Our multi-level, interdisciplinary training program is typified by cancer training. In the US, we trained 19 PhD students, post-doctoral fellows, and junior faculty through intensive 3-12 month mentored experiences. Eight trainees received re-entry grants ($10,000-$15,000) for pilot studies to establish sustainable research. Atara Nteki, supported by the D43 and trained at the Novartis Institutes for Biomedical Research, is the PI on an investigator-initiated clinical trial that is training 50+ healthcare professionals to launch the trial. Prisca Adejumo earned a PhD in nursing through the D43 sandwich program and established a cancer risk clinic and genetics education intervention to inform a genetic counseling curriculum. The sickle cell disease program saw similar longitudinal development. Biobele Brown and Nnodu Obiageli, both D43-supported, are PIs on research at their home institutions and recently received research funding from Doris Duke for a community-based program to reduce the SCD burden in Nigeria. A research scientist from Dr. Brown’s lab, Oluwatoyin Babalola, is training in Chicago as a D43-supported postdoc. Other successful trainees include Babatunde Adedokun, who completed his sandwich PhD program in Epidemiology and provides leadership for biostatistics and bioinformatics; physician-scientist Williams Balogun, studying genetic variants of diabetes; and physician-scientist Mary Balogun, examining environmental exposure to volatile organic compounds and NCDs. These trainees have applied for sustained research funding through the NIH and others. This program has fostered international collaboration across Africa with Consortium for Health, Advocacy, Research and Training in Africa for Sickle Cell Disease; African Organization for Research and Training in Cancer; and Global Alliance for Clean Cookstoves. The University of Chicago Global Clinical Research Network continually engages researchers from Africa using a web-based
training and collaboration platform and recently included a South-South partnership with researchers in Bangladesh.
**Title:** Lifecourse pathways linking adolescent childbearing to chronic conditions: A pilot study to reinforce research and health system capacity in Northeast Brazil

**Principal Investigators:** Pirkle, Catherine & Câmara, Saionara

**Major foreign collaborator name and country:** Câmara, Saionara (Brazil)

**Presenter Name:** Pirkle, Catherine

**Grant Number:** 1R21TW010466-01

**Background:** Northeast Brazil is characterized by high poverty, low educational attainment, and large gender inequalities. Prevailing cultural values emphasizing fertility in women encourage adolescent pregnancy, especially in impoverished communities. Adolescent childbirth is associated with high blood pressure, metabolic syndrome, and cardiovascular disease in the mother as she ages. Selection factors and underlying mechanisms for these associations are understudied, hampering our understanding of the etiology of the observed associations and thus, prevention efforts to reduce chronic disease in women who are and were adolescent mothers.

**Objectives:** Describe health research capacity building efforts training undergraduate and graduate students in epidemiological best practices to collaborate in a pilot longitudinal study of 50 adolescent and 50 young adult mothers followed from the first trimester of pregnancy to 6-weeks postpartum in rural Northeast Brazil. This pilot study will validate quantitative measurement scales, as well as anthropometric, clinical and laboratory assessment tools in order to establish the foundation for a large prospective cohort study to investigate selection factors and biological mechanisms between adolescent childbirth and chronic disease.

**Results:** Because adolescence is a critical developmental period and pregnancy may induce permanent modifications in physiology, we are collecting extensive clinical and biomarker measures to compare adolescent and young adult cohorts. Adolescent pregnancy may also confound associations between disadvantaged family background and poor long-term health. We are collecting data on early life and the current circumstances of in both cohorts for comparison. The process of conducting this study, along with our 12-module training program for undergraduate and graduate students in epidemiological best practices, will reinforce health research capacity in a rural region of Northeast Brazil.

**Conclusion:** There is a need to investigate how adolescent childbirth relates to later-life health, but it requires sufficient health research capacity and many communities, domestic and international, with the greatest numbers of adolescent mothers, lack capacity and political clout to study the issue. Our training and pilot study efforts will provide new insights in a highly-impacted community.
Clinical, Public Health, and Behavioral Oral Health
Research Training for Thailand

Timothy A. DeRouen, Ph.D., Professor Emeritus of Biostatistics, Oral Health Sciences, and Global Health, University of Washington, U.S.A., P.I.

Waranuch Pitiphat, D.D.S., Sc.D., Dean, Khon Kaen University Faculty of Dentistry, Thailand, Major Foreign Collaborator

Prathip Phantumvanit, D.D.S., Dean, Thammasat University Faculty of Dentistry, Thailand

Grant D43 TW009071

This program is designed to provide training in research methodology to faculty in dental schools in Thailand in order to enhance the clinical research capability of those schools. The effort is focused on two collaborating Thai institutions, Khon Kaen University in Northeast Thailand and Thammasat University in Bangkok, but also includes other Thai institutions along with outreach to dental schools in other Southeast Asia countries. Training is done at three levels: short term workshops (5 days), intermediate term participation in the six week Summer Institute in Clinical Dental Research Methods at the University of Washington in Seattle, and long term training (two years) consisting of one year of research methodology courses at the University of Washington and one year conducting research in Thailand as part of Ph.D. programs. From 2012-2017 there were 3 workshops conducted, two in Thailand (Chiang Mai in 2012, Chiang Rai in 2016), and as an outreach effort, one in Vietnam (Hoi An in 2014), with a total of 121 participants. The largest number (41) were from Thailand, but included participants from 13 other Asian countries. From those workshop participants, 21 were selected for intermediate term training to attend the Summer Institute, with 11 from the two collaborating Thai institutions, 6 from other Thai universities, and 4 from Vietnam, Cambodia, and Myanmar. In addition, there were six long term participants from the two Thai collaborating universities who attended the Summer Institute and then spent one year at the University of Washington obtaining further research methodology training. Of those, five successfully proposed research projects that were awarded $15,000 research grants to conduct their Ph.D. research, received human subjects approval from UW and their home institution for their projects, returned to their home institutions and are in various final stages of completing their Ph.D. research projects. (One long term trainee decided not to continue the Ph.D. program). In addition to this activity in Thailand and Southeast Asia, in 2014 Dr. DeRouen was awarded a $25,000 supplement to the D43 grant to conduct a five day workshop in Lima, Peru, to build upon existing collaborations and help initiate a training program for South American countries. For the Lima workshop, there were 30 participants from Peru, and another 5 from four other South American countries. That workshop also led to other funding for a second workshop in Lima in 2015 that focused on oral health research in patients with HIV.
Abstract

The goal of our ongoing NIH D43 training grant ‘Strengthening Nurse NCD Research and Training Capacity in Thailand’ is to increase NCD research in Thailand by leveraging the role of PhD prepared nurses and other PhD health professionals to expand research capacity. The three components of the program are 1) a long-term fellowship to train 10 Thai postdoctoral scholars that includes one year of intensive mentored research training in the US and one year implementing a research project back in Thailand; 2) a short-term course experience at the UM that provides an opportunity for Thai scientists, teachers, administrators and policy makers to take classes in areas relevant to NCD; 3) a yearly two-day NCD workshop to be held in different regions of Thailand. The ability to participate in the in-depth activities provided by the grant have not only expanded knowledge around NCD’s, but also has enabled US and Thai investigators to grow in the area of culturally informed research.
**Presenter and PI: Ilya Raskin, USA**

Tajikistan collaborators / Co-Directors:
Dr. Saidbeg Satorov, Tajik Research Institute of Preventive Medicine  
Dr. Yusuf Nuraliev, Avicenna Institute of Medicine and Pharmacology.  

Grant #1D43TW009672-01  

**Title:** International Research Training Center for Botanicals and Metabolic Syndrome in Tajikistan

**Center for Botanicals and Metabolic Syndrome in Tajikistan**

The Center for Botanicals and Metabolic Syndrome in Tajikistan (CBMS-T) was established in 2014 to integrate, in a culturally sensitive way, intensive didactic training in Western science with extensive knowledge of traditional botanical medicines in Central Asia. CBMS-T serves as a core for a comprehensive training program for predoctorate and postdoctorate fellows. The progress made by CBMS-T exceeds the original aims of the program and includes:

- Seven Ph.D. and three postdoctoral fellows in training.  
- Two postdoctoral fellows completed training.  
- Four associate Ph.D. and one associate postdoctoral fellow admitted (Tajikistan match).  
- On-line educational hub established and functioning - [http://cbms.rutgers.edu/](http://cbms.rutgers.edu/).  
- Two International Workshops on Botanicals & Metabolic Syndrome conducted in Dushanbe in Sept 2015 and November 2016 (over 450 local students /scientists involved).  
- Eight keynote lectures presented by US scientists at two leading Tajik Universities (over 2000 people attended).  
- CBMS-T trainees presented at 26 national and international conferences, published four books and brochures, two articles in peer reviewed regional journals, two articles in international peer reviewed journals, and submitted two Tajik and one European patent applications.  
- The President of Tajikistan declared research and development of botanical medicines a national priority economic area under his personal control.  
- New laboratory of Medicinal Plants, led by CBMS-T postdoctoral fellow, Dr. Shifo Kurbonbekova organized, established in 2016.  
- One Ph.D. trainee received matching scholarship from Tajikistan for a two-year training at Rutgers University.  
- Eight medicinal plant collection expeditions completed.
The overall purpose of the Network for Tobacco Control among Women in Antioquia, Colombia, is to establish community and institutional capacity to promote gender-relevant tobacco control efforts among Colombian women. The goals of the “Network” are to reduce tobacco use and exposure to environmental tobacco smoke among women in Antioquia. These goals will be accomplished utilizing the principles of Community-Based Participatory Research and the Empowerment Model, and will be guided by a multi-level approach that will address four target levels: individuals, organizational systems, policy makers, and agents of change across the major components of tobacco control across the lifespan (prevention, cessation, environmental tobacco exposure, and policy). We will first establish a network of representatives (e.g., education, health, policy) across the department of Antioquia followed by capacity building in which network partners will train and empower each other to carry forward the Network mission. The next step will consist of a needs/assets assessment phase in which network partners will assist in the identification of needs/assets regarding tobacco control among (and for) women in order to establish priority areas for intervention. Based on the results of these assessments, network partners in consultation with their constituents will develop a Community Action Plan (CAP), which will consist of a comprehensive tobacco control plan targeting women in the Antioquia. In year 2, we will implement a pilot project addressing one of the research priorities identified by the network. In synergism with these efforts, we will implement capacity building in gender-relevant tobacco efforts among students, professionals, and academicians.
Title: Evaluation of Vascular Event Risk while on Long-term Anti-retroviral Suppressive Therapy (EVERLAST)

Speaker: Dr Arti Singh

PI name/PI Country: Dr Bruce Ovbiagele (MUSIC, USA) & Dr Fred Stephen Sarfo (KNUST, Ghana)

Major foreign collaborator and country: Dr Arti Singh (KNUST, Ghana)

Presenter Name: Dr Arti Singh

Grant number and title: 1R21TW010479-01 - Evaluation of Vascular Event Risk while on Long-term Anti-retroviral Suppressive Therapy

Abstract

Sub-Saharan Africa (SSA) bears about 70% of the burden of people living with Human Immunodeficiency Virus (HIV). The introduction of potent, combination antiretroviral therapy (cART) has resulted in significant declines in mortality and morbidity due to HIV infection. Although, the initiation of cART has led to a global decline in deaths from Acquired Immune Deficiency Syndrome (AIDS) related opportunistic infections and malignancies, there has correspondingly been a surge in deaths from cardiovascular disease (CVD) and non-AIDS related cancers. It is estimated that nearly 80% of all deaths from Non-Communicable Diseases (NCDs) occur in Low and Middle Income Countries (LMICs) where deaths from NCDs are second only to the disease burden of HIV/AIDS. This is largely attributable to enhancements in socio-economic status of these populations leading to the adoption of Western diets and lifestyles with an associated burgeoning epidemic of key CVD risk factors such as hypertension, diabetes and hyperlipidemia. These secular trends in many LMICs further heighten an existing predisposition to CVD risk among the HIV population due to a combination of accelerated atherosclerosis from the pro-inflammatory milieu created by chronic HIV infection and the potentially adverse metabolic side effects from cART medications. Present evidence on the emergence of CVD risk as an important public health issue within the HIV population in SSA exists but there is a surprising paucity of studies evaluating interventions that could mitigate the burden of cardiovascular comorbidity and events among HIV patients on ART in SSA where the vast majority of HIV patients receiving ART reside. There is the urgent need for prompt and accurate detection, as well as appropriate management of CVD risk factors in this population given the poor vascular outcomes in LMICs. This study is premised on systematically assessing the prevalence and predictors of CVD risk among a cohort of HIV-patients receiving ART in an urban setting in Ghana. The Evaluation of Vascular Event Risk while on Long-term Anti-retroviral Suppressive Therapy (EVERLAST) Study will provide crucial insights into the unique contributions of ART exposure and environmental factors such as lifestyle, traditional beliefs
and socio-economic indicators to CVD risk among HIV patients in a resource-limited setting with the objective of developing an intervention to be tested in a future study.
Presenters:

- Penny Vlahos PhD
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  Department of Maritime Studies
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- Stephen L. Schensul PhD
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Penny Vlahos PhD
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Penny Vlahos and Stephen L. Schensul

Identifying Contributing Factors to the Progression of Chronic Kidney Disease of Unknown Etiology in Sri Lanka (1 R21 TW010425)

1. Abstract

Over the last two decades there has been a rapid increase in chronic kidney disease of unknown etiology (CKDu) that has emerged in rural, arid, agricultural lowland regions in multiple countries. These regions report 15 to 20% prevalence among men and women between the ages of 30 to 60. CKDu is a progressive and irreversible disease resulting in renal failure and death unless dialysis or a kidney transplant is available, both interventions in scarce supply in low and middle income countries. The primary effort to date has focused on identification of the etiological factors that cause CKDu, but the results of intensive investigations have been frustratingly inconclusive leaving public health officials and agricultural workers with little guidance for prevention. This FIC R21 project focuses on identifying factors associated with delaying progression of the disease in Sri Lanka, one of the countries hardest hit by the CKDu epidemic. The project will be conducted in a rural endemic area of Sri Lanka, Wilgamuwa Secretariat in the Central Province. The project is a collaboration between the University of Connecticut in the US and the University of Peradeniya in Sri Lanka and involves biogeochemists, social scientists and nephrologists from both institutions working collaboratively to identify the environmental, behavioral and health care factors that are
associated with the rate of progression from moderate to more advanced CKDu. A sample of 300 male and female farmers with moderate CKD as measured by their serum creatinine level is being generated from a Ministry of Health screening in the study area. Those recruited and consent to participation will be monitored for the rapidity of progression utilizing quarterly serum creatinine testing to determine trajectory of progression. The specific aims of this proposed project are to: (1) Assess and monitor water and soil in the microenvironments of individuals with CKDu; (2) Identify behaviors related to farming including hydration, pesticide and agrochemical use and non-farming behavior including psychological states, stigma, alcohol and tobacco use; (3) Examine health care utilization including use of allopathic v. non-allopathic care, medication adherence, and co-morbidities; and (4). Increase the capacity of faculty and students from both institutions to conduct interdisciplinary research with regard to CKDu in Sri Lanka and other endemic countries. The project also provides the opportunity for cross-disciplinary, cross-national exchange that can be generate a model for addressing NCDs in Sri Lanka and other countries.
Global impact of seasonal air pollution on health across the lifespan in Mongolia.

**PI:** David Warburton, Hilary Ong, Jargalsaikhan Badrach, and Chimedsuren Ochir.

Fogarty International Center/National Institute for Environmental Health Sciences D43 Program at the Saban Research Institute, Children’s Hospital Los Angeles and the Department of Environmental Health and Obstetrics at the Mongolian National University of the Medical Sciences.

Environmental pollution of the air, water and soil comprise an increasingly urgent challenge to global health, well-being and productivity. The impact of environmental pollution arguably has its greatest impact across the lifespan on children, women of childbearing age, pregnant women and their unborn children, not only because of their vulnerability during development, but also because of their subsequent longevity. Ulaanbaatar, Mongolia is a highly instructive, perhaps extreme example, of what happens with recent, rapid urbanization. It is the coldest capital city on earth, where average ambient temperatures routinely fall below -40°C/F between November and February. During the winter cold period >200,000 “Ger” district households burn over 600,000 tons of coal for domestic heating (>3 tons each). Thus, outdoor ambient particulate levels frequently exceed 100 times the WHO recommended safety level for sustained periods of time and drive the majority of personal PM exposure. Indoor levels of exposure are somewhat lower in this setting because Gers are equipped with chimneys. Major adverse health impacts that we have documented in the Ger districts include: Respiratory diseases between 1 and 59 years of age and Cardiac diseases in the over 60s. Alarming changes in lung cancer rates in females are also beginning to emerge. Fertility and subsequent successful completion of term pregnancy falls by up to half during the winter pollution season, while early fetal death rises by 4-fold. However, the World Bank has intervened with a Ger stove replacement project that has progressively reduced winter pollution by about 30% over the past 5 years, and this has been accompanied by an increase in mean term birth weight of >100g. Each incremental decrement in air pollution clearly has beneficial effects on pregnancy, which are likely to have the greatest positive health and macroeconomic impact across the lifespan. However innovative policies and solutions are clearly needed to eliminate coal heating in Gers and thus further reduce the markedly negative health impact of this practice. Under the D43 funding we have trained over 20 MPH and PhD qualified personnel who are now intellectually equipped to engage in this thorny public health issue in Mongolia and worldwide.
This D43 program addresses the adverse impact of migration on chronic non-communicable diseases (NCD), specifically in the area of mental illness and physical comorbidities. The overall aim of this program is to build research capacity in low- and middle-income countries concerning this major global health problem. It focuses on migration in Eastern Europe and Central Asia from two of the world’s highest migrant sending countries, Kosovo and Tajikistan, both Muslim majority LMICs. The purpose of this research is to improve the abilities of policymakers, practitioners, and educators in Kosovo and Tajikistan to deal with migration-associated mental and physical illnesses for their citizens both at home and abroad. This grant supports the University of Illinois at Chicago to work with leading research institutions in Kosovo and Tajikistan to train postdoctoral researchers and build centers of expertise in NCD research that will be part of a Chicago-Prishtina-Dushanbe Network (CPDN). This research training program has three specific aims: 1) Train 10 early- to mid-career postdoctoral researchers from Kosovo and Tajikistan in multidisciplinary approaches to NCD research through training at UIC; 2) Build research capacity at 7 partner institutions by supporting 10 one-year mentored research projects and via training to academics, educators, practitioners, policymakers, and stakeholders on pertinent research methods, issues, and research support capabilities; 3) Form a network of researchers from the U.S., Kosovo, and Tajikistan dedicated to sharing knowledge and skills through convening annual meetings, trainings, and dissemination. The research training program focuses on the impact of migration upon chronic non-communicable diseases in the areas of mental illness (e.g. depression, anxiety, PTSD, substance abuse) and risks for physical comorbidities (e.g. cardiovascular disease, cerebrovascular disease). The contemporary complex nature of migration, mental illness, and physical comorbidities requires multifaceted and novel approaches to NCD research training that incorporate: 1) clinical, behavioral, environmental, and social science approaches to the impact of migration; 2) lifecycle, family, epigenetic, and prevention science approaches to studying risks, resilience, and intervention opportunities; 3) services research approaches to the implementation and evaluation of care and prevention in diverse settings, and 4) international exchange of research expertise. Additionally, Dr. Weine worked with fellows and faculty to submit a supplement for the D43 on (Global RDoC) and to revise and resubmit a R21 application entitled “Advancing Stepped Care for Women’s Common Mental Disorders in an LMIC”. Both the RDoC supplement and R21 were funded and both involve research and research training activities that are integrated with the D43 program.
Children and adolescents are among the highest need populations in regards to mental health support, especially in low and middle income countries (LMIC). Yet resources in LMIC for prevention and treatment of mental health problems are limited in particular for children and adolescents. I will go an overview of our child mental health development work in Southeast Asia, structured around the model for development of child and adolescent mental health (CAMH) resources in LMIC that has guided our work. I will also highlight the utility of constructive competition in this development, and also note its converse.
1. Abstract
   a. **PI Name**: Dr. O. Dale Williams; **PI Country**: USA
   b. **Major Foreign Collaborator**: Dr. V Mohan, Madras Diabetes Research Foundation, Chennai, India
   c. **Presenter**: Dr. O. Dale Williams
   d. **Grant Number**: D43TW009125; **Grant Title**: Strengthening Indian NCD Clinical Research and Training Capacity

   NCD in India: An Approach to Capacity Building
   **Presenter**: O. Dale Williams, MPH, PhD, FAHA, FSCT

   When we began in 2002 there was little focus on and little interest in NCDs in India. Against this background, we focused both on non-degree training for individuals and on institutional capacity building. The primary focus for capacity building was the Madras Diabetes Research Foundation (MDRF), led by our major collaborator, Dr. V Mohan. Program components included an annual three-day National/International Seminar, typically with some 140 attendees; annual three-day Intensive Interactive Training Programme, with about 40 attendees, a series of in-house workshops at MDRF and six other institutions; short-term focused training in the US; a series of genetics workshops; and other activities.

   Seminar and Training Programme attendees came from across and beyond India and included medical school post graduates; some undergraduates; medical school faculty; and local, regional and national government and MDRF personnel. Seminar faculty included all three of the Director Generals of the Indian Council of Medical Research (ICMR) in office during our program, WHO officials responsible for NCDs in Geneva and at SEARO, the three-member US team (Williams; Dr. CE Lewis, UAB; Dr. M Gross, UMN), Dr. Mohan and numerous others from MDRF, and experts from government organization, institutes and universities in India. Also participating were three US Consulate Generals.

   Overall, there were some 5,500 attendees in all sessions combined. Several delegates returned later as seminar faculty. Others became Heads of Medicine, one a regional director for NCD for WHO and many others assumed important roles at national and regional research and health related institutes.

   We trained thousands of personnel now located in many Indian states. We had a special focus on the Northeast, at ICMR’s request, and conducted training sessions at three sites in two of those eight states. The capacity building success was especially important as ICMR funded a national probability sample survey on critical diabetes mellitus issues. MDRF personnel we trained lead this important activity, with responsibility for design, implementation, analyses and publication of results. Further, some of our trainees were responsible for the implementation in some of the states and cities included. This survey is includes all Indian states, uses 23 languages, with well over 100,000 participants. Indian health policy, which we helped inform, now has an important focus on NCDs and Indian institutions have a cadre of trained personnel with research training and focus on NCDs.
Abstract: Developing a Research Agenda in South Africa: the Scholar’s Perspective

Presenters: Mashudu Davahna-Maselesele, PhD; University of the NorthWest Mafikeng Campus, South Africa

Naseema Vawda, PhD; University of KwaZulu Natal, South Africa.

Gail Wyatt, PhD, University of California Los Angeles

Norweeta Milburn, University of California Los Angeles

NIH Fogarty Grant 3 D43TW007278

Before the Phodiso (Healing) UCLA-South Africa was founded 12 years ago, South Africa faced socio-economic and health challenges as the country sought to overcome Apartheid. Due to the high rates of multi-morbidities present, including both communicable and non-communicable diseases, there is very little funding available for mental health issues. This is compounded by shortages of researchers, clinicians, and poor infrastructure especially in investigators serving populations and many positions that did not guarantee tenure. The role of the Phodiso programme in promoting pertinent mental health research, developing researchers and their career and other opportunities is highlighted in the presentation. One of the major hurdles to overcome by funding the research of scholars selected for the program was to encourage across campus and university collaborations and to foster opportunities to conduct research on topics such as culturally relevant measurement development that had been overlooked in the past. In its 12th year, other pre-doctoral students are conducting secondary data analysis in the Phodiso datasets while at UCLA. We are one of few programs with a “pipeline grant’ which feeds Phodiso. Our graduates continue to lecture and collaborate on trauma informed topics and effects on mental health. In so doing The Phodiso model has been successful in increasing the breadth and depth of investigators in areas of trauma and mental health.
Major foreign collaborator Tetiana Nickelsen, Ph.D.; Ukraine

**Presenter: Robert A. Zucker**

Grant # D43TW009310: Capacity Building for Lifespan Focused Substance Use Disorder Research in Ukraine

Presentation title: **International Conflict: Challenges & Solutions for Sustaining the Fogarty Program in Ukraine**

**ABSTRACT (400 words)**

Program’s goals are to: a) transfer knowledge regarding the developmental etiology of substance use disorders; and, (b) mentor development of strategies for implementation of screening and brief intervention that build upon the scientific base. This is to occur by: a) yearly workshops to teach a developmental focus about the emergence of substance use and addiction, as well as screening and brief intervention methodologies; b) US fellowships to mentor younger scientists, and develop contacts with relevant US researchers and policy makers for senior scientists; c) mentoring of needs assessment surveys and pilot brief intervention programming in targeted communities; and, d) publicize this methodology to local public health officials.

Over the past 2+ years the program has grappled with major challenges that potentially could impede or destroy successful implementation of the work: (1) Active warfare in eastern Ukraine, and escalating conflict stemming from covert Russian assistance, leading to significant mortality and flight by Ukrainian citizens living in that region. Since project activity included collaborations with high ranking substance abuse researchers and addiction treatment specialists in the east, this upheaval led to the need to abruptly cancel a workshop in Kharkiv with only a month’s notice. (2) The need to postpone a shifted meeting location in Western Ukraine because of heightened conflict, and potential shooting threats to American presenters visiting the country. (3a) The need to postpone US fellowship appointments because of emergency work demands on potential fellows, (psychiatrists running emergency war trauma treatment programs) and unwillingness to leave family and colleagues in this time of great national need. (3b) Following a subsidence in conflict, a Kiev workshop program was completed in Feb 2016, and fellows were willing to begin training in the US again. (4a) Instability of leadership appointments and grant funding in Ukraine, led to need to find new foreign collaborators. 4b) We were able to successfully exploit previously developed relationships with trainees to establish a new highly effective collaborative structure. 5) Plans to resume a workshop in Spring 2017 were impaired by new US government plans to implement intense monitoring and major restriction on US immigration and visitation, leading to the possibility that Ukrainian colleagues currently in the US would be unable to attend Ukraine meetings and then return to complete their work. We describe recent activity to overcome these problems, which include development of an online methodology course and conducting a workshop remotely using video-based meeting conferencing, as well as future plans.
Pls:  Joseph R. Zunt (University of Washington)
      David L. Tirschwell (University of Washington)
      H.H. Garcia (Universidad Peruana Cayetano Heredia, Peru)

Project Title: “ICTuS: Interdisciplinary Cerebrovascular Diseases Training Program in South America”

Grant Number: 5D43TW009137-04

Project/Grant Period: 06/25/2014 - 05/31/2019

Abstract:

The overarching goal of this our ICTuS program is to reduce morbidity and mortality of cerebrovascular disease in Peru through identifying environmental, lifestyle and host risk factors for stroke and collaborate with governmental and academic institutions to develop policies to decrease population-level risk factors identified through this program. To attain this goal we provide a combination of short, medium and long-term training, with an emphasis on master's degree training at the Universidad Peruana Cayetano Heredia (UPCH) and the University of Washington (UW) and three-month Comprehensive training in epidemiologic research methods at the UW with practical experience in stroke management and rehabilitation medicine. We have also implemented short training workshops in cerebrovascular and chronic diseases epidemiology, palliative care and post-stroke rehabilitation. Over the past year, Dr. Abanto and colleagues have developed a proposal to establish a stroke training program at the INCN. This process required establishing a Diploma based at the Universidad Nacional Mayor de San Marcos. We have received initial approval and are now in the process of negotiating costs and determining how neurologists currently providing stroke care will be allowed to teach (e.g. grandfather clause or entering as both students and teachers to allow eventual development of a subspeciality in stroke neurology). Clinical experience of this diploma will include: clinical stroke experience in the stroke ward and stroke ICU, neuroimaging, transcranial doppler, community stroke prevention, and a research methodology training. The ICTUS program will provide intellectual support during the development and implementation of this fellowship and continue to support one Peruvian program staff to assist with implementation of program activities.