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Global Transdisciplinary Research Collaboration on the Health of the Caribbean Diaspora

Final Report

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Office for Diversity and
Community Partnership



**Pan American
Health
Organization**

Regional Office of the
World Health Organization

“A population profile of the Caribbean region shows an increasingly aging population as a result of social gains such as control over infectious diseases, improved education, generally higher standard of living, and improved access to social services. Despite these gains, Caribbean countries are vulnerable to income volatility due to economies characterized by lack of diversification, dependence on other countries for goods, and vulnerability to natural disasters. Rural populations, women heads of households, the elderly, and children are more susceptible to poverty than are other groups; urban poverty is increasing in some countries.”

– *Aldrie Henry-Lee, Ph.D., University of the West Indies*

“To be effective in a cross-cultural context, transdisciplinary research must address challenges such as the lack of common language and value system, inefficient processes for technology transfer, uncritical use of theories that may not be grounded in the culture of the population being studied, and the clash between indigenous traditional knowledge and western scientific knowledge.”

– *Lourdes Baezconde-Garbanati, Ph.D., M.P.H., University of Southern California*

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PURPOSE OF THE REPORT

The Harvard Medical School, Office for Diversity and Community Partnership; the National Cancer Institute (NCI), part of the National Institutes of Health (NIH); and the Pan American Health Organization, Office of Caribbean Program Coordination partnered to host the meeting, Global Transdisciplinary Research Collaboration on the Health of the Caribbean Diaspora, held in Boston, Massachusetts, June 23-24, 2008. This meeting was designed to deepen the understanding of the root causes and social determinants of health, as applicable to the Caribbean Diaspora, and to strengthen the capacity of mainland U.S. and Caribbean researchers to collaborate, report, and publish on health issues with an emphasis on the social determinants of health, from a global perspective. Specific learning objectives were to increase:

- participants' knowledge base of transdisciplinary science and social determinants of health,
- participants' understanding of translational research and how it applies across several indicators,
- connections and develop new opportunities for collaboration and partnership,
- understanding of resources and how to leverage resources from various funding agencies, and
- understanding of how to develop career paths in research.

Panel discussions, networking opportunities, and small workgroups were used to address these objectives. This report presents the proceedings from this meeting and discusses barriers to collaboration, factors that foster collaboration, and resources needed to increase collaboration among U.S. and Caribbean researchers.

MEETING BACKGROUND

This meeting was prompted by the need to address the burden of chronic disease and death in the Caribbean and among peoples of the Caribbean Diaspora. The burden of chronic diseases in developing countries is rapidly increasing at rates similar to those seen in developed countries. This is particularly evident in the Caribbean region, where the leading causes of morbidity and mortality mirror those seen in the United States and include diabetes, cardiovascular disease, hypertension, and cancer, with the accompanying lifestyle factors of tobacco use, alcohol use, poor nutrition, and physical inactivity. Social and economic profiles of developing countries now resemble those of underserved communities in the United States. The vibrant history of immigration to the United States from the Caribbean region and circular patterns of migration have also contributed to the dynamics of chronic disease patterns that are shaped by culture, acculturation, social and economic circumstances, and lifestyle factors.

To curb the burden of chronic disease in the Caribbean and among Caribbean immigrants globally, effective and practical research and strategies are needed to address chronic disease health outcomes and the underlying social determinants. Given that the social determinants of health span several different areas of research (e.g., social sciences, basic science, genetic epidemiology), it is critical that we conduct research that is transdisciplinary—that is, joint efforts using shared conceptual frameworks that draw together disciplines, specific theories, and concepts to develop new approaches, measures, and methods to address a common problem. This is especially important in countries and communities where the downstream negative effects of the social determinants of health further impact the most vulnerable in society.

MEETING SUMMARY: DAY 1, MONDAY, JUNE 23, 2008

Session 1: Welcome Remarks

Dr. Joan Y. Reede, Dr. Bernadette Theodore-Gandi, & Ms. Jane MacDonald-Daye

Drs. Reede and Theodore-Gandi thanked the meeting planners for their efforts and welcomed participants. Dr. Reede said one of the goals of the meeting was to establish networks to more fully discuss issues affecting the Caribbean region. She encouraged participants to create lines of communication and to use those networks to identify and leverage resources. Dr. Reede asked senior educators and researchers to consider how their programs can help nurture and mentor the next generation of health scientists.

Dr. Theodore-Gandi welcomed participants and noted that the health disparities seen in the Caribbean and Latin America can be improved only by research that extends beyond academia and brings knowledge into the areas of policy and civil society. She described the meeting as an opportunity to expand personal relationships into productive networks and institutional relationships and lay the groundwork for further activity at a ministerial meeting on health research to be held in the fall of 2008.

Ms. MacDonald-Daye noted in her presentation, *Multilateral Collaboration: A Key Element in Accelerating Our Impact on Reducing Cancer Disparities*, that cancer health disparities are worsening in the United States, despite NCI's increased attention to this issue. Cancer rates among U.S. neighbors in the Pacific region, Mexico, and the Caribbean region rival or surpass the highest global rates. Ms. MacDonald-Daye said NCI's Pacific Cancer Initiative might serve as a model for similar efforts in the Caribbean region. She emphasized the importance of engaging community representatives throughout the

process and to identify and incorporate unique and common regional and local issues.

Ms. MacDonald-Daye said the meeting can lead to the development of a productive research collaboration among the diverse nations of the Caribbean, patterned on the regional effort now underway in the Pacific.

Session 2: Keynote Lecture

Social Determinants of Health: Global Perspectives

Dr. David Williams

Data compiled by the World Health Organization demonstrates the extent of health disparities in the Caribbean and among Caribbean emigrant populations. Caribbean immigrants to the United States have better overall patterns of health than do subsequent generations; health declines with length of residence and in successive generations. Three major influences contribute to decreased quality of health among Caribbean immigrant populations. First, low socioeconomic status is the most powerful predictor of poor health. For example, the death rate before age 65 among persons earning less than \$10,000 per year is triple the rate among persons earning \$100,000 or more annually. Second, institutional aspects of racism have an independent negative effect on health in addition to exacerbating the effects of socioeconomic status. Third, the experiences associated with discrimination represent chronic and acute stressors that produce measurable effects on brain function, such as learning and memory, and on stress-related hormonal activity.

Access to and quality of health care is influenced by race and ethnicity, creating inequities in vulnerability, prevention, and treatment. Because the quality of health care is

systematically poor, improving prevention is important to reducing disparities. Interventions that decrease vulnerability and promote prevention require active involvement. The social environment is central to providing healthy alternatives, opportunities, and support. For example, policies and programs that lead to improvement in neighborhoods also improve the health of residents, even if the policies or programs have no overt health component. Changes in policy are key to reducing disparities, and they require the collaborative support of all sectors of society operating systematically and comprehensively. Dr. Williams suggested a need to develop a framework on which to build systematic approaches to improving the inequitable social circumstances that cause and sustain health inequities. Participants discussed the phenomenon of immigration “selectivity” and the widening of health disparities that accompanies increasing duration of residence. Health disparities exist in all White receptive countries; Black immigration has a negative impact on health over time.

Session 3: Social Determinants of Health and the Caribbean Region **Moderator: Dr. Roderick King**

Presentation 1: Socioeconomic Aspects of Health in the Caribbean

Dr. Andrew S. Downes

The English-speaking countries of the Caribbean are members of an economic structure called CARICOM – the Caribbean Community and Common Market – which is working toward a single market and economy (CSME). CARICOM has established several health initiatives since 1984; overall, the Caribbean is seen as rated middle to high on the United Nation’s Development Index, which includes life expectancy as a health metric. Economic issues, such as the cost of health care, low productivity, and income inequality,

negatively impact health in the CARICOM countries. The varied social and economic factors that influence health quality require a transdisciplinary research approach to improving overall health care and reducing disparities.

Demographic patterns over recent years indicate that decreasing death rates result in increased elderly population and burden of age-related illness. At the same time, injury and violence reduce the main labor force. Furthermore, among persons aged 25-44, deaths due to HIV/AIDS have increased. The increasing incidence of non-communicable and behavior-related disease (tobacco-related disorders and HIV/AIDS) presents more complex health challenges than does reducing the threat of other types of communicable disease.

In smaller CARICOM countries, public health programs must compete for limited public resources; in addition, these countries suffer a “brain drain” due to the migration of nurses and other health care specialists. Dr. Downes suggested that meeting the challenges confronting CARICOM will involve efforts to reduce income inequalities; integrate medical and social sciences; increase emphasis on public health education; increase disease prevention; and improve food production, distribution, and access to healthy food and lifestyle.

Presentation 2: Migration and Health in the U.S.-Latin Caribbean Transnational Communities

Dr. Barbara Zsembik

Movement of populations out of and among Caribbean nations has changed the regional demographic from largely young and rural with high birth and death rates to increasingly older, urbanized populations with low birth and death rates. The Caribbean Diaspora is characterized by high rates of migration that follows three patterns: (1) intra-regional among Caribbean nations and to North America (primarily the

United States); (2) non-regional (to Europe); or (3) circular—repeated and often short-term movements between the countries of origin and destination. Circular and undocumented or irregular migration present increased health risks, such as infection and reinfection, and high rates of occupational health risks or violence (such as seen among Dominican sex workers). Caribbean migration patterns create transnational populations with single yet complex social networks and a complex epidemiological profile.

Different migration patterns have had different impacts on the health of Cuban, Dominican, and Puerto Rican native and migrant populations. First-wave Cuban immigrants to the United States were middle and upper class and have health profiles similar to Whites; subsequent immigrants are younger, of lower socioeconomic status, and in poorer health. Pre-1970 Puerto Rican immigrants tended to be displaced agricultural workers; later migrants have been middle class and professional. Most Dominican migrants to the United States arrived after 1990 and are professional or managerial workers. In many respects the health profile of Cuban, Puerto Rican, and Dominican immigrants to the United States reflect the “healthy immigrant” model: First-wave migrants are healthy when they leave their country of origin; subsequent generations reflect health disparities characteristic of the group into which they are acculturated. Dr. Zsembik stated that it is important to pay attention to the effects of increasing globalization and transnationalism on health and health disparities within the region.

Presentation 3: Redefining the Caribbean Health Agenda Within the Context of Social Determinants

Dr. Gillian Barclay

The political, economic, and social characteristics of the CARICOM region describe a community linked by common

history, language, culture, and geography. Most countries (except Haiti) are middle-income economies built on tourism, agriculture, and financial services. Economies are jeopardized by limited capacity and infrastructure and burdened with extensive debt. Additional socioeconomic vulnerability is associated with potential for natural disasters, uncertainty of the food supply, and the disparities illustrated by tourism’s relative luxury alongside extreme poverty. The unification of the region under a CARICOM structure could present new social challenges to health due to the increased mobility of the population and consequent risk of disease transmission; meeting these challenges will require shared epidemiological and other health information and improved and expanded health services. Epidemiological data show increasing burdens of non-communicable diseases such as diabetes, cancers, and cardiovascular disease. Other increasing health burdens include HIV/AIDS, violence, and injury. In addition, the region’s population is aging; by 2025, the elderly will account for 17 percent of the region’s population.

Revising the region’s health agenda will require coordinated and comprehensive efforts such as the Port of Spain Declaration (2007). The Declaration commits CARICOM to reducing the incidence of chronic non-communicable diseases through efforts such as policies that combat tobacco use, incorporate gender in all considerations of disease prevention and control, re-introduce mandatory physical education, and increase availability of high-quality foods. Dr. Barclay suggested that policy and action within the CARICOM region will require accurate data as well as recognition and definition of problems, formulation of solutions, scalability into different contexts, and sustained political will.

Session 4: Social Determinants and Transdisciplinary Research

Moderator: Roger McLean

Presentation 1: NIH-Funded Transdisciplinary Research

Dr. Pebbles Fagan

Transdisciplinary research represents an opportunity to bring multiple avenues of research to bear on public and population health issues—such as tobacco use and obesity—that are influenced by complex social, environmental, and biological factors. NIH-supported transdisciplinary research allows researchers to work jointly in a shared conceptual framework that draws together discipline-specific theories and concepts to develop new approaches, measures, and methods to address a common problem.

NIH currently funds transdisciplinary research in tobacco use (seven centers), cancer communications (four centers), population health and health disparities (eight centers), drug abuse prevention research, energetics and cancer (four centers), and the Tobacco Research Network on Disparities. Transdisciplinary research represents an enormous financial and human investment. It requires skilled senior leadership and institutional support; the development of a common language to enable regular, structured communication across disciplines; and an understanding and respect for others' models and methods.

Transdisciplinary research fosters the development of junior researchers, provides opportunities for co-authorship, and spawns a wide range of spin-off grants. Dr. Fagan suggested that the transdisciplinary research supported by NIH represents a powerful model for research approaches that can be brought to bear on health problems and disparities confronting the Caribbean Diaspora.

Presentation 2: Cultural Perspectives in Transdisciplinary Research for the Elimination of Health Disparities

Dr. Lourdes Baezconde-Garbanati

Areas of transdisciplinary research at the University of Southern California include energetics and cancer, tobacco and alcohol use, and prevention research. Within these areas, transdisciplinary research focuses on economic, environmental, social, cultural, political, and social determinants. Research related to tobacco use prevention and cessation includes collaboration with the Tobacco Research Network on Disparities, with projects that focus on migrant farm workers and tobacco-related media messages, and the Pacific Rim Transdisciplinary Tobacco and Alcohol Use Research Center, which examines effectiveness of prevention programs across cultural and environmental contexts. The University of Southern California's Transdisciplinary Research Center on Energetics and Cancer examines the complex socioeconomic, environmental, and cultural factors that contribute to linkages among obesity, physical activity, diet, and cancer. This Center conducts research into cultural and gender determinants on interventions to reduce sugar intake by Latinas. The Center's China Seven Cities Study looks at the role of real and perceived income as a social determinant of tobacco use and self-reported health.

To be effective in a cross-cultural context, transdisciplinary research must address challenges such as the lack of a common language and value system, inefficient processes for technology transfer, uncritical use of theories that may not be grounded in the culture of the population being studied, and the clash between indigenous traditional knowledge and Western scientific knowledge. Dr. Baezconde-Garbanati suggests that lessons learned through the University of Southern California's experience can improve the likelihood of

effective implementation of transdisciplinary research to the Caribbean Diaspora.

Presentation 3: Essential (Child) Health Research: Transcending the Disciplines

Dr. Aldrie Henry-Lee

A population profile of the Caribbean region shows an increasingly aging population as a result of social gains, such as control over infectious diseases, improved education, generally higher standard of living, and improved access to social services. Despite these gains, Caribbean countries are vulnerable to income volatility due to economies characterized by lack of diversification, dependence on other countries for goods, and vulnerability to natural disasters. Rural populations, women heads of households, the elderly, and children are more susceptible to poverty than are other groups; urban poverty is increasing in some countries.

General risks to the health of Caribbean children include poverty, poor parenting, lack of educational opportunity, unsafe private and public spaces, and lack of leisure and recreation. Infant mortality rates are generally low (Haiti is an exception). Causes of death before age five include preventable or treatable diseases. Risks to children aged 9-12 include abuse, exposure to violence, and increasing rates of obesity. Roughly 30 percent of Caribbean populations are adolescents, aged 13-17. Risks during adolescence include inadequate education, sexual exploitation, teen pregnancy, HIV/AIDS, and child labor practices. Improved health among Caribbean children requires efforts to improve research, develop policy, and implement new programs. Challenges to research include lack of collaboration and communication among researchers and medical practitioners, research objectives defined by funding agencies rather than researchers, and inadequate funding. Challenges faced by researchers at the policy level include difficulty in gaining access to policy makers and the lack

of a forum in which governments and researchers can interact. Challenges at the level of implementation include insufficient dialogue between policy makers and researchers and limited resources and scope for monitoring and evaluation.

The Caribbean Child Research Conference, now in its third year, is a mechanism to share research findings, strengthen researcher networks, and encourage research in priority and neglected child health issues. Dr. Henry-Lee suggested that the Child Conference 2008, scheduled for October 21-22 in Jamaica, could provide a valuable forum for establishing further collaborations and discussion to develop a transdisciplinary research agenda for the region.

Session 5: Social Determinants of Health and Translational Research **Moderator: Dr. Hilary Robertson-Hickling**

Presentation 1: Facilitating the Translation of Evidence-based Interventions Into Community Health Practice

Ms. Cynthia Vinson

One NIH goal is to develop and disseminate credible health information based on scientific discovery. Within NCI, the Division of Cancer Control and Population Studies is working to expedite the transfer of evidence-based knowledge from research into clinical practice. Currently, the lag between development of new treatments or interventions is too long, and NIH has been criticized for producing “all breakthrough, no follow-through.” It takes 17 years to turn 14 percent of original research to the benefit of patient care. NCI is working to increase the research “push” as well as the practice “pull” to move information more rapidly from laboratory to practice. As part of the research “push,” NCI offers funding opportunities for dissemination and implementation projects

(<http://cancercontrol.cancer.gov/d4d/>). To encourage and facilitate the “pull” for implementation and adoption of methods developed through research, NCI maintains an updated repository of summary statements, ratings, and products from cancer prevention and control programs tested in research (<http://rtips.cancer.gov/rtips/index.do>). Ms. Vinson indicated that improving and expediting the translation of research findings into clinical practice will require expanded research-practice collaborations.

Presentation 2: Translational Research and the Health of the Caribbean Diaspora

Dr. Lee Nadler

Breakthroughs achieved in medical research now take a full generation before they have an impact on public health. NIH is committed to speeding this process by making translation of research to practice a condition for continued funding. Research centers such as Harvard are complex institutions with administrative and laboratory structures spread among 10 schools and 13 institutions with separate management, interests, and prejudices. It is unrealistic to expect this long-established institutional structure to change in order to effectively address translational research. Instead, the change must be driven by individuals within institutions. Real translation happens when the interests of the patient get to the lab, not when lab results get to the clinic. Researchers must begin to think about patients first. The first step in this process is for patients, represented by community leaders, clinicians, and public health officials, to help open avenues of communication. Dr. Nadler stated that representatives of the Caribbean and other communities should tell institutions such as Harvard what questions must be addressed.

Presentation 3: From Research to Action in Tobacco Control: Applying Research Translation to Public Health

Dr. Francisco Buchting

Translating research information into clinical practice can be considered as knowledge brokerage: collecting, indexing, and sharing validated research findings available in research literature to advance policy and improve health care delivery to the public. In “theory,” funding agencies, researchers, and the public health policy community share the need for effective knowledge brokerage, but none of them is actually responsible.

Private Internet entities are far better at disseminating health information than are public and academic agents, but these sources may not reliably verify information they provide. New models of information transfer are needed to quickly translate publicly funded research into accessible knowledge. The Tobacco Research Translation Institute was established in California by the state-supported Tobacco-Related Disease Research Program. The Institute’s goal is to facilitate translation, dissemination, and application of research findings among tobacco control professionals and the larger public health community. In a track at the biennial Tobacco-Related Disease Research Program conference, the Tobacco Research Translation Institute offered presentations of three recently published research papers and provided toolkits to support making research results available to tobacco control professionals. This process eliminates some of the delay associated with more passive diffusion of published information. Effective knowledge brokerage requires three components embodied in the Tobacco Research Translation Institute project: identification and evaluation of relevant research studies, program development and training, and web-based knowledge management to support training.

MEETING SUMMARY: DAY 2, TUESDAY, JUNE 24, 2008

Session 1: Opening Comments

Dr. Joan Y. Reede

Dr. Reede welcomed participants and expressed her hope that the productive collegiality of the first day's activities would continue through the rest of the full agenda. She then introduced the keynote speaker, Dr. Camara Phyllis Jones.

Session 2: Keynote Lecture

Social Determinants of Health and Social Determinants of Equity

Dr. Camara Phyllis Jones

The 2003 Institute of Medicine report on discrimination and health inequities described a broad array of differences related to access, use, and patient experience of care. These differences are the result of social determinants of health. However, the report did not address that the social determinants of inequity create an environment within which health disparities arise.

The social determinants of health can be seen as acting to create disparities at three levels: differences in (1) life opportunities, exposures, and stresses that result in differences in underlying health status; (2) access to health care, including preventive and curative services; and (3) the quality of care received within the health care system. Addressing the social determinants of health involves improved medical care and public health systems, but also includes collaboration with sectors outside health care, such as education, justice, transportation, housing, and environment. The social determinants of health act within a larger environmental context with characteristics such as individual resources, neighborhood resources, hazards and toxic exposures, and opportunity structures. Such environmental characteristics may vary greatly in quality and availability.

Different populations are distributed within different ranges of this context, and the distributions are influenced by systems of power, such as capitalism and racism. The environmental context and distribution of resources and exposure represent social determinants of inequities.

Addressing the social determinants of inequity involves monitoring inequalities in resources, exposures and opportunities; monitoring disparities in outcomes; examining structures, policies, practices, and norms to understand how inequities are being maintained; and intervening in societal structures and systems of power.

Racial disparities in health are the result of racism: a system of structuring opportunity and assigning value based on how a person looks. Racism exists on three levels:

- *Institutionalized racism* creates and maintains differential access to goods, services, and opportunities, and its impact is seen in the association of race with socioeconomic status.
- *Personally mediated racism* maintains differential assumptions about abilities, motives, and intent based on how an individual looks. This level of racism results in stigmatization and acts of discrimination or prejudice, such as police brutality, a teacher's devaluation of a student, or a physician's disrespect of a patient.
- *Internalized racism* is the acceptance by the "races" of assumptions and messages about our own worth and acceptance of limitations on our own humanity.

The pervasive and pernicious effects of racism on social determinants of health and equity can be seen in responses to a set of questions on the 2004 Centers for Disease Control and

Prevention Behavioral Risk Factor Surveillance System (BRFSS) survey, which asked respondents to choose a self-assigned race as well as a “socially assigned” race (“How do other people usually classify you in this country?”). BRFSS data show that being “socially White” is associated with higher educational attainment and with better health, even within the same self-identified race and the same educational level.

It is necessary to understand why socially assigned race is associated with better health status and with educational level. Racism is not an indefinable miasma; it operates through identifiable mechanisms. When evaluating social determinants of health and equality, it is necessary to always ask, “How is racism working here?” Dr. Jones stated that there is a need to analyze policies and programs to identify health and equity inequities and ask “how is racism working” in order to identify mechanisms for targeted action.

Session 3: Identifying and Leveraging Resources for Global Collaborations

Moderator: Dr. Emma Fernando-Repollet

Presentation 1: International Tobacco Control: A Funder’s Perspective

Ms. Catherine Jo

The American Cancer Society provides funding and support for international tobacco control efforts. One effort is the Framework Convention on Tobacco Control (FCTC) Caribbean Network, which is working toward ratification and implementation of the Framework Convention on Tobacco Control by Caribbean nations. The Network supports local, national, and regional collaborations to raise public awareness through projects such as a campaign to achieve strong graphic warning label regulation on tobacco products in CARICOM countries. American Cancer Society funding helps support the InterAmerican Heart Foundation and International Development

Research Centre in maintaining a regional research database that can be used to identify collaboration and research possibilities in the Caribbean region. The International Tobacco Control Funders Forum was established in 2006 with American Cancer Society support to encourage discussions and collaborations that increase the effectiveness of international tobacco control efforts. Forum-sponsored projects include maintaining a funders database, enhancing language/translation capabilities, and coordinating FCTC and other tobacco control efforts. American Cancer Society funding to the Caribbean region includes five grants, ranging in size from \$7,500 to \$51,154.

When seeking support from international funders of tobacco control, proposals should focus on policy research and advocacy projects, such as the development of factsheets or toolkits that provide a bridge from research to public awareness and outreach to policymakers. Projects also should involve a multi-sector approach and have clear and measurable objectives. In collaboration with Cancer Research U.K. and the Framework Convention Alliance, the American Cancer Society offers 1-year grants averaging \$5,000 to support advocacy for the FCTC. In partnership with Cancer Research U.K., Research for International Tobacco Control, the Canadian Tobacco Control Research Institute, and INCA (Brazil’s national cancer institute), the American Cancer Society offers 1-year grants averaging \$10,000 to support research on issues related to ratification, implementation, or enforcement of the Framework Convention on Tobacco Control. Ms. Jo stated that it is important to develop realistic grant proposals that assure funders of achievable and measurable outcomes.

Presentation 2: Building Research Capacity: Opportunity for Resource Development

Dr. Michael Johnson

Global health issues—particularly HIV/AIDS—will continue to have strong support from U.S. sources, though areas of support will change as more emphasis is placed on chronic and non-communicable disease. The Fogarty International Center Strategic Plan 2008—Pathways to Global Health Research—has five main goals: (1) train the next generation of U.S. and international researchers; (2) continue a focus on infectious disease, while expanding the chronic disease portfolio; (3) accelerate dissemination and application of research knowledge on a global scale; (4) build sustainable research capacity through institutional partnerships; and (5) foster a sustainable research environment in low- and middle-income countries through development of research hubs and improved information technology capability.

Fogarty support has led to the development of sustained and successful capacity building projects in Uganda and Haiti. The Uganda project to date has produced 6 doctorate degrees, 30 master's degrees, 15 bachelor's degrees, and 65 diplomas and has filled 13 post-doctoral positions. All of these trainees have returned to work in Uganda. Twenty-five years of research support in Haiti has led to dramatic improvements in diarrhea-related infant death; HIV testing, counseling, and treatment (50-percent decrease in HIV seroprevalence between 1993 and 2003); and the effectiveness of tuberculosis prophylaxis and treatment.

During 2007, the Fogarty International Center expended \$75 million in extramural award funds; 28 percent of this amount (\$21 million) came from 25 Federal co-funders. A transdisciplinary approach is central to effective investment in global health research. Science must be more forward looking and create broad collaborations that bring proven interventions rapidly to implementation. These efforts must focus beyond medical research and consider

culture, industrial capacity, clinical penetration, and legal and social environments. Institutions that receive Fogarty Frameworks grants for critical developments in global health must include involvement of multiple disciplines, such as nursing, engineering, or law in addition to medical and clinical research. Industry spends 10 to 20 percent on understanding its market before launching products; how can science make a comparable investment? Dr. Johnson stated that Fogarty's funding emphasis will move increasingly toward an implementation science agenda, with emphasis on multidisciplinary projects that develop new tools, expand training, and increase capacity in low- and middle-income countries.

Presentation 3: U.S.-Caribbean Collaborative Health Research: Successes, Challenges, and Opportunities

Dr. Anselm Hennis

Numerous U.S.-Caribbean research collaborations have produced results that contribute to improved health in the United States as well as the Caribbean. The International Collaborative Study of Hypertension in Blacks has provided new understanding of gradients in blood pressure and lifestyle disorders across the West African Diaspora. Caribbean research has also improved our understanding of the role of amino acid metabolism in malnutrition and has demonstrated important associations between human T-cell lymphotropic virus and adult T-cell leukemia.

Collaborations with researchers in Barbados include a hyperglycemia and adverse pregnancy study that demonstrated an association between high glucose levels and larger infants, higher incidence of Caesarean deliveries, and increased episodes of hypoglycemia in infants. The Barbados Eye Studies, supported for more than 15 years by the National Eye Institute of NIH, have produced more than 70 journal publications describing findings such as the role of optic nerve perfusion pressure in glaucoma and a new understanding of genetics in

glaucoma. The studies also have provided the first population-based data on incidence and risk factors for many eye conditions. The Barbados National Cancer Study of Breast and Prostate Cancer is a case-control study to evaluate genetic and other risk factors in the incidence of breast and prostate cancers. The work is funded by NCI and the National Human Genome Research Institute. Dr. Hennis stated that the advantages of U.S.-Caribbean collaboration include shared heredity with African Americans with less admixture, similar health priority issues, and high research participation.

Presentation 4: Leveraging Resources for Cancer Control in the U.S. Affiliated Pacific Island Jurisdictions

Dr. Neal A. Palafox

Like the countries of the Caribbean region, the U.S. Affiliated Pacific Island Jurisdictions are small, widely separated, and culturally diverse. U.S. Affiliated Pacific Island Jurisdictions have suffered sometimes severe effects of racism and colonialism: Nuclear testing in some areas destroyed culture and communities through activities that vaporized some islands and left the food chain and environment contaminated by long-term radiation. The fallout from weapons testing is linked to increased incidence and rates of cancer, which is the first or second leading cause of death in the region.

The rates of cancer throughout the region led to increased U.S. and international interest in the region's health and resulted in the establishment of active and effective advocacy organizations in the region. The Cancer Council of the Pacific Islands is a regional body that supports a wide range of cancer control and treatment efforts. The Cancer Council of the Pacific Islands develops regional comprehensive cancer control plans, provides coordination of cancer control efforts throughout the region, serves as an advocate, and writes grant and other funding requests. The Council was established in 2002 through support from NCI's Pacific Cancer Initiative grants. The Pacific Regional Comprehensive Cancer Control Program

supports infrastructure development, resource assessment, data acquisition and use, and strategic planning. The regional approach allows numerous small jurisdictions to benefit from the synergy and economies of scale associated with a single strong organization that can interact with Federal and international funders. The Pacific Regional Cancer Registry supports management and use of region-wide data acquired through mandatory case reporting throughout the region. The Pacific Center of Excellence in the Elimination of Disparities is one of 18 centers supported by the Centers for Disease Control and Prevention REACH U.S. grants (http://www.cdc.gov/reach/reach_us.htm). The Pacific Center serves as a national clearinghouse for information on breast and cervical cancer in the region, provides regional planning, and supports the development of local and regional coalitions.

Dr. Palafox stated that separate research, advocacy, interest, and support groups that coalesce around a single common interest can lead to development of powerful and effective regional organizations. The successes achieved throughout the U.S. Affiliated Pacific Island Jurisdictions show that community coalitions are essential to planning and implementation, a key element in securing the attention of funders.

Presentation 5: Identifying and Leveraging Resources for Global Collaborations

Dr. Jacob A. Gayle

The concept of "community" underpins all discussions of the Caribbean Diaspora. Communities can represent common local geography or broad international kinship linked to culture, history, or common interest. The Caribbean community is a geographic and functional community characterized by diversity, cohesion, and high mobility. Funding agencies and organizations may not consider the Caribbean region "poor enough" for aid, although 2003 public debt averaged 96 percent of GDP for Caribbean countries, ranging from 179 percent in Guyana to 44 percent in Surinam. Between 1996 and 2001, foreign investment and

remittances from the Diaspora each increased by \$2 billion in the Caribbean region, while development assistance decreased by \$200 million.

In view of decreasing external development aid, the region must identify new funding sources to establish collaborations capable of sustaining efforts that address disparities and other health issues. Possible economic sources include increased commitments to social responsibility by (1) corporations that profit from regional resources and labor and (2) individual, regional, or institutional philanthropy similar to the Gates Foundation approach to regional programs aimed at infectious disease, including HIV/AIDS. Human sources of development aid might include repatriation of talent, energy, and education embodied in the Diaspora. Dr. Gayle stated that it is important for the Caribbean region to identify and learn from the global/local coalition-building lessons learned through regional initiatives to fight HIV/AIDS.

Presentation 6: Challenges and Opportunities for Leveraging Collaborative Resources for Trinidad and Tobago

Ms. Pooja Joshi

Trinidad and Tobago has one of the highest per capita incomes and economic growth rates in Latin America and the Caribbean. The country enjoys an excellent reputation for profitable international business investment, but the increase in corporate investment is accompanied by decreases in investment for economic development of social services.

Since 1998, Rockefeller Philanthropy Advisors has provided support to the J. B. Fernandes Memorial Trust, making grants available in Trinidad and Tobago that average \$1.2 million annually. Grants support programs aimed at health, education, and economic development and reduction of poverty. The Trust has identified eight main issues as the focus of support: (1) improving parenting; (2) reducing gang violence associated with increasing drug trade and a widening income gap; (3) reducing

substance abuse; (4) reducing domestic violence, often a consequence of substance abuse; (5) improving the availability of qualified social workers; (6) improving vocational training; (7) strengthening the link between education and work skills; and (8) preventing and treating HIV/AIDS.

The Trust finds it increasingly difficult to identify collaborative funding partners to help sustain its programs. The challenges to funding include a widespread perception of Trinidad and Tobago as a highly developed nation with adequate resources; a small population relative to other needy nations in the world; untapped private wealth, because there is no tax advantage associated with philanthropy; a lack of political will to match policies to goals of NGOs or development institutions; and a volatile political environment in which it is difficult to work and secure funds. Approaches to counter the funding challenges include increasing the administrative and organizational capacity of existing institutions to make them better able to attract and sustain local and international support; investing in the development of a network or coalition that can serve as an advocate for institutions and organizations and can be a forum for sharing best practices; and identifying and developing projects that attract cross-sector support from corporate and government interests. Ms. Joshi said the decrease in traditional development investment requires a focused effort to improve internal conditions such as tax structures and to construct cross-sector programs that allow investors such as corporations to link social service improvement to their corporate self-interest.

Session 4: Potential Areas of Research for U.S.-CARICOM Collaborations

Moderator: Ms. Karen Pierre

Presentation 1: Issues and Challenges in Addressing Health Disparities in the U.S. Virgin Islands

Dr. Gloria Callwood

The Caribbean Exploratory Research Center on Health Disparities at the University of the Virgin Islands is supported by a grant from the National Center for Minority and Health Disparities. The Center conducts research on health disparities; mentors and trains students, junior faculty, and researchers; provides health screening, promotion, and information dissemination activities; and establishes partnerships with community-based organizations. The Center's specific activities will generate reliable baseline data on health disparities and develop and evaluate interventions that can effectively reduce or eliminate health disparities. Activities currently underway include projects to develop a church-based diabetes survey; identification of factors affecting self-management of type 2 diabetes; and a survey of attitudes, knowledge, perceptions, and decision-making among pregnant or parenting women at risk for or living with HIV/AIDS. The Center has reported findings from a patient/provider study of breast cancer communication that show providers do not routinely collect family or personal history data relevant to breast cancer risk and that the majority of patients do not comply with recommended breast cancer screening guidelines. These and other findings from the breast cancer study suggest broad needs for improved communication on breast cancer risks among patients, care providers, community groups, and educators.

Health disparities in the U.S. Virgin Islands are in part the result of three groups of factors: system-level factors, such as lack of insurance coverage, or other access-related issues, such as transportation; patient-level factors, such as low

rates of preventive procedures (e.g., mammograms or colorectal screenings) and poor adherence to treatment plans; and factors related to clinical encounters, such as inadequate explanation of conditions or treatment, long waiting times, or the need to pay out-of-pocket for care. Dr. Callwood stated that improved educational programs among all stakeholders can contribute to reducing some health disparities.

Presentation 2: The African-Caribbean Cancer Consortium: Collaborative Studies on Cancer Risks

Dr. Camille Ragin

The African-Caribbean Cancer Consortium was established in 2006 to foster the study of viral, genetic, environmental, and lifestyle risk factors for cancer in populations of African descent in Africa, the Caribbean, and the United States. The African-Caribbean Cancer Consortium provides a forum for the development of standardized sampling and data collection methods that can be employed in studies that advance our understanding of risk factors across studies and populations. The 53 members of the African-Caribbean Cancer Consortium are involved in 52 separate studies at institutions in Africa, the Caribbean, and the United States. Membership is open to any researcher with an interest or experience in studies examining cancer in populations of African descent (information on membership is available at www.ac-ca-consortium.org). The African-Caribbean Cancer Consortium is organized into working groups devoted to studies of breast, prostate, cervical, and head and neck cancers. Work group leaders solicit proposals from group members and facilitate discussion of proposal feasibility and study design.

African-Caribbean Cancer Consortium studies of prostate cancer are underway in Nigeria, Grenada, Bahamas, Jamaica, Trinidad and Tobago, the United States, and Barbados. Breast cancer studies are being conducted in Ghana, Barbados, and the United States. Cervical cancer is being studied in the Bahamas,

Jamaica, Trinidad and Tobago, Nigeria, and the U.S. Virgin Islands. Cancer studies in immigrant populations are being carried out at four U.S. locations. Collaborative opportunities for researchers in African-Caribbean Cancer Consortium include training opportunities for young researchers as part of an effort to expand research capacity in participating countries. At the second annual African-Caribbean Cancer Consortium conference, attendees took part in main sessions devoted to breast cancer, cervical and other HPV-associated cancers, prostate cancer, and HHV8 infections. Special topic discussions, poster sessions, and breakouts provided opportunities for networking and informal information exchange and resulted in proposals for new studies or new sites in Barbados, Guyana, Nigeria, and Jamaica. Dr. Ragin stated that the African-Caribbean Cancer Consortium and similar consortia provide a forum for identification and development of research methods and topics that facilitate collaborative study across populations or regions.

Presentation 3: Scale-up of HIV Prevention, Treatment Care, and Support in the Caribbean

Dr. Nicholas Adomakoh

Small-scale studies have shown significant improvement for people living with HIV/AIDS in the Caribbean region, which is second only to sub-Saharan Africa in adult HIV prevalence. For example, the Barbados National HIV Programme reports that implementation of antiretroviral therapy has reduced the costs of inpatient care by 66 percent between 2001 and 2004, reduced hospital admissions by 50 percent and reduced the HIV/AIDS death rate by 85 percent over a 5-year span. The challenge to public health officials is to find ways to scale up treatment approaches that have been successful on a pilot level. Successful scale-up will reduce viral load and the rate of transmission and extend the life of patients with HIV/AIDS. Scale-up can also minimize per-patient costs while maximizing outcomes.

Large-scale implementation of proven treatment and care practices will require improvements in the environment of care: creating an enabling environment, improving equity of access to care, strengthening counseling services, and improving tracing and referral networks. Scale-up must also involve improved targeting of populations, which must be based on better understanding of what sociocultural and economic variables contribute to vulnerability. Current challenges to scale-up include “brain drain” and difficulty in retaining skilled staff; inadequate infrastructure; regional diversity, which requires translation of best practices to fit various cultures; and lack of information-sharing systems throughout the region. Dr. Adomakoh stated that HIV prevention, treatment, care, and support programs proven to be successful on a small scale can make significant improvements when scaled up for application throughout the Caribbean region.

Session 5: Potential Areas for U.S.-CARICOM Collaborations – Group Sessions

Question 1: What are the potential research areas for U.S.-Caribbean collaboration?	
<i>Research Areas</i>	<i>Research Questions</i>
Poverty and Health	<ul style="list-style-type: none"> ▪ What effect does a nation's poverty have on health? ▪ What effect does poverty have on maternal and child health (e.g., early motherhood, nutritional programs)?
Literacy and Education	<ul style="list-style-type: none"> ▪ How can we increase basic knowledge with information about individual health? ▪ What mechanisms can be implemented to educate and transmit information related to health (health communication)?
Equity	<ul style="list-style-type: none"> ▪ How does discrimination impact access to health care and health outcomes? ▪ What is the perceived discrimination? ▪ What is the equity in delivery, accessibility, and capacity building? ▪ What are the institutional/ecological factors (e.g., well-established systematic racism) that affect health care? ▪ What are the social inequities we observe in each country? Why? ▪ How do social inequities operate in each country to influence health?
Access to Care	<ul style="list-style-type: none"> ▪ How can we build capacity (e.g., community-based participatory research)?
Culture as a Social Determinant	<ul style="list-style-type: none"> ▪ How does culture impact health? ▪ How does culture affect social determinants of health, cultural traditions, and collaborations? ▪ What are the cultural perceptions of health and health care? ▪ What are the cultural beliefs, values, behaviors, and attitudes on health? ▪ How do social determinants affect various population groups in specific countries? How can this understanding be used to focus interventions? ▪ What are the specific interventions, evidence-based programs, and implementation protocols that address social determinants? ▪ Do we have enough information on social determinants of health to embark on a program of research? ▪ Do we need more information/data on social determinants? ▪ Can we conduct an environmental scan of the critical issues related to social determinants of health in the communities to identify priorities and identify focal groups? ▪ What specific research questions match regional priorities? How do we articulate research around these questions and approach funding agencies, demonstrating the community defined needs?
Economics	<ul style="list-style-type: none"> ▪ What is the impact of disparities on the economy of the regions?
Social-political	<ul style="list-style-type: none"> ▪ What is the social-political ideology and influence on health?
Gender	<ul style="list-style-type: none"> ▪ How does gender influence health?
Acculturation/Immigration	<ul style="list-style-type: none"> ▪ What is the impact of acculturation, immigration, and generational status on health? ▪ What migration issues affect health?
Organization	<ul style="list-style-type: none"> ▪ How is health care structured in each country?

Question 2: What collaborations can facilitate more research and publishing?	
<i>Potential Collaboration</i>	<i>Collaboration Details</i>
Hold an Annual Conference	<ul style="list-style-type: none"> ▪ Organize an annual conference on specific issues (e.g., children and poverty). ▪ Have a broad consortium that is specific to areas of interest in health, and can tackle the same problem from different angles. ▪ Hold the conference in different areas of the Caribbean to extend reach and audience.
Begin a Joint Exchange Program	<ul style="list-style-type: none"> ▪ Include an obligation to do a research project and publish during exchange. ▪ Create opportunities for individuals to work with different universities and researchers. ▪ Create fellowships or mini-sabbaticals (e.g., 3-month exchange) to bring or send scholars to train.
Begin U.S.-Caribbean Health Journal	<ul style="list-style-type: none"> ▪ Use the Pacific Model to operate a journal for the entire Caribbean region to foster collaborations and pilot projects. It must be a first-rate journal, so that there is high impact.
Publish a Special Journal Issue or Supplement each Year	<ul style="list-style-type: none"> ▪ Have a different university take responsibility each year to write a special issue or supplement. ▪ Rotate topics annually (e.g., health resources development in the Caribbean, cancer research in the Caribbean). ▪ Create collaborations for publications; work with recognized or well-known investigators and editors.
Review and Create New Institutional Formation and Strategies	<ul style="list-style-type: none"> ▪ Create an interdisciplinary hub for training, research, and clinical care. ▪ Identify new leadership issues for building capacity for the next generation. ▪ Research new approaches and strategies for funding. ▪ Research new models for collaborations using virtual and emerging technology. ▪ Fund non-virtual research networks for the resolution of common issues.
Get the Community Involved	<ul style="list-style-type: none"> ▪ Get the community's perspectives on research and research needs. ▪ Build community alliances. ▪ Identify a community in each country and work with that community to explore the critical issues and develop an agenda for action.
Identify the Appropriate Funding	<ul style="list-style-type: none"> ▪ Identify appropriate funding opportunities for community-based approaches.

Question 3: What are the top barriers to collaboration? What is preventing collaboration?

<i>Top Barriers</i>	<i>Reasons for Barriers</i>
Funding	<ul style="list-style-type: none"> ▪ Some funding is only for U.S.-based studies. ▪ There is a misalignment of funding priorities. ▪ There is an issue with the control of funding. ▪ Funding mechanisms do not promote and enhance collaboration.
Data and Research Issues	<ul style="list-style-type: none"> ▪ There are problems with data collection, transfer of data, and data sharing. ▪ Awareness of data are low (i.e., is there secondary data on health disparities among countries already available?). ▪ There is a lack of uniform national/regional survey, registry, or disease surveillance data, including data for the U.S. Virgin Islands. ▪ Identification of mutual benefits for the United States and the Caribbean is important. ▪ There is a lack of strong qualitative research linked to community engagement.
Power Sharing	<ul style="list-style-type: none"> ▪ There are issues with trust, accessing the community, and ownership of data.
Professional Development/Organization	<ul style="list-style-type: none"> ▪ There is a stratification of professions. ▪ There is a lack of individual willingness to change.

Question 4: What are the strategies to move beyond barriers?

<i>Strategies</i>	<i>Explanation of Strategies</i>
Identify Research Partners/Collaborators	<ul style="list-style-type: none"> ▪ Identify research partners and funding opportunities. ▪ Influence priorities for research for the Caribbean; people in the Caribbean should bring the questions to the table and prove research is necessary; make sure our recommendations translate to the funders. ▪ Identify and bring together key players. ▪ Establish the foundation on which to build a U.S.-Caribbean consortium that looks at social determinants of health.
Combine Research with other Key Issues	<ul style="list-style-type: none"> ▪ Integrate Diaspora issues such as migration and health of the migrants with research on HIV/AIDS, cardiovascular disease, diabetes, cancer, non-communicable diseases, environmental health, and natural disasters.
Redefine and Restructure Resources	<ul style="list-style-type: none"> ▪ Approach strategic planning with a scale-up perspective, defining short- and long-term goals.
Hold Conference	<ul style="list-style-type: none"> ▪ Identify conference participants' existing research and program activities that can be brought to bear on the strategic objectives of the conference.
Facilitate Communication	<ul style="list-style-type: none"> ▪ Generate social capital to build a network of relationships and market ideas for funding. ▪ Involve spokespersons—survivors and people with specific diseases should be involved.
Develop Leadership	<ul style="list-style-type: none"> ▪ Clarify the roles of the three organizations (Harvard, NCI, PAHO) that brought us here. We need a secretariat composed of the groups that assemble a steering committee of technical experts and a consortium that involves key policy makers in the United States and the Caribbean.
Identify Research Focus	<ul style="list-style-type: none"> ▪ Identify health conditions that should be the focus of research. Should we classify by population groups such as women and children, adolescents, or the elderly; or should we classify by methods such as quantitative and qualitative methods, etc.?

Question 5: What resources are needed?

<i>Resource</i>	<i>Resource Details</i>
Funding	<ul style="list-style-type: none"> ▪ To facilitate community engagement.
Development	<ul style="list-style-type: none"> ▪ A database. ▪ Caribbean research website. ▪ Information technology. ▪ An electronic mailing list or listserv. ▪ List of research areas, discussions, focus groups.
Access	<ul style="list-style-type: none"> ▪ Information technology infrastructure inventory of resource (information, collaboration). ▪ Information databases and sharing of information.
Leadership	<ul style="list-style-type: none"> ▪ Assure representation in decision-making committees, etc., to be able to influence the process. ▪ Select a secretary-historian to document this conference and continue forward, provide follow-up, and communicate what we do. ▪ Create a Secretariat.
Training	<ul style="list-style-type: none"> ▪ Collaborate around capacity building and training of junior investigators.

GENERAL DISCUSSION AND KEY POINTS

Day 1: Sessions 1 – 5

Session 1: Welcome Remarks

- Addressing health disparities in the Caribbean and Latin America will require research that extends beyond academia and brings knowledge into the areas of policy and civil society.
- Cancer rates among U.S. neighbors in the Pacific region, Mexico, and the Caribbean region rival or surpass the highest global rate.
- Engaging community representatives in collaborative efforts to address health and cancer disparities is critical. The NCI Pacific Cancer Initiative can serve as a model for community engagement.

Session 2: Keynote Lecture

- First-generation immigrants to the United States have better overall health patterns than do subsequent generations born in the United States.
- Low socioeconomic status, institutional aspects of racism, and experiences associated with discrimination that can lead to chronic and acute stress contribute to poor health among immigrant populations in the United States.
- Systematic approaches that address social circumstances leading to poor health and incorporate policy efforts to reduce disparities will require collaboration from all sectors of society.

Session 3: Social Determinants of Health and the Caribbean Region

- Rates of illness are increasing among men, and the number of men in graduating classes are decreasing.
- “Gender” is understood to mean women and reproductive health when discussing health research in the region.
- Women have higher levels of employment and may be less likely than men to want to migrate, creating complex family dynamics.
 - On the other hand, a World Bank study shows better opportunities in allied health professions and post-primary education—consequently better migration opportunities—for women.
- The “brain drain” experienced in Guyana, Haiti, and Jamaica is having an impact on economic affairs and health.
 - Crime, violence, and quality of life are increasingly strong, though indirect, health determinants.
 - In some respects, political attention is shifting to a focus on crime, not health.
- Local and community-level leadership must be included in policy development and planning.
- Complex social/political/economic/demographic factors influence health disparities.
- Policy formulation must take into account the role of private practitioners.
- Mental health must be incorporated into health planning and policy.
- Planning and policy must take into account the social components grounded in the region’s history of slavery and plantations.

- Policy and action to address health issues will require accurate data as well as recognition and definition of problems, formulation of solutions, scalability into different contexts, and sustained political will.
- A transdisciplinary approach will require new ways of looking at health, collecting data, and working at the community level.

Session 4: Social Determinants and Transdisciplinary Research

- Transdisciplinary research represents an opportunity to bring multiple avenues of research to bear on public and population health issues that are influenced by complex social, environmental, and biological factors.
- Transdisciplinary research requires skilled senior leadership, the development of a common language to facilitate communication across disciplines, and an understanding of and respect for others' models and methods.
- Within a cross-cultural context, transdisciplinary research challenges include the lack of a common language and value system, inefficient processes for technology transfer, uncritical use of theories that may not be grounded in the study population's culture, and the clash between indigenous traditional knowledge and Western scientific knowledge.
- Lack of collaboration and communication among researchers and medical practitioners, research objectives defined by funding agencies, and inadequate funding are additional challenges.
- Researchers experience difficulty in accessing policy makers, are seldom engaged in researcher-policy maker dialogue, and have limited resources and scope for monitoring and evaluation.
- Non-academic structures such as NGO partnerships could serve as hubs for transdisciplinary research.
- It is important to involve communities not simply as the focus of research, but as active participants in the planning and conduct of research and policy development.
 - This involvement requires time and effort to build relationships, but it is essential to knowing what problems to study as well as how to study them.
- Community-level concerns and structures should be incorporated in planning at the earliest stages.

Session 5: Social Determinants of Health and Translational Research

- Expediting the transfer of evidence-based knowledge from research to clinical practice is key to improving population health and requires expanded research-practice collaborations. The U.S. NIH is committed to increasing translation efforts through programs such as the NCI's Division of Cancer Control and Population Sciences. Requiring research-to-practice translation efforts as a condition of continued funding will facilitate these efforts.
- Researchers must begin to think about patients first. Patients, represented by community leaders, clinicians, and public health officials, must also work to open lines of communication with the research process.
- New models of information transfer are also needed to quickly translate funded research into accessible knowledge. Effective knowledge brokerage requires identification and evaluation of relevant research studies; program development and training; and web-based knowledge management to support training.

Day 2: Sessions 2 – 4

Session 2: Keynote Lecture

- Social determinants of health create disparities at three levels: (1) life opportunities, exposures, and stresses resulting in differences in underlying health status; (2) access to preventive and curative health care; and (3) quality of care received.
- Addressing social determinants of health involves improved medical care and public health systems, but also includes collaboration with sectors outside health care, such as education, justice, transportation, housing, and environment.
- Racial disparities in health are the result of racism that is institutionalized, personally mediated, and internalized.
- Policies and programs should be analyzed to identify health inequities and ask “how is racism working” to identify mechanisms for targeted action.
- A racist “system” is polluting and personally mediated by individuals who have become racist; it is not intrinsic to them.
 - Understanding this invites everyone to take part in the “undoing” of institutional racism.

Session 3: Identifying and Leveraging Resources for Global Collaborations

- Proposals for support from international funders of tobacco control projects should involve policy-focused research and advocacy projects, such as fact sheets or toolkits that provide a bridge from research to public awareness and outreach to policy makers.
- When seeking funding, it is important to develop realistic grant proposals that include a multi-sector approach with achievable and measurable objectives.
- A transdisciplinary approach is central to effective investment in global health research. Such efforts must focus beyond medical research and consider culture, industrial capacity, clinical penetration, and legal and social environments.
- Industry spends 10 to 20 percent on understanding its market before launching products; how can science make a comparable investment?
- Advantages of U.S.-Caribbean collaboration include shared heredity with African Americans with less admixture, similar health priorities, and high research participation.
- The regional approach to addressing health disparities allows numerous small jurisdictions to benefit from the synergy and economies of scale associated with a single strong organization that can interact with Federal and international funders.
- Separate research, advocacy, interest, and support groups that coalesce around a single common interest can lead to the development of powerful and effective regional organizations. Community coalitions are essential to planning and implementation, a key element in securing the attention of funders.
- With decreasing external development aid, the region must identify new funding sources, such as increased commitments to social responsibility by corporations that profit from regional resources and labor and individual, regional, or institutional philanthropy similar to the Gates Foundation approach to regional programs aimed at infectious disease, including HIV/AIDS.

Session 4: Potential Areas of Research for U.S.-CARICOM Collaborations

- Challenges to funding include a widespread perception of Trinidad and Tobago as a highly developed nation with adequate resources; a small population relative to other needy nations in the world; untapped private wealth, because there is no tax advantage associated with philanthropy; a lack of political will to match policies to goals of NGOs or development institutions; and a volatile political environment in which it is difficult to work and secure funds.
- Approaches to counter the funding challenges include increasing the administrative and organizational capacity of existing institutions to make them better able to attract and sustain local and international support; investing in the development of a network or coalition that can serve as an advocate for institutions and organizations and can be a forum for sharing best practices; and identifying and developing projects that attract cross-sector support from corporate and government interests.
- Traditional development investment requires a focused effort to improve internal conditions such as tax structures and to construct cross-sector programs that allow corporations to link social service improvement to their corporate self-interest.
- Health disparities in the U.S. Virgin Islands are in part the result of system-level factors, such as lack of insurance coverage; patient-level factors, such as low rates of preventive procedures (e.g., mammograms or colorectal screenings); and factors related to clinical encounters, such as inadequate explanation of conditions or treatment and long waiting times.
- Large-scale implementation of proven treatment and care practices will require improvements in the environment of care by creating an enabling environment, improving equity of access to care, strengthening counseling services, and improving tracing and referral networks.
- Scale-up must also involve improved targeting of populations, which must be based on better understanding of sociocultural and economic variables contributing to vulnerability.
- Challenges to scale-up include “brain drain” and difficulty in retaining skilled staff; inadequate infrastructure; regional diversity, which requires translation of best practices to fit various cultures; and lack of information-sharing systems throughout the region.
- HIV prevention, treatment, care, and support programs proven to be successful on a small scale can make significant improvements when scaled up for application throughout the Caribbean region.

NEXT STEPS

Dr. Reede thanked the organizers and participants, and summarized the breakout groups' suggestions for next steps:

1. Develop a new institutional forum or “secretariat,”
2. Develop methods for capacity building, including training and mentoring of young researchers,
3. Think very broadly—across disciplines such as basic, clinical, social sciences; across “ministries” to include economics, law, and other institutions; and across national political and cultural boundaries,
4. Convene more frequently to ensure that the many voices not heard at this meeting will be heard elsewhere, and
5. Schedule a follow-up meeting, journal article, and other methods of disseminating the enthusiasm and productivity of this meeting.

Dr. Theodore-Gandi also thanked participants and organizers and encouraged each of them to go home and share information with colleagues. She suggested a follow-up meeting to be held, perhaps involving other ministries from countries of the region. Dr. Theodore-Gandi said it is important to move research and other efforts so as to change the environment and make it possible to have dialogues such as the one at this meeting in every government agency. It is important to develop a common language to move from where we are to where we need to be. This effort begins with planning and steady movement. The first steps have been very successful and represent the formation of a powerful collaboration capable of moving from strength to strength in developing a strategic agenda for the Caribbean people and the Caribbean Diaspora in the United States.