THE NEW YORK ACADEMY OF MEDICINE

HEALTHY CITIES. BETTER LIVES.

LEADERSHIP

DAVID SISCOVICK MD, MPH
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Director

INSTITUTE FOR URBAN HEALTH: RESEARCH
Improving health through research, evaluation, policy, and practice

The Academy is committed to multi-disciplinary, collaborative research and evaluation to generate new knowledge that advances the field of urban health. Our research spans disciplines that include health management and policy, health economics, systems science modeling, health systems research, cognitive and behavioral sciences, anthropology, urban planning, epidemiology, and program evaluation.

Our multi-method approach includes quantitative and qualitative studies, community-based participatory research, and program evaluation. The Institute houses three research centers: the Center for Cognitive Studies in Medicine and Public Health, Center for Evaluation and Applied Research, and Center for Health Innovation.

SELECTED RESEARCH EXPERTISE

- Access to care for immigrant populations
- Aging
- Asthma
- Community health needs
- Cognitive assessment
- Chronic disease prevention and management
- Diabetes prevention and management
- Health care workforce training
- Health economics
- Public health and health services management and policy
- Multi-sectoral programming
- Patient safety and error reduction
- Population health science
- Team decision making

SELECTED RESEARCH CAPABILITIES

- Community health needs assessment
- Community Based Participatory Research
- Cost-effectiveness analysis
- Decision making processes evaluation
- Deliberative community decision making
- Health impact assessments
- Program design and evaluation
- Quantitative and qualitative research
- Survey development and administration
- Systems science and simulation modeling
- Technology evaluation
- Training and technical assistance

CENTER FOR EVALUATION AND APPLIED RESEARCH

LEADERSHIP
LINDA WEISS
PhD
Director

The Center for Evaluation and Applied Research (CEAR) works with a broad range of not–for–profit and governmental organizations to investigate, design, and assess initiatives that seek to improve the health and well–being of populations in New York City, New York State, and around the world. With expertise in both qualitative and quantitative research methods, CEAR conducts needs assessment, process evaluation, and outcome evaluation.

CEAR works with large and small programs focused on a wide range of health–related topics, including nutrition and physical activity, diabetes prevention and care, HIV/AIDS care, asthma, maternal and infant health, substance abuse treatment, practice change in health care settings, education and training of the health and social service workforce, reducing racial and ethnic health disparities, aging, and access to care for immigrant populations.

CURRENT PROJECTS

Power Up for Health! Pilot of the National Diabetes Prevention Program to Better Engage Men

This pilot adaptation of the National Diabetes Prevention Program (NDPP) engages men from disadvantaged communities in activities designed to reduce their risk of developing diabetes. Power Up! focuses on healthy eating, physical activity, and stress reduction. Working in collaboration with Albert Einstein College of Medicine and the University of Pittsburgh, the pilot has been implemented at New York City Parks Department Recreation Centers in selected low–income neighborhoods. The pilot is funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

Prioritize Health! Values and Evidence: Public Input for Hospital Planning to Improve Community Health

This project is focused on promoting informed public health decision–making. A collaborative effort with the Sophie Davis School of Biomedical Information and Maimonides Medical Center in Brooklyn, NY, the project involves community members in a deliberative process aimed at assisting Maimonides in the selection of health programming for the diverse neighborhoods it serves. The research examines the impact of participant knowledge and perceptions, as well as the outcomes of the deliberations and their value to Maimonides and its partners. The findings will also inform a broad spectrum of care providers and communities. The project is funded by the Agency for Healthcare Research and Quality.

Language Access in New York Pharmacies: An Evaluation of City and State Policy Change

A collaboration between CEAR and Make the Road New York, this study examines the extent to which access to, and provision of, translated verbal and printed prescription medication instructions improved in New York pharmacies following changes to City and State pharmacy law. In addition, CEAR is evaluating whether improvements in language services impact patients' medication knowledge and adherence. The study is funded by the Peter and Carmen Lucia Buck Foundation.

SELECTED PUBLICATIONS

"Implementation and outcomes of the New York State YMCA Diabetes Prevention Program: A multisite community-based translation, 2010-2012" (*Preventing Chronic Disease*, 2014)

"Health, Community and Spirituality: Evaluation of a Multicultural Faith-based Diabetes Prevention Program" (*Diabetes Educator*, 2014)

"Factors Affecting Evidence-Based Decision Making in Local Health Departments" (*American Journal of Preventive Medicine*, 2013)

CENTER FOR COGNITIVE STUDIES IN MEDICINE AND PUBLIC HEALTH

LEADERSHIP
VIMLA L. PATEL
PhD, DSc, FRSC
Senior Research
Scientist and Director

The Center for Cognitive Studies in Medicine and Public Health is a multidisciplinary research center devoted to empirically based studies to understand the decision-making behaviors of health care providers and their interactions with patients. These studies use methods of data collection and analysis that are grounded in social, cognitive, and information sciences.

The beliefs, values, and thought processes of patients challenge the safe nature of doctor-patient interactions and generate errors that influence outcomes, education recommendations, and policies. The role of health information technology to mitigate these errors, and to develop informed educational and training programs for patient safety, plays an important part in this research.

CURRENT PROJECTS

Cognitive Complexity and Error in Critical Care

In this multi-year, multi-site project, we bring together new perspectives from cognitive informatics, complexity science, and clinical practice to bear on the problem of medical errors. The project combines methodological advances with the challenge of addressing a pressing social problem of managing and mitigating medical errors in complex health care environments. These studies provide novel insights into how mistakes are made and provide new ways to mitigate these errors in environments where there are too many variables to consider such as the modern health care system. The study is funded by the James S. McDonnell Foundation.

Effects of Electronic Health Record (EHR) on Team Performance

Recent incentivization of EHR use has led to its rapid adoption in health care settings. While there is little consensus on the success of such implementation, recent research has highlighted several unintended consequences of its use. Our study, currently underway in the Emergency Rooms (ER), is focused on characterizing the nature and source of these unintended consequences on teamwork, and mitigation of errors to improve workflow and performance efficiency and ensure patient safety. The study is funded by the James S. McDonnell Foundation.

Effects of Noise on Cognitive Function

There is sufficient evidence to show that multitasking and interruptions compromise performance. In the urban environment, including the hospitals, excessive noise is a form of interruption and has been shown to exhibit a detrimental effect on cognitive function and communication, generating errors. Our team, in collaboration with Mount Sinai Hospital and Columbia University, is collecting preliminary data to assess noise levels, using sound measurement and simulation technology, in the patient care environment during care team transitions. The study is funded by the National Library of Medicine.

SELECTED PUBLICATIONS

Cognitive Informatics for Biomedicine: Human Computer Interaction in Healthcare (Springer book, 2015)

Cognitive Informatics in Health and Biomedicine: Case Studies on Critical Care, Complexity and Errors (Springer book, 2014)

"Cognitive and Learning Sciences in Biomedical and Health Instructional Design: A Review with Lessons for Biomedical Informatics Education" (*Journal of Biomedical Informatics*, 2009)

CENTER FOR HEALTH INNOVATION

LEADERSHIP
JOSÉ A. PAGÁN
PhD
Director

The Center for Health Innovation develops and implements innovative and data–driven solutions to improve the health care system, with increased attention on vulnerable populations. With the triple aim of reducing costs, increasing quality, and improving population health, the center designs, tests, and evaluates financially sustainable improvements in health care delivery systems that recognize the social and economic determinants of health.

As health care reform advances, there is a new emphasis on population health and addressing the behavioral, social, environmental, and economic factors that impact well–being. By focusing on health care delivery and the broader determinants of health, the Center seeks to become a leader in health reform implementation and a strategic partner to organizations interested in inventive solutions to improving population health.

CURRENT PROJECTS

Health in Cities: Multi-sectoral Determinants of Infant Mortality and Other Related Child Health Outcomes

The Academy is collaborating with IBM Research to evaluate the availability, format, and integration potential of multisectoral data and then identify the technologies needed to analyze these data to address infant mortality and other child health outcomes in Philadelphia and Los Angeles. The findings from this work will be useful to cities interested in using multisectoral data and new analytical tools to improve population health. The project is funded by the Robert Wood Johnson Foundation.

The National County Health Rankings

Using big data analytics (machine-learning data mining techniques), the Academy is identifying clusters of counties with a range of population health outcomes and the factors associated with those outcomes. The goal is to select pathways through which decision–makers and leaders can target interventions and design programs to improve health. The project is funded by the Robert Wood Johnson Foundation.

Telehealth Monitoring

Telehealth monitoring, which uses telecommunications and information technology to provide access to medical care across distance, has the potential to substantially improve health outcomes while reducing hospitalizations and costs. The Academy is collaborating with the University of North Texas Health Science Center, CareCycle Solutions, and Medicaid to implement and evaluate the clinical and cost effectiveness of a telehealth monitoring system that aims to manage the care of patients with multiple chronic health conditions discharged from hospitals in North Texas. The project is funded through a Medicaid 1115 Waiver.

Systems Science Modeling and Diabetes Prevention

The prevention of prediabetes and diabetes is an important challenge in San Antonio, Texas, as well as many other large urban areas in the United States. Academy researchers are working with the San Antonio Metropolitan Health District to assess the cost–effectiveness of diabetes prevention and self–management strategies using systems science modeling. This collaborative work also includes projecting the prevalence of complications associated with diabetes— such as blindness or stroke—and then evaluating how diabetes and its complications can be averted by implementing different lifestyle interventions or self–management programs. The project is funded by the Robert Wood Johnson Foundation.

SELECTED PUBLICATIONS

"Advancing the use of evidence-based decision-making in local health departments with systems science methodologies" (*American Journal of Public Health*, 2015)

"Chronic pain and health care spending: an analysis of longitudinal data from the Medical Expenditure Panel Survey" (*Health Services Research*, 2015)