

Regional Roundup

The Eastern Caribbean Health Outcomes Research Network (ECHORN)

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Introduction

The Eastern Caribbean Health Outcomes Research Network (ECHORN) was founded in September 2011 with funding from the National Institutes of Health/National Institute on Minority Health and Health Disparities. (PI: Nunez-Smith, M; Grant #: U24MD006938). ECHORN is a cross-island, multi-site research and capacity-building alliance between Yale University and four academic health professions institutions across the Eastern Caribbean and is funded through 2016. The inaugural ECHORN members include: University of Puerto Rico, the University of the West Indies-Cave Hill, the University of the West Indies-St. Augustine and the University of the Virgin Islands. ECHORN's focus is on the rising tide of non-communicable and chronic disease in the region and this research collaboration seeks to generate new knowledge on diabetes, cancer, and cardiovascular disease across these island communities. Of equal priority is ECHORN's commitment to strengthening health outcomes leadership capacity across the entire region.

The core ECHORN research project will establish a population-based cohort of over 5,000 racially/ethnically and linguistically diverse adults across the four ECHORN sites. Cohort participants will complete a baseline questionnaire, undergo a brief physical examination, and provide blood, urine, and saliva samples. The questionnaire collects data on environmental exposures, health behaviors, knowledge and attitudes, medical family history, healthcare access and utilization among other topics. Several clinical data points are collected on each participant at the baseline visit, and some ECHORN participants will have an opportunity to provide biological samples for future genetic and biomarker testing to identify early predictors of disease. In the short and long term, ECHORN will be able to evaluate important etiologic hypotheses for chronic diseases with a high burden in the Caribbean region. This work has the potential to identify new risk of protective factors for the three disease states under study in a diverse population followed over time. Preliminary data collection has begun and cohort participant enrolment begins in January 2013.

Additional research questions that ECHORN can address include the extent of control of diabetes and hypertension; the prevalence of common mental health disorders and the relationship with NCDs; and social support and perceived stressors among older individuals regionally and inter island disparities.

The second major component of the project, enhancing health outcomes research leadership capacity offers the opportunity to achieve significant inter-sectoral collaboration. These capacity building activities occur at four different levels. At the individual level, the project currently offers an on-line community for members of the network to learn research methodology and techniques and exchange ideas. At the level of the site, each team has the opportunity to participate in the Global Health Leadership Institute (GHLI) annual symposium. Participation in these symposiums in addition to working with a local community advisory board helps sites to guarantee community engagement, research dissemination and policy relevance. As a direct benefit to the academic institutions, ECHORN hosts two learning exchange workshops each year aimed at building research skills among the faculty and students. Finally, at the regional level, ECHORN hosts a yearly symposium which focuses on career development activities and cross-island networking and collaboration. The first annual symposium was held this past year in Miami. Over the next four years the symposia will rotate between the four sites beginning with USVI, Puerto Rico, Trinidad and Tobago and Barbados. The Symposia are open to the public for application.

Cohort studies in the West Indies

This study joins a tradition of several outstanding cohort trials conducted in some of the ECHORN sites, for example, the Barbados Eye Study, where the Chronic Disease Research Centre at Cave Hill campus, Barbados collaborated with the Stony Brook University School of Medicine, New York and the University of Pittsburgh's work in the Tobago Prostate Cancer Survey. The former "aimed to gain better understanding of the impact of the perceived visual-related quality of life among high-risk groups of Blacks" [1] and its findings have revolutionized the care of glaucoma among Blacks worldwide. In the latter, The Tobago Prostate Cancer Survey was designed to better understand the role of inheritance, lifestyle, and body weight and composition in the aetiology of several common chronic diseases, including prostate cancer in a population of African ancestry, [2] the study documented the high prevalence of prostate cancer among this population, with 10% of 2484 males screened testing positive for prostate cancer. In Trinidad, the St. James study is historically the most important, setting the scene for the explosion of NCDs which we see today, and providing early evidence of the weight of morbidity of diabetes

on the East Indian Diaspora and the protective benefit of HDL on coronary heart disease. [3] Since then however the impact on the Indo-Trinidadian population has been under-studied; ECHORN has the promise of looking prospectively at this sub-population and following them over time, updating as it were, the St. James study. Also understudied is the mixed ethnicity population of Trinidad, the NCD burden on this population has been little described and the bio-banking process may glean important information for this population. Another study worthy of mention is The Puerto Rico Heart Health Program [4], a cohort study of 10,000 males in Puerto Rico that evaluated risk factors for coronary heart disease. Study participants were followed for over 10 years; this was sponsored by the National Heart Institute of the US Public Health Service (USPHS).

The ECHORN Team

ECHORN is overseen by the study's principal investigator, Dr. Marcella Nunez-Smith at Yale University. Dr. Nunez-Smith is a Harvard- and Yale-trained physician researcher; she is the principal investigator on several NIH and foundation-funded research projects, has published extensively in the peer-reviewed literature, and has been recognized with numerous awards. ECHORN is one of several projects in her research portfolio which is broadly aimed at achieving equity in health and healthcare outcomes for diverse populations across the globe. As are several members of the broad ECHORN team, she is from the region (born and reared in St. Thomas, USVI) and her ties to the region remain strong. Her long-term vision for ECHORN is to strengthen the collaboration by expanding the network to other island sites within the region and to develop regional approaches and solutions to the looming burden of chronic disease. She works closely with all of the senior site principal investigators, chairs ECHORN's steering committee, and liaises with an interdisciplinary Faculty Advisory Board. Each site principal investigator leads a local team of junior faculty researchers, research assistants, project managers, and clinical research nurses. The ECHORN Coordinating Center is located at Yale and that team is led by Dr. Terri-Ann Thompson. Dr. Thompson is a public health researcher from Johns Hopkins University with expertise in the areas of women's health, gender and sexual & reproductive health in the Caribbean.

Regional/Site Principal Investigators

In Barbados the team is led by Dr. Peter Adams and Euclid Morris; In USVI, by Maxine Nunez, in Puerto Rico by Dr. Cruz Nazario-Delgado. In Trinidad, the team is led by Dr. Rohan Maharaj and Dr. Paula Nunes.

Dr. Maxine Nunez, is professor of nursing at the University of the Virgin Islands. She is the former Academic Dean of the St. Thomas campus, and recently director of the research core of a federally supported grant from the NIMHD. She studied community health/public health administration and research at the Johns Hopkins School of Public Health and Hygiene where she earned her doctorate. Through the research activities of ECHORN she intends to counter the negative impact of the spiralling occurrences of NCDs and their complications.

Dr. Cruz Nazario-Delgado, obtained a PhD from Johns Hopkins University, School of Hygiene and Public Health. She is a tenured Professor of Epidemiology at the School of Public Health, University of Puerto Rico and teaches graduate courses on epidemiological methods, cancer epidemiology, and community research. Dr. Nazario has over 35 years of experience in health services research, outreach, and education in Puerto Rico and the United States and has published extensively in the areas of chronic disease epidemiology and disease detection and monitoring.

Dr. Peter Adams did his medical training at Mona and Cave Hill. After internship at the Port-of-Spain General Hospital, Trinidad, he returned to Cave Hill where he obtained the DM Family Medicine. He was appointed lecturer in Family Medicine in 2002 and Deputy Dean of the Faculty of Medical Sciences, Cave Hill in 2008. He is a consultant at the Queen Elizabeth hospital and heads the General Practice Unit. He is a member of the International Advisory Board, *British Journal of General Practice*. His research interests are chronic non-communicable diseases (diabetes, hypertension and obesity) and sexually transmitted infections.

Dr. Rohan Maharaj completed his medical training and DM (Family Medicine) at UWI and his Master of Health Sciences (Family Medicine) at the University of Toronto. He is a Fellow of the Caribbean College of Family Physicians. Dr. Maharaj is a Senior Lecturer at the St. Augustine campus. His research has been focused on depression and other psychosocial issues in primary health care and in 2009 he published his first book 'Psychosocial Issue in West Indian Primary Health Care'. He has 30+ journal publications and has trained over 70 graduate students in Family Medicine.

Conclusion

The ECHORN project has a unique opportunity to document the current NCD epidemic and the trends over time. It will provide surveillance and prevalence data on NCDs in the Eastern Caribbean and generate opportunities for capacity building in research skills in the Eastern Caribbean. For additional information on the ECHORN project visit the web page at www.echorn.org.

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