NIH Seeks to Break New Ground in Reducing Health Disparities

The National Institutes of Health today launched a multidisciplinary network of experts who will explore new approaches to understanding the origins of health disparities, or differences in the burden of disease among population groups. Using state-of-the-science conceptual and computational models, the network’s goal is to identify important areas where interventions or policy changes could have the greatest impact in eliminating health disparities. The Office of Behavioral and Social Sciences Research (OBSSR), part of NIH, is contracting with the University of Michigan’s School of Public Health, Ann Arbor, to establish the Network on Inequality, Complexity, and Health (NICH).

Comprised of scientists with expertise across disciplines, including economics, biology, ecology, computer science, education, sociology, mathematics and epidemiology, NICH will be the first network to apply systems science approaches to the study of health inequities.

Systems science methods enable investigators to examine the dynamic interrelationships of variables at multiple levels of analysis (e.g., from cells to society) simultaneously. They also study the impact on the behavior of the system as a whole over time. For example, factors such as access to health care, neighborhood environment, educational opportunities, physiology and genetics all may interact over the course of a person’s life to influence risk for diseases like diabetes and cardiovascular disease.

Besides exploring hypothesized causes of health inequalities, these simulations may reveal unexpected causes, and help researchers predict better which interventions have the most potential for reducing or eliminating health disparities. The computational
models function as computer-simulated laboratories in which to probe the causes of health disparities, as well as their solutions.

“NICH brings together scientists from many different disciplines to create a new conceptual approach for examining the behavioral, social and biological factors which interact to cause inequalities in health,” said Deborah H. Olster, Ph.D., acting director of OBSSR.

Led by chair and principal investigator George A. Kaplan, Ph.D., at the University of Michigan School of Public Health, NICH’s primary goal is to catalyze groundbreaking research on health disparities and population health using systems science methods. NICH will foster areas of health disparities research that are receptive to using a systems science approach.

“Much of the health disparities research conducted to date took place within single disciplines, and therefore could not comprehensively approach the multitude of factors that are involved. NICH will fundamentally change this approach by embracing perspectives from the biological to the societal, while employing cutting-edge simulation methods from computer science,” Kaplan said.

The network will foster collaborative research, which builds bridges between disciplines interested in health disparities and complex systems research. NICH will produce reports and publications, including possible books or special journal issues, on the collaborative work of network members and other experts. Publications will focus on breaking new ground by illustrating, explaining, promoting and translating the application of complex systems approaches to critical health disparities areas that require transdisciplinary development.

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For more information on NICH please visit [http://obssr.od.nih.gov/scientific_areas/social_culture_factors_in_health/health_disparities/index.aspx#NICH](http://obssr.od.nih.gov/scientific_areas/social_culture_factors_in_health/health_disparities/index.aspx#NICH)

The Office of Behavioral and Social Sciences Research (OBSSR) opened officially on July 1, 1995. The U.S. Congress established the Office of Behavioral and Social Sciences Research (OBSSR) in the Office of the Director, NIH, in recognition of the key role that behavioral and social factors often play in illness and health. The OBSSR mission is to
stimulate behavioral and social sciences research throughout NIH and to integrate these areas of research more fully into others of the NIH health research enterprise, thereby improving our understanding, treatment, and prevention of disease. For more information, please visit http://obssr.od.nih.gov.

The National Institutes of Health (NIH) -- The Nation's Medical Research Agency -- includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. It is the primary federal agency for conducting and supporting basic, clinical and translational medical research, and it investigates the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit www.nih.gov.