

Department of Population Health

BRIDGING MEDICINE AND PUBLIC HEALTH

2012–2017





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Welcome

It's hard to believe that five years have passed since I sat down with Dean Robert I. Grossman, MD, and other members of NYU Langone Health's leadership to discuss the creation of a new Department of Population Health at NYU School of Medicine.

This new department would be dedicated to bridging the fields of medicine and public health by exploring and strengthening the connections between healthcare systems and the factors that influence our health every day in communities, homes, schools, playgrounds, and workplaces.

At the time, NYU Langone already had several programs extending beyond its walls of the medical center to reach populations across New York City. Yet we lacked a single department that championed this approach and enabled investigators to move beyond their disciplinary silos, pool resources, exchange ideas, and create a powerful research platform for advancing innovative approaches to improve the health of urban populations.

And so, in 2012, the Department of Population Health was born.

From the beginning, our multidisciplinary effort has brought together an exceptional team of researchers from across NYU Langone. Our shared aim is to lift the gaze of medicine up and out, beyond the walls of the doctor's office, to encompass the connections between medicine, society, and people's daily lives and to improve outcomes for whole populations. Our discipline-spanning approach is a core strength: Our best ideas arise at the interface of different areas of expertise and from collaborations with community partners and leaders in the fields of medicine, public health, and well-being. Our diverse partnerships—with community organizations, medical colleagues, government agencies, and other stakeholders—allow us to tackle the population health challenges in the settings in which they matter most.

To realize our twin goals of improving health for all and reducing health inequities between groups,



MARC N. GOUREVITCH, MD, MPH

Muriel G. and George W. Singer Professor of Population Health
Professor of Medicine and Psychiatry
Chair, Department of Population Health

our work embraces four core strategies: engaging communities, turning information into insight, transforming healthcare, and shaping policy. These themes are brought to life throughout this report, which tells our story through selected profiles of our work.

Over the past five years, our numbers and the breadth of our expertise have grown by leaps and bounds. Today, our 90-plus full-time faculty members and more than 300 staff encompass community-based preventive health, mathematical modeling of health interventions, biomedical ethics, early childhood development, and healthcare delivery system improvements—to name just a few specialty areas. Education is central to our mission, and we have developed new and expanded programs to prepare the next generation of physicians, scholars, and leaders in population health.

We prize the rigor of our work, reflecting our deep roots in academic medicine. In an age of limited resources, we are committed to understanding which approaches are truly effective and why—and to sharing these findings with our colleagues and the public. Our department includes exceptional biostatisticians and epidemiologists who apply cutting-edge methodologies, such as adaptive trial design and machine learning, to complex, real-world health challenges.

In just five years, our department has grown into a thriving academic community. Our paradigm of engaged and discipline-bridging inquiry and partnership is helping pave the way for the realignment of medicine and public health, while bringing about tangible improvements in population health and health equity. And we have only just begun! ■

\$55 M

TOTAL EXTRAMURAL FUNDING

in 2017, which has more than doubled
over the past 5 years

48%

OF EXTRAMURAL FUNDING

is from the National Institutes of Health

93

FULL TIME FACULTY MEMBERS

and more than 300 staff members

61%

FEMALE FACULTY

35%

MINORITY FACULTY

Shaping the Growth of an Emerging Field

TRANSFORMING THE HEALTH OF POPULATIONS: THE FIRST FIVE YEARS OF THE DEPARTMENT OF POPULATION HEALTH

In 2012, the creation of the Department of Population Health at NYU Langone Health married two visions: that of its founding faculty, who saw the inherent potential of an institutional platform for population health improvement—and that of Dean Robert I. Grossman, MD, the Saul J. Farber Dean and chief executive officer of NYU Langone Health, who saw population health strategically, as an emerging field in which NYU Langone was poised to play a major role.

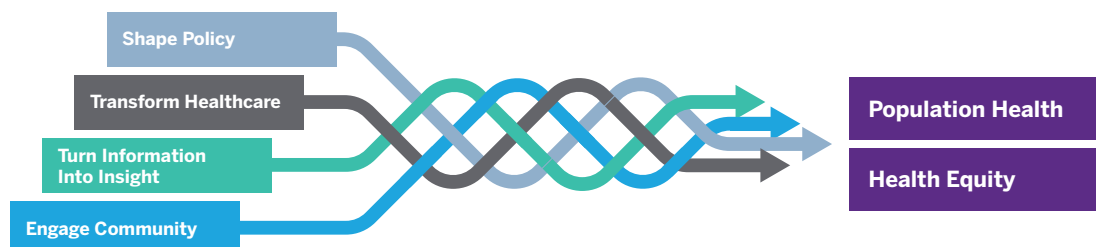
“We needed an academic nucleus for faculty focused on healthcare delivery, social determinants of health, health policy, and quantitative outcomes analysis methods,” explains Dr. Gourevitch.

From its inception, the department defined itself as a multidisciplinary hub with a rigorous research orientation, aimed at understanding and improving drivers of population health and health disparities (*see department timeline on page 5*). “The department became a home for these and other disciplines to work together on some of the toughest challenges to improving health on a broad scale,” says Chau Trinh-Shevrin, DrPH, associate professor of population health and medicine and the department’s vice chair for research.

Fundamentally, the department is leveraging its main strategies—engaging the community, turning information into insight, transforming healthcare, and shaping policy—to improve health in New York City, the United States, and the world (*see approach below*). “Our hope,” says Lorna E. Thorpe, PhD, MPH, professor of population health, director of the department’s Division of Epidemiology, and vice chair for strategy and planning, “is to apply our insights to change lives and communities.”

DEPARTMENTAL APPROACH TO ADVANCING HEALTH EQUITY

To achieve our goals of advancing population health and health equity, we adopt four core strategies in an integrated fashion.



“HEALTH AND...” CONFERENCE EXPANDS THE BOUNDARIES OF HEALTHCARE



Thomas Frieden, MD, MPH, former director of the Centers for Disease Control and Prevention, participates in a keynote discussion with Gbenga G. Ogedegbe, MD, MPH, at the 2017 “Health And...” conference.

With the goal of translating research into action to improve urban population health, the department established its annual “Health And...” conference series in 2016. These dynamic meetings bring together top investigators, policy makers, practitioners, and community leaders who work at the intersection of health and its many determinants. The department’s inaugural conference, “Health And... Place, Education, Healthcare,” spotlighted the roles of and interplay between diverse determinants of health with a focus on education, neighborhood, and healthcare.

“Improvements in population health are best accomplished when diverse stakeholders are aligned and collaboratively engaged,” says Gbenga G. Ogedegbe, MD, MPH, the Dr. Adolph and Margaret Berger Professor of Population Health and Medicine, and director of the department’s Division of Health and Behavior and the division’s Center for Healthful Behavior Change. At the “Health And...” conference, we seek to uncover and highlight the role that social determinants play in shaping the health of populations.

In 2017, the “Health And... Racial Equity and Urban Well-Being” conference convened more than 300 participants, including health and housing officials, researchers, and community leaders to focus on solutions that advance racial equity, urban well-being, and health. Sessions examined the growing evidence and strategies for deepening the impact of interventions to prevent violence, reduce arrests, address urban blight, and improve public safety.

GEOGRAPHIC REACH: EXPANDING THE DEPARTMENT’S IMPACT, IN NEW YORK AND BEYOND

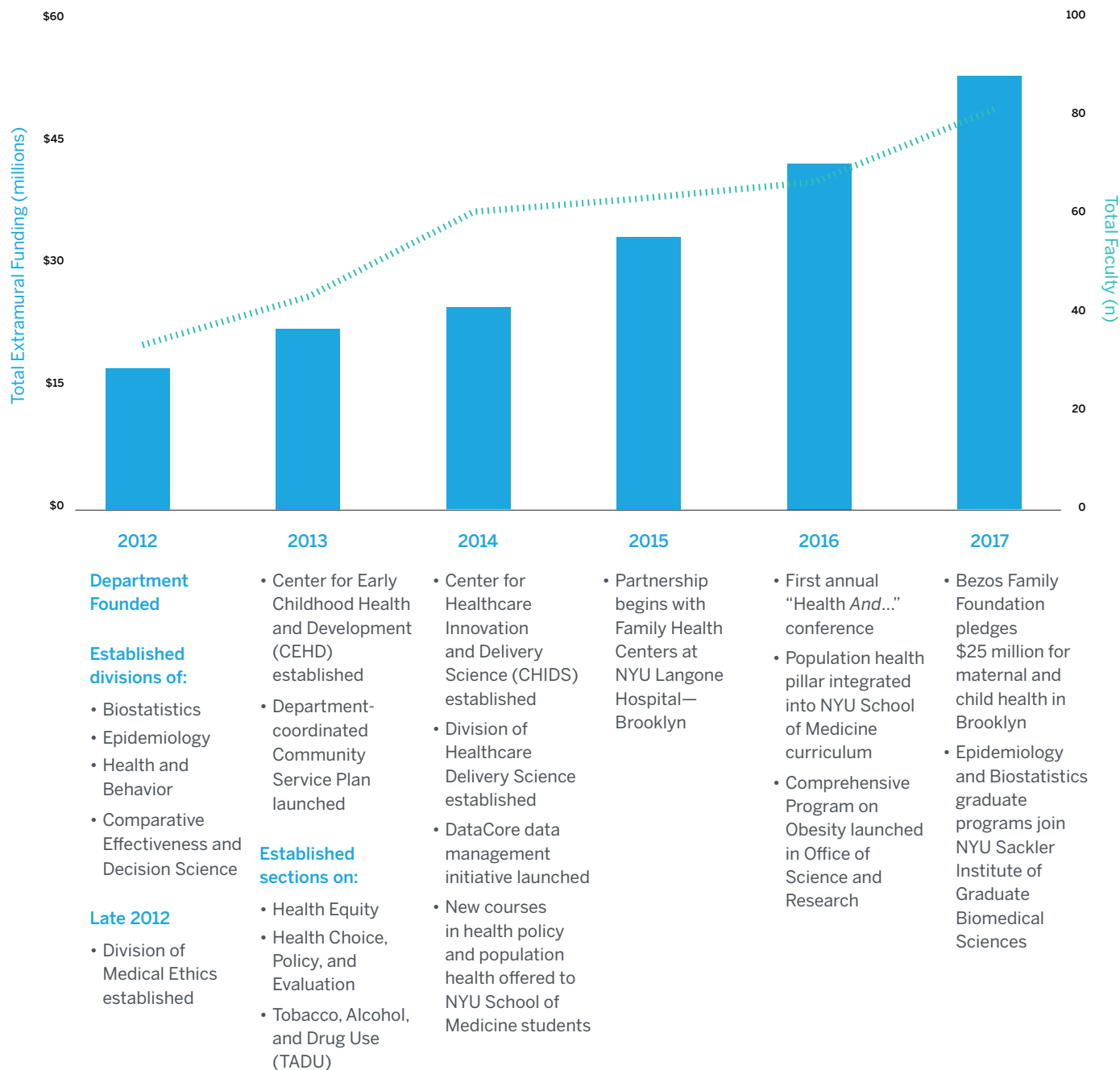
Since 2012, the Department of Population Health has steadily expanded its depth and reach, locally spanning the five boroughs of New York City and neighboring areas, while strengthening its rapidly growing footprint at the national and global level. The trajectory of the department’s breadth and depth is now ideally poised for accelerated growth and impact as it enters its next five years.

Here in the region, the department’s growing footprint has been fueled in part by NYU Langone’s greater reach—particularly its integration with Lutheran Medical Center in Brooklyn (now NYU Langone Hospital–Brooklyn), which treats one of the world’s most diverse patient populations. The department is working with NYU Langone Hospital–Brooklyn and Family Health Centers at NYU Langone to facilitate the participation of diverse communities in studies, such as a large-scale study of factors contributing to pediatric obesity.

Most recently, the Bezos Family Foundation made a philanthropic pledge of \$25 million to establish an endowment and program fund for major initiatives to improve the health and well-being of mothers, children, and families in the Brooklyn community. The gift will provide long-term funds for essential new staff positions and crucial initiatives based on the science of early brain development, to advance mother–baby care across the institution and support families during the critical first years of a child’s life. This initiative will deepen the partnership between the Department of Population Health and NYU Langone Hospital–Brooklyn’s Pediatrics, Obstetrics–Gynecology, and Child Psychiatry services.

“This generous, transformative gift from the Bezos Family Foundation will facilitate future large-scale initiatives that positively influence the well-being of children and communities,” notes Larry K. McReynolds, executive director of the Family Health Centers at NYU Langone. “Its impact is poised to benefit families for generations ahead.”

DEPARTMENT TIMELINE



ADVANCING HEALTH AT THE NATIONAL LEVEL

The department is committed to disseminating its findings to advance the field of population health at the national and global levels.

Thought Leadership

Most senior department faculty are active in national leadership positions to advance population health. Our faculty have recently chaired advisory committees for the National Institutes of Health, the Centers for Disease Control and Prevention, the Health Resources and Services Administration, the Olympics, and the United Nations, among others. Through these and other appointments, faculty advise national organizations on a wide range of topics, ranging from the influence of community on health behaviors for NIH to the ethics of synthetic biology for the Department of Defense.



In early 2017, the Department of Population Health and Médecins Sans Frontières/Doctors Without Borders co-sponsored “Ebola and Public Health: The Politics of Fear,” a discussion among medical ethicists, public health specialists, and medical professionals about the international response to the Ebola outbreak. Left to right: Arthur L. Caplan, PhD, the founder and director of the department’s Division of Medical Ethics; Mary T. Bassett, MD, MPH, the commissioner for New York City’s Department of Health and Mental Hygiene; Craig Spencer, MD, emergency physician and New York City’s first and only Ebola patient in 2014; and Armand Sprecher, MD, MPH, an epidemiologist with Médecins Sans Frontières.

Departmental leadership guides other national conversations as well, such as through participation in the National Academies of Sciences, Engineering, and Medicine’s Roundtable on Population Health Improvement, which generates valuable, comprehensive insights on pressing public health challenges. Additionally, department faculty play leadership roles in a large number of professional organizations, such as the American Public Health Association, the Society for General Internal Medicine, the American College of Epidemiology, and the Society for Medical Decision Making.

Training the Next Generation of Experts

As detailed in the Education section of this report (*see page 34*), the department is dedicated to developing the next generation of population health researchers, clinicians, and educators. Nationally, the department has worked to advance population health education as one of the 11 founding medical schools in the American Medical Association’s Accelerating Change in Medical Education Consortium. In this effort, department faculty promote health system science as one of medical education’s three core sciences, complementing basic and clinical science.

The department was also an early institutional sponsor of the Interdisciplinary Association for Population Health, which works to improve population health and advance its science by disseminating research and supporting population health scientists’ careers. “One innovative aspect of our program is that we’re pursuing population health from within an academic medical center,” notes Dr. Gourevitch. “We’re determining which approaches actually work and then using what we learn to train the next generation of healthcare professionals.”

LOCAL COLLABORATIONS: BUILDING BRIDGES TO CREATE HEALTHIER COMMUNITIES

One of the Department of Population Health’s great strengths is the collaborative nature of its work. The department frequently carries out projects with partners representing a wide array of public- and private-sector organizations in the New York City region, as well as across NYU School of Medicine and other NYU schools (*see next page*). “Partnership is critical to achieving goals that are aligned with real-world priorities and thus is central to our work,” notes Donna Shelley, MD, MPH, associate professor of population health and medicine and co-director of the department’s Section on Tobacco, Alcohol, and Drug Use. ■

OUR PARTNERS

Partners at NYU Langone and other NYU Schools

- Departments of Child and Adolescent Psychiatry, Emergency Medicine, Environmental Medicine, Medicine, Neurology, Obstetrics and Gynecology, Orthopedic Surgery, Pediatrics, Plastic Surgery, Psychiatry, Radiology, Rehabilitation Medicine, Surgery, Urology, and others
- NYU Langone Clinical and Translational Science Institute
- Perlmutter Cancer Center
- NYU College of Global Public Health
- NYU Robert F. Wagner Graduate School of Public Service
- NYU Courant Institute of Mathematical Sciences
- NYU Marron Institute of Urban Management
- NYU Center for Urban Science and Progress
- NYU Rory Meyers College of Nursing
- NYU College of Dentistry
- NYU Silver School of Social Work
- NYU Steinhardt School of Culture, Education, and Human Development
- NYU Leonard N. Stern School of Business
- NYU Furman Center for Real Estate and Urban Policy
- And many more

Public and Private Collaborations across New York City

- New York City Department of Health and Mental Hygiene
- New York City Department of Education
- NYC Health + Hospitals (including Bellevue, Gouverneur, and Woodhull)
- New York City Department of Housing Preservation and Development
- New York City Housing Authority
- VA NY Harbor Health Care System (Manhattan Campus)
- The City University of New York
- Asian Americans for Equality
- Charles B. Wang Community Health Center
- Chinatown YMCA
- Healthfirst
- Henry Street Settlement
- Hester Street Collaborative
- Kalusugan Coalition
- Korean Community Services of Metropolitan New York
- The Child Center of NY
- Two Bridges Neighborhood Council
- University Settlement
- UNITED SIKHS
- And many more

FUNDING SUPPORT TO ENHANCE THE DEPARTMENT'S IMPACT

Since the department was founded, its reach and impact have expanded and deepened, thanks to the generous support of various funders, some of which include:

Federal

- National Institutes of Health
- Agency for Healthcare Research and Quality
- U.S. Department of Veterans Affairs
- Centers for Disease Control and Prevention
- Center for Medicare & Medicaid Innovation
- Patient Centered Research Outcomes Institute
- U.S. Department of Education

Local and State

- Fund for Public Health NYC
- NYC Health + Hospitals
- New York City Department of Health and Mental Hygiene
- New York State Department of Health
- New York State Education Department
- New York State Office of Mental Health

Philanthropy

- Aetna Foundation, Inc.
- American Express Foundation
- American Heart Association
- Bezos Family Foundation
- Connecticut Health Foundation
- Einhorn Family Charitable Trust
- Bill & Melinda Gates Foundation
- Leona M. and Harry B. Helmsley Charitable Trust
- Robert Wood Johnson Foundation
- Merck & Co., Inc.
- New York Community Trust
- New York State Health Foundation
- Overdeck Family Foundation
- Robin Hood
- Charles and Lynn Schusterman Family Foundation
- Stranahan Foundation
- Allen Thorpe
- United Hospital Fund
- Vincent Wilkinson Foundation



6-point

AVERAGE REDUCTION

in men's blood pressure after
participating in barbershop
health intervention

BUILDING MEDICAL CAPACITY

across the globe

5,000+

MEDICALLY UNDERSERVED WOMEN

educated about
breast health in one year

ASSESSING THE IMPACT OF

Community Health Workers

in nontraditional
healthcare settings

Joseph E. Ravenell, MD, visits
a barbershop in Harlem
to discuss men's health.

Engaging Community

Partnership and collaboration are fundamental to making meaningful advances in population health and health equity. Working with a diverse set of community partners, as well as national and global stakeholders, the Department of Population Health ensures that its goals are aligned with real-world priorities and needs. Its approach is grounded in trust, respect, and shared values. The descriptions that follow highlight the department's focus on actionable research aimed at informing local practice and policies—always with an eye to scale and sustainability.

THE BARBERSHOP CONNECTION: GOING INTO THE COMMUNITY TO CONNECT THE UNDERSERVED WITH CARE

African American men are at a higher risk of death from colorectal cancer and complications of hypertension—yet they have lower rates of preventive colonoscopies and blood pressure control because of poor access to and an uneven experience within the healthcare system.

In their effort to address the problem, Joseph E. Ravenell, MD, associate professor of population health and medicine and director of Diversity in Research at NYU Langone's Perlmutter Cancer Center, and Gbenga G. Ogedegbe, MD, MPH, the Dr. Adolph and Margaret Berger Professor of Population Health and Medicine and director of the department's Division of Health and Behavior and the division's Center for Healthful Behavior Change, realized that they needed to meet these men in their community, where they might be more receptive to discussing their health.

"If we rely on a traditional clinical approach to improving outcomes for a population known to be less likely to seek healthcare, we're going to miss those who most need our help," notes Dr. Ravenell.

The resulting, groundbreaking Men's Health Initiative, created with National Institutes of Health (NIH) and Centers for Disease Control and Prevention (CDC) funding, applies a culturally tailored patient navigation strategy: Trusted members of the community are recruited, trained as patient navigators, and placed in barbershops and churches. There, they identify men who haven't

had colonoscopies—and guide or, in some cases, accompany those men to screenings and follow-up care.

Three randomized trials studied the effectiveness of this approach to detecting and managing hypertension and to improving colon cancer screening rates among 1,200 men. The colon cancer results, published in the *American Journal of Public Health* in August 2017, indicated that African American men teamed with patient navigators were twice as likely to complete screening as were those who were simply handed a list of screening facilities. The project also resulted in a six-point average reduction in the participating men's blood pressure. "Even lifestyle recommendations carried more power in these settings," says Dr. Ravenell.

New York City's Department of Health and Mental Hygiene is funding related outreach efforts through Perlmutter Cancer Center's Communities Partnering in Navigation in New York City, with a new effort encouraging low-income women at beauty salons to receive mammograms.

Beyond health benefits, the project has created full-time jobs for local residents. "Our navigation partnership with the Department of Health and Mental Hygiene has enabled us to sustain and build on evidence-based approaches to improve cancer screening among minority populations in community settings," Dr. Ravenell says. "We have recruited and hired navigators from the communities we aim to assist, creating opportunities to improve health and the local economy."

■ PROFILE

IN A SOUTH ASIAN COMMUNITY, DIABETES MANAGEMENT IS PERSONAL



MD Taher, MPH, (seated on left) speaks with a resident in Queens about diabetes management and the DREAM Project.

South Asian immigrants often arrive in New York City to a mix of challenges, including the American diet, the language, the complexity of healthcare, and the confounding transit system.

This is where CHWs like MD Taher, MPH, a resident of rural Bangladesh until age 22, come in.

Taher works in the CSAAH's DREAM program (see *main text at right*) and understands patients' lifestyle challenges firsthand: His parents died of type 2 diabetes, and many of his relatives live with the condition. "It's so profoundly common and insidious," he says.

Within a few months of meeting with Taher and his team, patients often show noticeable improvement in managing their diabetes, including attending regular appointments, adhering to medication, eating a healthier diet, and increasing their physical activity.

"I speak their language, understand their values, and share my life experience with them—which enhances the level of trust," says Taher.

REACHING MINORITY COMMUNITIES, WITHIN THE COMMUNITY

To enhance care among New York City's minority communities, the department's NYU-CUNY Prevention Research Center (PRC) designs interventions linking underserved communities to clinical care and resources, with funding from the CDC.

One approach engages community health workers (CHWs)—trusted community members recruited and trained by NYU Langone and others—in community settings such as faith-based groups, clinics, and grocery stores. These CHWs then educate at-risk members of their community and connect them with needed medical services. "The CHW model has a long history," explains Chau Trinh-Shevrin, DrPH, associate professor of population health and medicine, the department's vice chair for research, and center co-principal investigator. "Our interventions draw on the strengths of these communities by enhancing community capacity and building leadership."

Project IMPACT (Implementing Million Hearts for Provider and Community Transformation) is testing the use of CHWs to educate South Asian community members on hypertension control, combined with quality improvement training for physicians serving significant South Asian populations.

"Often, cultural barriers limit Asian Americans' healthcare access," notes Nadia S. Islam, PhD, associate professor of population health and the center's research director. "Because their countries have long histories of community-grounded health improvements, CHWs can serve as trusted information sources for these communities."

Project IMPACT has partnered with Healthfirst, the largest Medicaid-managed care organization in New York City, to support development of a reimbursable CHW model. "The Healthfirst collaboration allows us to monitor diagnosis, management, and follow-up for individual patients and assess the added value of CHW interventions in terms of patient outcomes, including blood pressure control," explains Lorna E. Thorpe, PhD, MPH, professor of population health, director of the department's Division of Epidemiology, the department's vice chair for strategy and planning, and center co-principal investigator.

Other CHW projects under the department's Prevention Research Center include: a large evaluation of Harlem Health Advocacy Partners, aimed at improving health outcomes of New York City Housing Authority residents; a randomized controlled trial designed to increase breast and cervical cancer screening among

Muslim women; and testing of a culturally tailored epilepsy management approach among Hispanic New Yorkers. The center has also developed a CHW Toolkit to help other organizations reach minority communities through the use of CHWs.

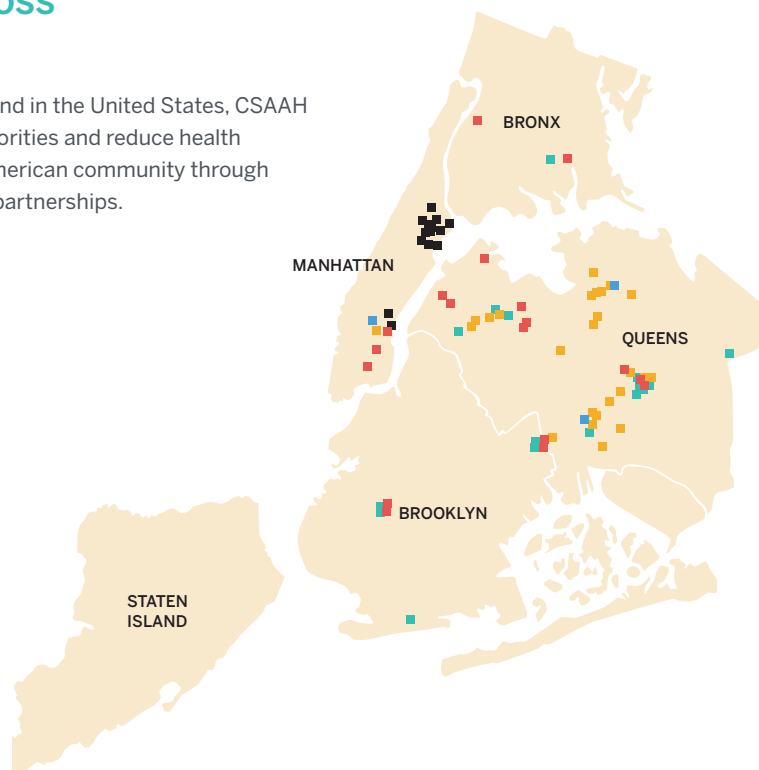
To further shrink this health improvement gap, the department's Center for the Study of Asian American Health's (CSAAH) Diabetes Research, Education, and Action for Minorities (DREAM) initiative, funded by the National Institute on Minority Health and Health Disparities, implements innovative diabetes management approaches among New York City's Bangladeshi American community—a population of mostly first-generation immigrants at heightened risk for the disease. CSAAH built a coalition and recruited members of that community as CHWs, who met regularly with fellow Bangladeshi Americans to provide education on lifestyle and diet and connect them with education, screening, and care through a culturally adapted protocol (*see sidebar at left*).

"All of our community partners are equal stakeholders in the study, from the conception of the project all the way through implementation, helping to ensure strategies are relevant and can be sustained in community settings," explains Dr. Islam, who directs CSAAH's cardiovascular and diabetes initiatives. Dr. Islam and colleagues have reported that individuals receiving the CHW intervention were more likely to achieve diabetes control at six-month follow-up when compared to the control group (36 percent vs. 25 percent, respectively) and more likely to report improvements in diabetes knowledge, physical activity, and health self-efficacy.

In collaboration with DREAM, CSAAH also launched the CDC-funded Racial and Ethnic Approaches to Community Health for Asian Americans (REACH FAR) project. Applying the CHW model to address hypertension among New York City's Indian, Bangladeshi, Korean, and Filipino populations, REACH FAR provides culturally tailored health education in partnership with faith-based organizations.

CENTER FOR THE STUDY OF ASIAN AMERICAN HEALTH (CSAAH) INITIATIVES ACROSS NEW YORK CITY

As the only center of its kind in the United States, CSAAH aims to identify health priorities and reduce health disparities in the Asian American community through research, training, and partnerships.



Community-based interventions currently implemented:

- **HHAP:**
Harlem Health Advocacy Partners
- **REACH FAR:**
Racial and Ethnic Approaches to Community Health for Asian Americans
- **RISE:**
Reaching Immigrants through Community Empowerment
- **DREAM:**
Diabetes Research, Education, and Action for Minorities
- **Project IMPACT:**
Implementing Million Hearts for Provider and Community Transformation

THE “BRAIN GAIN” INITIATIVE: BUILDING CLINICAL AND RESEARCH CAPACITY IN LOW-INCOME COUNTRIES

From enlisting CHWs to nurturing research programs, the department is helping to reshape healthcare infrastructure in low-income countries worldwide.

Dr. Ogedegbe, known for his pioneering work on hypertension control, is leading this effort. Dr. Ogedegbe traces his focus on global health to an epiphany after the funeral of his mother, who passed away from a hemorrhagic stroke in his native Nigeria. “I realized sub-Saharan African countries, which are experiencing a growing cardiovascular disease burden, need a better approach to cardiovascular care—including greater research capacity,” he says.

While these countries have good doctors, he adds, their numbers are small. “There’s a brain drain of physicians and scientists, who come to the U.S. and Canada to train and then stay,” he says. “I’m one of them!” Sub-Saharan African countries carry 25 percent of the global disease burden of non-communicable diseases yet have only 14 percent of the global health workforce and produce only two percent of global research.

Dr. Ogedegbe and colleagues are working with University of Ghana faculty to train a network of investigators from Ghana and Nigeria in non-communicable-disease research.

“We’re gratified by these results, but the real story is not about us. It’s about what the people we’ve mentored—physicians, nurses, basic scientists, epidemiologists, and health services researchers—are now achieving.”

— GBENGA G. OGEDEGBE, MD, MPH

The NIH-funded program has brought more than 40 U.S. scientists to Ghana to lead intensive research workshops and has trained more than 80 investigators. Dr. Ogedegbe’s goal is to replicate this program at other regional universities, bringing an enduring “brain gain” back to the continent.

To address the region’s growing cardiovascular disease burden, Dr. Ogedegbe and colleagues have designed task-shifting strategies using nonphysician workers to manage hypertension (*see sidebar at right*). The team just completed one of the largest pragmatic trials of hypertension management in Ghana, finding that a nurse-led intervention was associated with blood pressure reduction.

Dr. Ogedegbe’s colleagues from King’s College London are adopting this strategy in three Caribbean countries (Jamaica, Dominica, and Guyana), where lay health advisers are being trained to incorporate diabetes screening and management in places of worship. Results of a similar effort in faith-based settings in Nigeria to encourage HIV testing among pregnant women—essential to preventing mother-to-child transmission—were recently published in *The Lancet Global Health*.

“We’re gratified by these results, but the real story is not about us. It’s about what the people we’ve mentored—physicians, nurses, basic scientists, epidemiologists, and health services researchers—are now achieving,” says Dr. Ogedegbe.

A COMMUNITY SERVICE PLAN WITH POPULATION-LEVEL IMPACT

Soon after the department was created in 2012, it was offered the opportunity to lead NYU Langone’s Community Service Plan. Under the department’s guidance, this program has been achieving unprecedented community impact through initiatives designed and implemented in partnership with Manhattan- and Brooklyn-based neighborhood organizations.

“This coordinated set of programs builds on faculty expertise in population health and community expertise in outreach and implementation,” says the plan’s director, Sue A. Kaplan, JD, research associate professor of population health and medicine. “This lets us tackle high-priority health issues for the community, the city, and the state.”

NYU Langone's Community Service Plan consists of the following initiatives to serve a number of populations across New York City:

Program	Mission	Location
ParentCorps*	Early childhood education	Various neighborhoods across Manhattan
REACH FAR*	Promote blood pressure control, healthy diet	Lower East Side/ Chinatown Sunset Park
Tobacco Free Community Project	Smoking cessation	Lower East Side/ Chinatown Sunset Park
Project SAFE	Sexual health education	Sunset Park
Healthy Families Program/ Programa de Familias Saludables	Reduce childhood obesity	Sunset Park
Greenlight	Reduce childhood obesity	Lower East Side/ Chinatown
Two Generations	Promote maternal and child physical and mental health	Sunset Park
Health + Housing Project	Promote healthy environments and behaviors	Lower East Side

*Described elsewhere in this report.

Note: Sunset Park is in Brooklyn; Lower East Side/Chinatown is in Manhattan.

■ PROFILE

IN GHANA, HYPERTENSION TREATMENT TAKES A COMMUNITY FOCUS



Joyce Gyamfi, MS, (pictured above) knows the burden of hypertension in sub-Saharan Africa firsthand; many in her native Ghana live with the condition, which, if untreated, can cause headaches and fatigue—as well as premature death from a stroke or a heart attack.

As a senior research coordinator for the Task-Shifting Strategies for Hypertension control in Ghana (TASSH) study, led by Dr. Ogedegbe, Gyamfi trains nurses in Kumasi, Ghana, to manage uncomplicated cases of hypertension, helping to address the physician shortage there (see *main text at left*). Gyamfi trains nurses in both the native Twi and English and tailors her recommendations, aware that “eat right and exercise” is not always realistic in a setting where poverty can limit access to adequate resources.

TASSH's integration into existing community health centers, with regional staff, has garnered buy-in from Ghanaian leadership and support from nurses and patients.

“Many of these patients thought hypertension was a death sentence,” says Gyamfi. But, she adds, “since the program began, we have seen their sense of self-efficacy rise.”

The Community Service Plan's projects take a unique approach to meeting NYU Langone's federal- and state-required community service obligations. Rather than merely "checking off the boxes" to meet baseline requirements, NYU Langone established a coordinating council to engage with organizations by serving as an open forum for faculty, staff, and representatives from the plan's many community partners. "Every partner has an equal voice in how the plan's projects are conducted, how they are evaluated, and how the data are utilized and disseminated," says Ms. Kaplan.

The plan's second three-year phase has expanded its reach from Manhattan to include Sunset Park, Brooklyn, home of NYU Langone Hospital–Brooklyn, which joined the NYU Langone system in 2015. New, Brooklyn-centered projects are being implemented, and the plan's coordinating council alternates its meetings between the two boroughs. "Sunset Park is a destination for many first-generation immigrants, just as Chinatown and the Lower East Side have been, and the areas share many of the same health concerns," notes Ms. Kaplan.



More than 225 residents in two subsidized housing buildings on the Lower East Side participated in the Health + Housing Project, working with a CHW one-on-one over 15 months to achieve their health goals. Above, a program participant and her aunt celebrate her health accomplishments at a recognition ceremony in June 2017.

BREAST CANCER NAVIGATION PROGRAM CELEBRATES ONE-YEAR ANNIVERSARY AND 5,000 WOMEN SERVED

After her own experience surviving breast cancer, nationally renowned philanthropist Beatrice W. Walters wanted to "pay it forward" and help educate other women about breast cancer and the importance of early detection. In collaboration with NYU Langone, Ms. Walters established the Beatrice W. Walters Breast Health Outreach and Navigation Program to ensure access in medically underserved communities throughout New York City.

One short year since its launch, the program has educated more than 5,000 women in all five New York City boroughs about maintaining breast health through screening services. Since 2016, the program has hosted 94 outreach events at churches, beauty salons, and health fairs. As a result, 531 people, many of them uninsured women, have subsequently enrolled in its navigation services, which include free or low-cost mammograms, as well as active support for women—from diagnosis through treatment and to survivorship.

Co-directors Dr. Ravenell and Kathie-Ann Joseph, MD, MPH, associate professor of surgery and population health and director of Breast Surgery Services at NYC Health + Hospitals/Bellevue, attribute the program's success to their work building community partnerships and their ability to leverage existing relationships within the NYU Langone network, such as NYC Health + Hospitals/Bellevue and NYU Langone Family Health Centers in Flatbush and Sunset Park, to reach patients.

"Not only is this program educating women about breast cancer and the critical importance of screening and early detection," Dr. Joseph says, "but it is also helping them through one-on-one and direct interaction to navigate the sometimes complex healthcare system as a whole."

Working with Ophira M. Ginsburg, MD, associate professor of population health and medicine and director of Perlmutter Cancer Center's new High-Risk Cancer Genetics Program, Dr. Ravenell and Dr. Joseph are implementing initiatives to improve equitable access to clinical cancer genetics services for underserved men and women.



Celebrating the launch of the Beatrice W. Walters Breast Health Outreach and Navigation Program in late 2016 (left to right): Kenneth M. Rifkind, MD, chief of surgery at NYU Langone Hospital–Brooklyn; Robert I. Grossman, MD, the Saul J. Farber Dean and Chief Executive Officer of NYU Langone Health; Elisabeth J. Cohen, MD; Beatrice W. Walters; Richard L. Shapiro, MD, surgical oncologist at NYU Langone’s Perlmutter Cancer Center; and Marc N. Gourevitch, MD, MPH.

In early 2018, Dr. Joseph will launch a cancer genetics component within the Walters Program, which will identify and refer high-risk individuals to the program’s dedicated genetic counselor at NYC Health + Hospitals/Bellevue—an enhanced offering made possible through a grant from the Greater New York City affiliate of the Susan G. Komen Foundation. These high-risk individuals may also be paired with a patient navigator who will help them move through the health system should follow-up care be necessary.

In addition to contributions from Ms. Walters and her family, the program has received philanthropic support from the Laura and Isaac Perlmutter Foundation. ■

“Not only is this program educating women about breast cancer and the critical importance of screening and early detection, but it is also helping them through one-on-one and direct interaction to navigate the sometimes complex healthcare system as a whole.”

– KATHIE-ANN JOSEPH, MD, MPH

ONE-OF A KIND HEALTH DASHBOARD OF

500
cities

at the public's fingertips in 2018

Developing a health snapshot of

700K

NEW YORK CITY RESIDENTS

Using big
data

to uncover the link between
microbiome and cancer risk

Marc N. Gourevitch, MD, MPH, shares insights on the health of the residents in Providence, Rhode Island, based on the municipality's walkability score plotted on the City Health Dashboard.

Turning Information into Insight

The Department of Population Health develops and uses novel analytic methods and information technologies to unlock insights from diverse sources and address important questions about the causes of illness, effective treatments, and preventive approaches. These techniques are applied to monitor population health, evaluate intervention and policy effectiveness, design randomized controlled trials, analyze underlying health risks, and measure behavior change. The goal: to turn vast information into real insights to guide population health and health equity efforts.

THE CITY HEALTH DASHBOARD: ACTIONABLE HEALTH DATA FOR NEIGHBORHOODS AND CITIES

More than 50 percent of Americans live in cities, and the percentage is rising—yet most U.S. health data are compiled only at the county or state level. With a new online tool developed by NYU Langone's Department of Population Health, municipal leaders nationwide will be able to access at-a-glance pictures of their own city's health.

On the publicly available City Health Dashboard website, developed in partnership with NYU's Robert F. Wagner Graduate School of Public Service and the National Resource Network and supported by the Robert Wood Johnson Foundation, viewers click on a city to view health-related data mapped to the city or neighborhood level. Piloted in four geographically diverse cities—Flint, Michigan; Kansas City, Kansas; Providence, Rhode Island; and Waco, Texas—the Dashboard will soon cover all 500 U.S. cities with 70,000-plus residents when the next version is launched in summer 2018.

Each map provides color-coded, city- and neighborhood-level snapshots of 37 key health-related data drawn from diverse national data sets. With these maps, city and community leaders can now visualize local rates of important social and economic influences on health, such as high school graduation and unemployment rates; physical characteristics such as neighborhood walkability and the food environment; unhealthy behaviors

such as smoking and physical inactivity; health outcomes such as obesity and opioid deaths; and access to preventive health, dental care, and other services. Policy makers, community leaders, and researchers can compare each city's performance against national averages and review the statistical relationships among variables.

"We've had an extremely positive response from leaders in our four pilot cities," says Marc N. Gourevitch, MD, MPH, the Muriel G. and George W. Singer Professor of Population Health, professor of medicine and psychiatry, chair of the Department of Population Health, and principal investigator for the initiative. "These data simply haven't been available at the city level before, and they powerfully frame key health issues—highlighting neighborhoods where action is most needed and which factors to pay attention to—so leaders can engage immediately."

"The City Health Dashboard powerfully frames key health issues so leaders can engage immediately."

— MARC N. GOUREVITCH, MD, MPH

DATA ANALYTICS UNRAVEL THE OBESITY RIDDLE

Although obesity affects one in three American adults, the condition remains poorly understood. In an effort to improve on this situation, NYU Langone recently launched the Comprehensive Program on Obesity, a multidisciplinary initiative that is bringing together the medical center's expertise to unravel the secrets of this tenacious disease.

"Our goal is to integrate our population health work with NYU Langone's clinical and basic science research," says initiative director Brian D. Elbel, PhD, MPH, associate professor of population health and medicine and director of the department's Section on Health Choice, Policy and Evaluation. Employing a user-friendly infrastructure called Databridge (*see illustration at right*), the program synthesizes an unprecedented range of obesity-related information, with a focus on key areas such as pediatric obesity. Researchers will analyze electronic health records (EHRs) as well as information on children's food and physical environments and other population-level data from some 50,000 children in the NYU Langone network.

"We're exploring whether we can predict at age two whether a child will become obese at age five," says Dr. Elbel. "With predictive analytics, we're uncovering which factors to target with interventions."

The program is also investigating whether and how biological, clinical, and population health characteristics—such as patients' microbiome, disease history, fat tissue, demographics characteristics, physical activity and diet, and

neighborhood access to parks and healthy food—impact outcomes following bariatric surgery. Both NYU Langone and NYC Health + Hospitals/Bellevue—which is primarily staffed by NYU Langone faculty—are among the nation's leaders in bariatric procedure volume. "We're combining clinical data from NYU Langone and Bellevue bariatric surgery patients with population health data and data from biological samples collected before, during, and after surgery," says Dr. Elbel.

The Comprehensive Program on Obesity will integrate and analyze the data from these diverse sources to explore questions such as who does best with the surgery, how gastrointestinal microbial populations change after surgery, and how diabetes influences surgical outcomes. "This approach integrates many types of investigators and data," says Dr. Elbel, "and this is important because obesity is determined by multiple factors and has multiple implications for health."

PROBING THE LINKS BETWEEN THE LOCAL ENVIRONMENT AND CHILDHOOD OBESITY

How is children's risk for becoming overweight influenced by the walkability of their neighborhood or the quality of their school's gym? Dustin T. Duncan, ScD, associate professor of population health, Pasquale Rummo, PhD, MPH, assistant professor of population health, and Dr. Elbel have received a four-year National Institutes of Health grant to answer these questions.

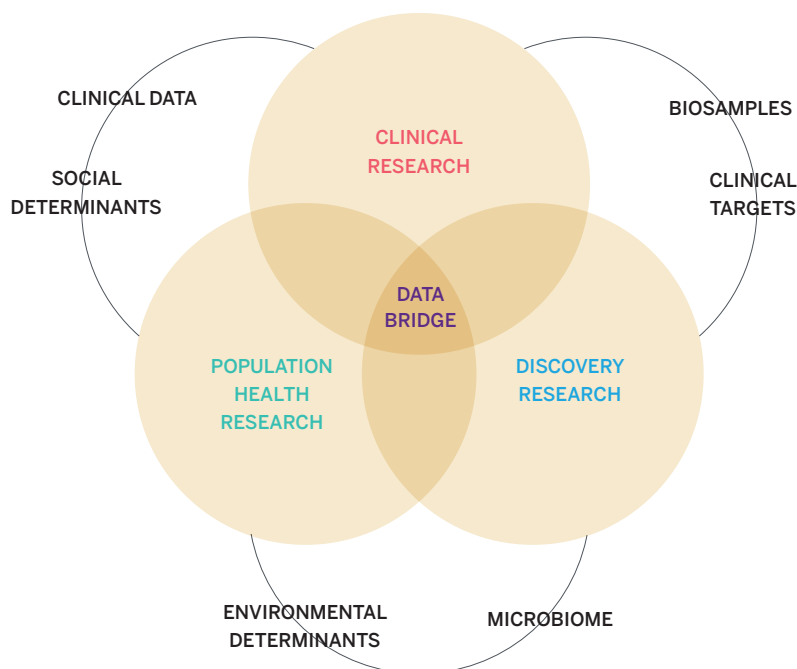
THE DATABRIDGE

The NYU Langone Comprehensive Program on Obesity builds upon our research strengths in three major spheres:

- Population health
- Clinical medicine
- Discovery research (i.e., basic science)

The DataBridge integrates data from these spheres to help us answer novel questions, as many factors influence them:

- Environmental determinants and the microbiome are featured prominently in our population health and discovery research
- Biosamples and clinical targets help shape our clinical and discovery research
- Clinical data and social determinants affect the direction of our clinical and population health research



These investigators will explore the connections between New York City public school children's body mass index (BMI), activity levels, and their "built environment"—everything from the structure and accessibility of neighborhood parks and playgrounds to the location of supermarkets, fast-food restaurants, and convenience stores. "We'll examine the impact of factors such as living in a neighborhood that's largely residential versus one that's mainly commercial, and having a home with a backyard," says Dr. Elbel.

This new study builds upon the team's previous research on the influence of built environment on health. A statistical analysis of BMI data on New York City school children, published by Dr. Elbel and colleagues in *PLoS ONE* in 2016, found that children's school and neighborhood

environments had a meaningful effect on obesity rates but that this impact was relatively modest when factors such as race, income, and immigration status were accounted for.

In 2017, Dr. Duncan reported in the *Journal of Community Health* that adults living in the noisiest New York City neighborhoods had lower average BMIs and blood pressure levels than residents with comparable backgrounds living in quieter areas. "It may just be that New York's noisiest neighborhoods are also the most walkable and that their residents get more exercise that way," notes Dr. Duncan. "But our study showed that neighborhood noise may have an indirect impact on health that is different from the impact of known risk factors, such as diet and sedentary lifestyles."

BIostatISTICS: A GROWING DISCIPLINE TAKES ON NEW ANALYTIC FRONTIERS



Whether finding ways to tease out population-level implications of diseases, unraveling the nuances of genetic permutations, or designing studies to be conducted in frontline clinical and community settings, the department's Division of Biostatistics is developing state-of-the-art techniques that help researchers optimize the impact of their work.

"We work with departments across NYU Langone on a wide range of research—from basic science to clinical trials and epidemiological studies," says division director Andrea B. Troxel, ScD, professor of population health (*pictured above*). "In particular, we are in the vanguard of pragmatic trials and implementation science, working in real-world settings to rigorously evaluate new approaches and see how they truly work in practice. In one high-profile collaboration, division faculty and NYU Langone mental health, environmental, and other population health specialists are tracking the long-term health effects of the 9/11 attacks on children exposed to the event's physical and emotional stresses.

The division is also pushing the boundaries of data analysis itself. "With lab advances, we have data that require entirely new statistical methods," says Dr. Troxel. Division faculty are taking innovative approaches to analytic puzzles, such as teasing out the potential health impact of gene mutations that occur in a fraction of the population.

"The high dimensionality of these data requires greater computing power," adds Dr. Troxel. "Fortunately, high-performance computing, combined with novel analytic methods, is keeping up—enabling us to sift through the data, eliminate the noise, and find the meaningful signals.

ELECTRONIC HEALTH RECORD TOOL MONITORS NEW YORK CITY'S HEALTH IN REAL TIME

Faculty in the department's Division of Epidemiology and the New York City Department of Health and Mental Hygiene (DOHMH) have co-developed and validated a tool that culls the EHRs of more than 700,000 New York City residents to paint a picture of the city's collective health status—an initiative that could change population-level health trend monitoring.

The tool, the NYC Macroscopic, tracks the prevalence of chronic medical conditions and risk factors such as hypertension, smoking, obesity, and diabetes, drawing on real-time EHR data from the Primary Care Information Project—a DOHMH office that provides approximately 700 primary care practices with free EHR systems in exchange for their anonymized data.

Still in development, the tool has already provided valuable insight. "After statistically weighting the data to reflect the adult population, we're getting important information on how many New Yorkers have certain conditions and who's getting screened," says Lorna E. Thorpe, PhD, MPH, professor of population health, director of the department's Division of Epidemiology, and vice chair for strategy and planning. "Ultimately, we want this tool to show accurately how well the conditions are managed—things that EHR networks have never been used for." Under New York City DOHMH leadership, the NYC Macroscopic is evolving, with new indicators being developed, notes Dr. Thorpe—including assessing trends over time.

The key question, Dr. Thorpe adds, is whether these EHR-based data will enable more targeted outreach to vulnerable individuals. "Sample sizes in major telephone and household-based surveys are too small to home in on the subpopulations we need to reach because they aren't getting care for common conditions such as hypertension or other chronic diseases," says Dr. Thorpe. "Now that we've validated the NYC Macroscopic's accuracy, we're exploring whether it can reveal what other data sources couldn't show us: the subgroups of individuals whose conditions aren't managed well."



A resident of Flushing, Queens, signs up to participate in the FAMiLI study.

Researcher Jiyoung Ahn, PhD, RD, is currently compiling comprehensive human microbiome samples from

10,000

HEALTHY NEW YORK-AREA INDIVIDUALS—

the largest effort of this kind to date.

THE MICROBIOME: CLUES TO LONG-TERM HEALTH

As the physiological impact of the human microbiome—the collection of microorganisms that live on and in our bodies and help with digestion and illness prevention—attracts continued research interest, investigators from the Division of Epidemiology are pioneering a population-level approach to understanding its influence on health. Jiyoung Ahn, PhD, RD, associate professor of population health and environmental medicine, and Richard B. Hayes, DDS, PhD, MPH, professor of population health and environmental medicine, are analyzing bacterial profiles across large groups to detect associations between medical conditions and microorganisms.

Through large-scale prospective studies with tens of thousands of samples, the researchers have examined the links between the oral microbiome and the risk of certain cancers.

Among the findings: An abundance of two particular strains of bacteria, *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans*, sharply increases the likelihood of developing pancreatic cancer (*Gut*, 2016); low levels of Proteobacteria correlate with increased risk of

esophageal cancer (*Cancer Research*, 2017); and low levels of Betaproteobacteria are associated with head and neck cancers (*JAMA Oncology*, 2018). These findings may help guide development of oral bacterial assays that can be used as biomarkers to detect cancer risk.

To connect these findings with prevention targets, the team is now exploring the behaviors and diets that bring about changes in the microbiome. For example, they published groundbreaking research showing that cigarette smoking substantially alters the composition of oral bacteria. “Smokers have fewer bacteria known to destroy carcinogens,” notes Dr. Ahn. Other research from Dr. Ahn, Dr. Hayes, and colleagues associates oral microbiome changes with heavy alcohol consumption.

To further identify the connections among human bacteria, diet, and medical conditions, the five-year Food and Microbiome Longitudinal Investigation (FAMiLI), led by Dr. Ahn, is compiling comprehensive human microbiome samples along with diet and demographic information from 10,000 healthy New York-area individuals—the largest effort of this kind to date. The work builds on earlier research linking lack of fiber-digesting gut bacteria with increased colon cancer risk (*Journal of the National Cancer Institute*, 2013). “This innovative resource will for the first time allow us to ask key questions about the microbiome and its role in cancer prevention,” says Dr. Ahn. ■

410

PRACTICES ENGAGED

in innovation transformation partnerships

SUPPORTING

2,000+

primary care physicians and specialists
through small practice innovation

Identifying the most effective
treatments on the

frontlines

OF THE OPIOID EPIDEMIC

Transforming Healthcare

A pillar of the Department of Population Health's mission is to accelerate the transformation of healthcare delivery while advancing population health—so the system not only treats illness but equitably promotes health and wellness.

To help bring about this transformation, department faculty apply data and analytics to evolve processes and outcomes, while bridging hospital and community settings with community-based interventions. Ultimately, the department seeks to shift the aim of care delivery from being volume-based to being value-based by improving care access, utilization, and quality. With these goals in mind, the faculty are engaged in a number of projects that are helping to bridge research and operations—building a “learning healthcare system” that readily applies new knowledge to enhance the way healthcare is delivered, in the clinic and in the community.

MAKING INNOVATION ROUTINE: TRANSFORMING AMBULATORY CARE IN THE NEW YORK METRO AREA

Value-based care—improving quality and outcomes for patients—may be the framework of the future, but many physicians' offices find it challenging to transform long-standing practices. To accelerate their evolution, the department's Center for Healthcare Innovation and Delivery Science (CHIDS; *see text on page 26*) is spearheading the Greater New York City Practice Transformation Network (GNYC-PTN), a \$7 million, four-year effort to improve the operations of New York metro area practices.

Funded by the federal Center for Medicare & Medicaid Innovation, the GNYC-PTN supports more than 2,000 primary care and specialist clinicians who treat a diverse patient population in NYU Langone Health's faculty group practices and small, independent practices, as well as in six Federally Qualified Health Centers (FQHCs) in New York City (*see map on page 24*). There, embedded facilitators observe daily activities, suggest quality improvements, train clinicians and administrators, and collect data. “We want to enable clinicians to think more globally, rather than count

how many patients they see in a given day,” says Leora Horwitz, MD, MHS, associate professor of population health and medicine, director of the Division of Healthcare Delivery Science and CHIDS.

One project involves the Family Health Centers (FHC) at NYU Langone in Brooklyn, the nation's second-largest FQHC, encompassing nine major clinical locations, 37 school-based dental clinics, and 20 school-based health centers, and serving 99,000 patients with 602,000 visits annually.

“The FHC was struggling to meet quality metrics, and at some sites, the cycle time to see patients was too long,” notes Dr. Horwitz. With a facilitator's help, one practice site redesigned care delivery, shaving 15 minutes from its cycle time in the first month. The site also began reviewing each day's patient list in a morning huddle to plan care and avoid unnecessary services.

“Today, the FHC's results in terms of exams completed and preventive care metrics have improved markedly,” says Dr. Horwitz. “Best of all, these enhanced workflows have become daily routines, and there is a new sense of teamwork across all practice members.”

Dr. Horwitz's work has already made a significant impact. Larry K. McReynolds, executive director of the FHC, says that working with CHIDS "brings the quality and efficiency of the FHC's care to the next level." Isaac Dapkins, MD, chief medical officer of the FHC, agrees: "Our Family Health Centers are now operating better than ever, while maintaining our enduring commitment to the communities of Brooklyn."

Separately, practice facilitators have been deployed to transform cardiovascular disease management at more than 250 small, independent practices serving more than half a million people through the HealthyHearts NYC initiative (*see sidebar at right*). Many are solo practitioners with limited staff, charged with addressing the disproportionate cardiovascular disease burden observed in the minority populations and immigrant communities they treat.

The initiative, a collaboration with the Primary Care Information Project (PCIP) of New York City's Department of Health and Mental Hygiene (DOHMH) and the Community Health

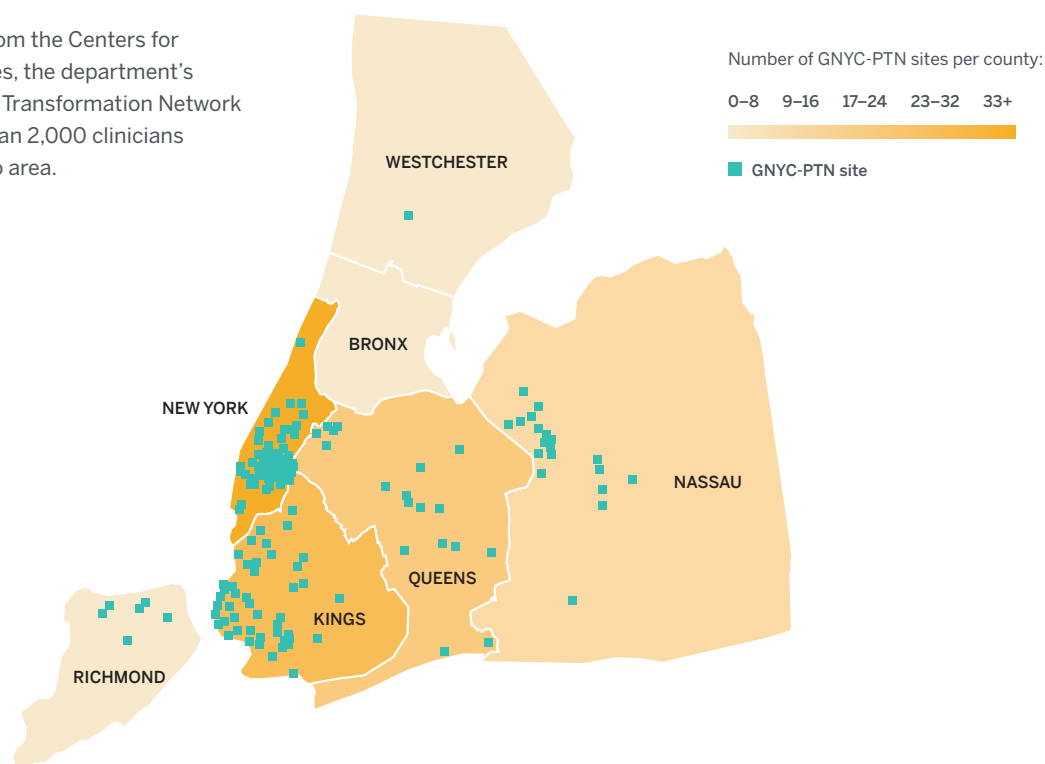
Care Association of New York State (CHCANYS), is a three-year Agency for Healthcare Research and Quality (AHRQ)-funded project aligned with the nationwide Million Hearts initiative.

These organizations work in a continuous partnership with small primary care practices to integrate evidence-based guidelines into care delivery and improve health outcomes and simultaneously evaluate the effectiveness of these practice facilitation efforts.

PCIP and CHCANYS facilitators initially evaluate each practice, helping staff incorporate evidence-based guidelines to manage hypertension and other cardiovascular risk factors, plan for patient visits, and optimize their EHRs to improve outcomes and efficiency. Following this, Department of Population Health researchers use a broad array of quantitative and qualitative data to determine the efficacy of specific facilitation strategies and identify any characteristics that might affect a practice's capacity to change.

PRACTICE TRANSFORMATION NETWORK SITES

Funded by a \$7 million grant from the Centers for Medicare and Medicaid Services, the department's Greater New York City Practice Transformation Network (GNYC-PTN) supports more than 2,000 clinicians across the New York City metro area.



“Our goal is to improve small practices’ management of risk factors while building their capacity to adopt innovations,” explains Donna Shelley, MD, MPH, associate professor of population health and medicine and co-director of the department’s Section on Tobacco, Alcohol, and Drug Use.

The current effort builds on Dr. Shelley’s longstanding work targeting tobacco cessation, including as director of NYC Treats Tobacco, which aims to reduce the burden of tobacco-related disease by promoting routine screening and medication access.

“We want to enable clinicians to think more globally, rather than count how many patients they see in a given day.”

– LEORA HORWITZ, MD, MHS

■ PROFILE

SMALL PRACTICE STRATEGIES MAINTAIN A PERSONAL TOUCH



Ernesto Fana, a practice facilitator with HealthyHearts NYC, reviews appointment scheduling data with a family physician in the Bronx.

Several days a week, Ernesto Fana helps small primary care practices in the Bronx and Queens apply disease prevention and management tools. Fana is one of 18 practice facilitators deployed in more than 250 small practices through HealthyHearts NYC, a cooperative of the Department of Population Health, the New York City DOHMH, and CHCANYS (see main text at left).

Fana and his colleagues also learn from the practices. They found that two providers who typically had 50-minute appointments saw strong hypertension control results with their patients. After observing this outcome, Fana shared this critical learning to other practices and recommended that appointments be lengthened or that patients be seen more frequently.

“That doctor-patient relationship really makes a difference,” says Fana. As the trust between a patient and doctor improves, so do the treatment outcomes.



A primary care physician interacts with a pediatric patient after an appointment at one of NYU Langone's Family Health Centers in Brooklyn.

COLLABORATION IS KEY IN DESIGNING MORE EFFECTIVE, EFFICIENT HEALTHCARE DELIVERY

NYU Langone's research and clinical initiatives are known for cross-collaboration, and this integration drives every activity of CHIDS, where collaboration is key to healthcare system redesign.

"We work at the intersection of research and operations, and everything we do has a foot in both worlds," explains CHIDS director Dr. Horwitz. "We can do better research and better interventions because we understand how things work on the ground and how to evaluate them."

CHIDS's full-time faculty includes general internists, informaticists, a computer scientist, and specialists in engineering, economics, and statistics—reflecting the belief, notes Dr. Horwitz, that "we can't change healthcare from just one perspective."

To this end, CHIDS works with an array of NYU Langone departments to develop and refine innovations in healthcare delivery. CHIDS's Patient Imaging Quality and Safety (PIQS, like "pictures") Laboratory, for example, is using funding from the AHRQ to refine the decision process for ordering imaging scans. In one collaboration with

NYU Langone's emergency department physicians and radiologists, CHIDS investigators are elucidating when doctors should scan for blood clots in the lung. "This evaluation involves a radiation-intensive CT scan that you don't want to use unnecessarily," explains Dr. Horwitz. The group is already disseminating the results of another PIQS project—a computerized decision support system that automatically alerts doctors of unexpected radiology results that need follow-up—at radiology conferences.

Besides these and other large-scale projects—such as CHIDS's predictive analytics unit, new laboratories devoted to digital health innovation, and work with health tech startups—CHIDS also awards its own grants to NYU Langone clinicians to pioneer new approaches to care. Since 2015, CHIDS has funded a range of projects, including the development of computer algorithms that predict clinical deterioration, telehealth protocols that eliminate unneeded travel for patients with renal disease, educational programs to reduce Brooklyn's high childhood obesity rate, and, in partnership with the NYU Tandon School of Engineering, low-cost three-dimensional printed prosthetics for cerebral palsy patients. All projects are vetted by an oversight committee to affirm their real-world impact.

“Too often, institutions implement innovations without knowing whether they really work,” says Dr. Horwitz. “We bring a unique collaborative rigor and governance to our projects.”

WIDELY ANTICIPATED CLINICAL TRIAL BOLSTERS USE OF MEDICATION TO TREAT OPIOID ADDICTION

With the opioid epidemic taking an increasingly heavy toll, a clinical trial published in late 2017 and led by Joshua D. Lee, MD, associate professor of population health and medicine, offered much-anticipated information for providers, patients, and their families.

The Lancet study showed that extended-release naltrexone—an opioid antagonist marketed as Vivitrol®—demonstrated similar safety and clinical effectiveness to more commonly prescribed buprenorphine-naloxone—an opioid agonist marketed both generically and as Suboxone®—following successful initiation, although naltrexone was more difficult for patients to start because the drug requires detoxification from opioids.

The trial was co-directed by John Rotrosen, MD, professor of psychiatry, and sponsored by the National Institute on Drug Abuse. A total of 570 adults were recruited at eight community treatment programs across the country, approximately two-thirds of whom were men and 82 percent primarily using heroin. One group received a monthly injection of naltrexone after completing detoxification, and the other self-administered a daily oral dose of buprenorphine initiated as early as possible after randomization.

The study bolsters the evidence in favor of using medication to help treat opioid addiction—especially naltrexone, which was approved in 2010. In the United States, deaths from opioid overdose have quadrupled since 1999, according to the Centers for Disease Control and Prevention.

“Both medications are effective treatments for opioid-use disorders versus counseling-only approaches or compared to placebo,” says Dr. Lee. He adds, “What is now clear is how similar the outcomes are for those initiating treatment with either medication.” ■



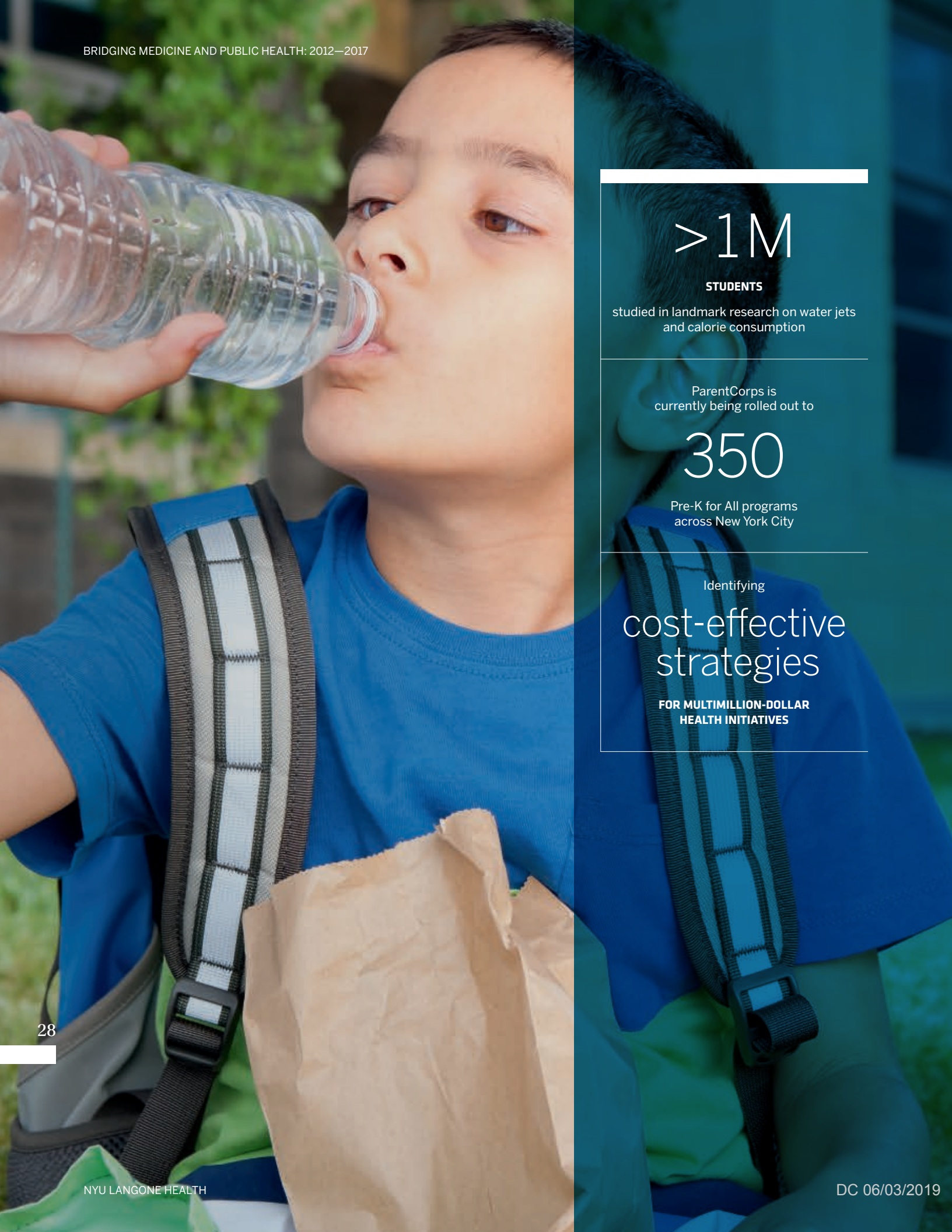
Researchers John Rotrosen, MD, and Joshua D. Lee, MD, review data from a clinical trial to compare the safety and clinical efficacy of naltrexone and buprenorphine-naloxone, two opioid antagonists.

Results from a clinical trial conducted by the
Departments of Population Health and Psychiatry

bolstered evidence

FOR USING MEDICATION

to help treat opioid addiction.



>1M

STUDENTS

studied in landmark research on water jets
and calorie consumption

ParentCorps is
currently being rolled out to

350

Pre-K for All programs
across New York City

Identifying

cost-effective
strategies

**FOR MULTIMILLION-DOLLAR
HEALTH INITIATIVES**

Shaping Policy

Advancing population health and health equity requires the development of effective, evidence-based population health policies with proven real-world impact. To support this focus, the Department of Population Health partners with a wide range of policy-making stakeholders. Across initiatives, the department has garnered recognition from the public and private sectors for its innovative expertise on policy design and its objective policy evaluation in many areas, including early childhood education, obesity reduction, and urban health planning.

DETERMINING WHICH POLICIES CHANGE BEHAVIOR (AND WHICH DO NOT)

From taxes on consumer products to marketing campaigns, behavior-nudging health policies have never been more popular—or more controversial. The question is, do they work? Researchers from the department's Section on Health Choice, Policy and Evaluation aim to answer that question.

The researchers are especially interested in determining the impact of public policies on low-income, racial, and ethnic minority populations and how to make these policies more effective and evidence-based. Obesity and the impact of New York City policies on body weight are a key focus.

Among recent findings:

- A 2015 analysis of approximately 40,000 city elementary and middle school students, published in the *American Journal of Public Health*, found that students' water consumption increased threefold just three months after low-cost "water jet" dispensers were placed in public school cafeterias.
- A subsequent study of more than 1 million students, published in the March 2016 issue of *JAMA Pediatrics*, was the first to link the water jet program to a small but significant weight loss among students. The authors concluded that easy access to water during lunch could encourage kids to forgo caloric beverages like juice and soda.

- A study of 7,699 fast-food customers' responses to calorie labels demonstrated that simply posting these labels in fast-food restaurants did little to reduce fast-food calorie consumption.

"While a reasonable percentage of people do report using the calorie labeling information, it's not a big enough subset to change purchasing behavior at the population level," explains section director Brian D. Elbel, PhD, MPH, associate professor of population health and medicine, who led both the calorie labeling and the water jet investigations.

Dr. Elbel adds that it has become harder to tease out the actual influence of these policies, especially those focused on chronic diseases with complex, multiple causes. "Yet, as governments tackle these problems, rigorous research like ours—designed to understand and encourage real-world policy impact—is more important than ever."

"As governments tackle these problems, rigorous research like ours—designed to understand and encourage real-world policy impact—is more important than ever."

— BRIAN D. ELBEL, PhD, MPH

■ PROFILE

FOR THIS EDUCATOR, PARENTCORPS WAS SO EFFECTIVE THAT SHE JOINED AND BECAME A TRAINER



When educator Kai Hamer (*pictured above*) attended her first ParentCorps training (*see main text at right*), a light bulb went off: “It changed the way that I see the families and the children I interacted with every single day,” she said.

When Hamer was dean of kindergarten through second grade at P.S. 41 in the Bronx, one of the big challenges she—like many educators—faced was how to engage parents in their children’s education.

Through ParentCorps trainings, she learned a set of tools for communicating effectively with parents, and she helped roll out the ParentCorps program at P.S. 41.

A year after her first training, Hamer joined ParentCorps as a coach and trainer, delivering the skills she had learned as an educator. Today, she hears from school leaders that parents who go through ParentCorps become more invested in the school community, such as participating in the PTA or volunteering for school events.

“The more involved the parent is, the better the children end up doing academically,” says Hamer. “I believe wholeheartedly in the effectiveness of this program because I’ve seen it work.”

EARLY CHILDHOOD INITIATIVE SUPPORTS PRE-K STUDENTS AND THEIR FAMILIES

The past two years have marked a significant expansion for the department’s ParentCorps—an evidence-based, family-centered intervention delivered in partnership with the New York City Department of Education throughout its Pre-K for All programs, which serve more than 70,000 four-year-olds.

ParentCorps aims to reduce educational and health disparities associated with poverty, such as academic underachievement and mental health problems. The program helps parents and early childhood teachers create safe, nurturing, and predictable environments as buffers against the negative influences of poverty and adverse childhood experiences.

ParentCorps’s holistic approach includes a program for pre-K students’ parents to learn about evidence-based practices and support each other in parenting effectively; professional development for leaders and teachers on evidence-based strategies to promote social, emotional, and behavioral development and positive family engagement; and a social, emotional, and behavioral skills classroom curriculum for pre-K students. During the parenting program’s 14 weekly sessions with 15 to 20 families, facilitated by school-based mental health professionals, parents discuss ways to create a nurturing and predictable home environment with routines, reinforcement for positive behaviors, and consequences for misbehavior (*see sidebar at left*).

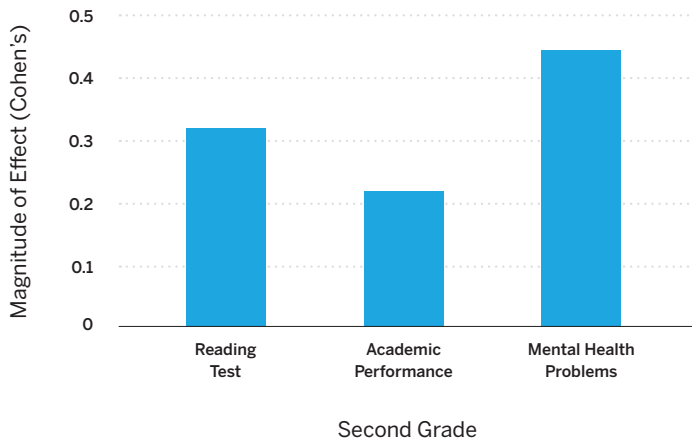
“Parents reflect on the hopes and dreams they have for their children and develop relationships with other parents,” says Laurie Miller Brotman, PhD, the Bezos Family Foundation Professor of Early Childhood Development, professor of population health and child and adolescent psychiatry, and director of the department’s Center for Early Childhood Health and Development (CEHD).

Randomized controlled studies with more than 1,200 African American and Latino children and families, published in *JAMA Pediatrics*, *Pediatrics*, and *Prevention Science*, have found that ParentCorps supports positive parenting practices, parent involvement in learning, and children’s school readiness. By second grade, ParentCorps results in better academic achievement and lower rates of obesity and mental health problems (*see graph on next page*).

Additionally, a mathematical model developed in the department’s Division of Comparative Effectiveness and Decision Science and published in *BMC Public Health* in 2017 indicates that ParentCorps can save more than \$4,300 per child

PARENTCORPS IMPACT ON FOUNDATIONAL SKILLS

Students who participate in ParentCorps demonstrate better academic achievement and lower mental health problems by the second grade.



in health, criminal justice, and productivity expenditures and substantially increase each child's quality-adjusted life expectancy.

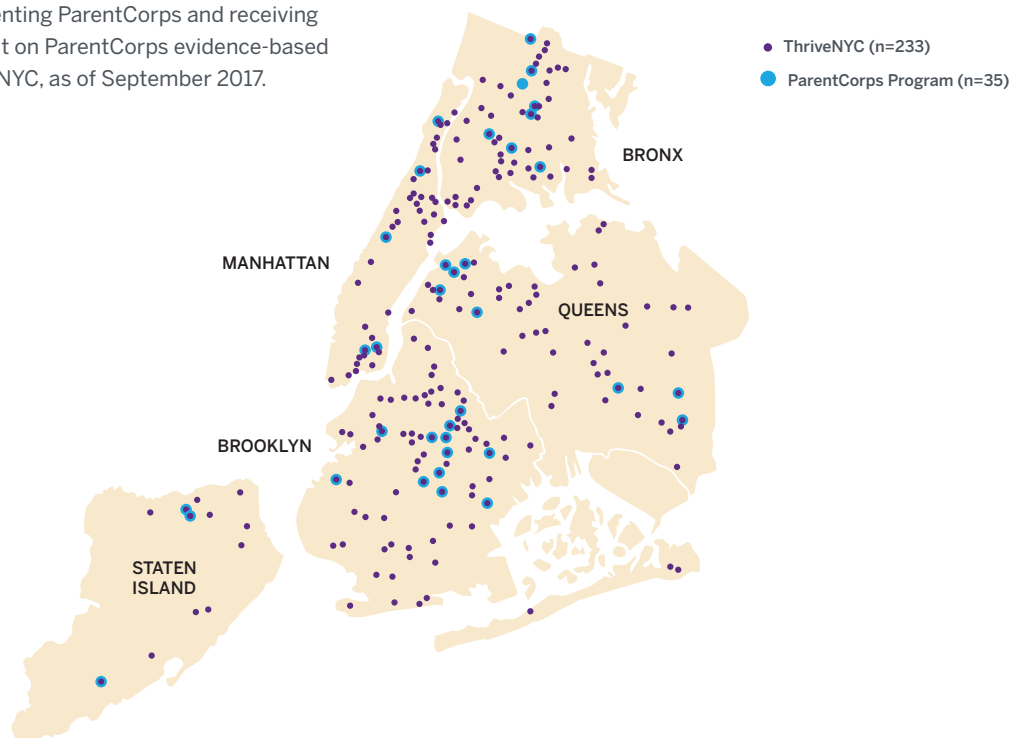
As part of ThriveNYC, a citywide mental health initiative, Dr. Brotman and her team are currently in the process of providing professional development to leaders and teachers in 350 Pre-K for All programs and the entire workforce of early childhood social workers who serve the Pre-K for All program (see map below).

The team recently rolled out Fun with Feelings cards in all Pre-K for All programs, which offer parents a playful way to help their children learn about feelings and support social-emotional skill-building at home. The cards are currently available in English, Spanish, and Chinese, with Arabic, Bengali, French, Haitian Creole, Korean, Russian, and Urdu cards being released throughout 2018.

As ParentCorps spreads throughout New York City, Dr. Brotman and CEHD faculty are conducting a series of randomized controlled trials to investigate the program's impact on teachers, classrooms, children, and families in 200 diverse pre-K settings. "As we are scaling and evaluating, we strive to be an improvement-oriented and racially conscious organization to ensure that we do all that we can to help children succeed," says Dr. Brotman.

PARENTCORPS LOCATIONS

Pre-K programs implementing ParentCorps and receiving professional development on ParentCorps evidence-based practices through ThriveNYC, as of September 2017.



GUIDING GOVERNMENT ALLOCATION OF RESOURCES—WITH MATHEMATICAL MODELS

In 2011, New York City faced a classic governmental problem: It had budgeted tens of millions of dollars annually to prevent HIV infections, but it wasn't certain which strategies were most cost-effective. The city turned to the department's Division of Comparative Effectiveness and Decision Science, which employs sophisticated computer models to compare the projected benefits of different interventions over time.

Division director Scott Braithwaite, MD, professor of population health and medicine, and his group constructed a simulation model to calculate the cost-effectiveness of various combinations of infection prevention strategies over time. The model identified 10 strategies with the potential to save the city money—meaning their implementation would cost less than the HIV-related expenses that would be incurred if the strategies weren't deployed. These strategies included condom interventions prioritized for high-risk HIV-positive individuals, educational marketing targeting HIV-infected persons, screening for sexually transmitted infections and unhealthy alcohol use, partner notification and testing, and linking HIV-positive New Yorkers to social support services.

Today, New York City is using the division's findings to guide its policy—as is the state of Connecticut, which asked Dr. Braithwaite's team to help identify community groups that could efficiently identify undiagnosed HIV-positive individuals and refer them for testing. The team's other current projects include evaluating anti-drug overdose interventions, assessing strategies to promote adherence to hepatitis C drug regimens, and assisting a national managed care company in targeting longevity-increasing interventions for members. Dr. Braithwaite's comparative effectiveness projects also are helping African nations allocate resources that combat HIV, cardiovascular disease, and other conditions.

“What distinguishes us from other modeling groups is that we make our recommendations explicit, based on very high-level evidence—and we're deliberately agnostic,” explains Dr. Braithwaite.

“If a government asks us to evaluate how to reduce traffic deaths, we don't come in with a preference for guardrails or lowering the speed limit; we just want to know how each intervention affects health, with the greatest impact.”

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– SCOTT BRAITHWAITE, MD

DR. ARTHUR CAPLAN: PUTTING ETHICS FRONT AND CENTER IN HEALTH POLICY

From concerns about genomic sequencing to the actual definition of death, Arthur L. Caplan, PhD, the Drs. William F. and Virginia Connolly Mitty Professor of Bioethics and director of the department's Division of Medical Ethics, has placed ethics at the center of healthcare's evolution.

A pioneer in the field of bioethics, Dr. Caplan has sparked dialogue on a wide range of critical issues, challenging conventions and influencing policy. Most recently, he has focused on improving patient access to experimental treatments—an area with broad-reaching policy impact. In 2015, he established a first-of-its-kind Compassionate Use Advisory Committee, setting a standard for how pharmaceutical companies review requests for pre-approved, experimental medicines. With sponsorship from Johnson & Johnson, Dr. Caplan also co-hosts an annual conference with the New York Academy of Sciences, bringing clinicians, ethicists, patient advocates, and policy makers together to identify ethical solutions to challenging treatment issues. In July 2017, the conference explored the ethics of randomized

controlled drug trials—historically viewed as the “gold standard” of health research—and considered alternative approaches to speed drug development.

Dr. Caplan and members of NYU School of Medicine's Working Group on Compassionate Use and Pre-Approval Access also educate the public and policy makers on the potential negative consequences of “right to try” laws, which allow terminally ill patients to access non-FDA-approved drugs.

Dr. Caplan is particularly concerned that the laws, passed in a majority of U.S. states, focus unduly on the FDA when, in actuality, private companies and sponsors control access. Dr. Caplan and colleagues argue that drug manufacturers may be more reluctant to permit patients' use of their experimental drugs, compared with the FDA under its Compassionate Use regulations, and that removing the FDA from the prescribing process could also open the door to fraudulent peddling of drugs.

“From organ donation to compassionate use to ethically conducted research, the Division of Medical Ethics endeavors to make ethics workable in the real world, for large and diverse populations,” says Dr. Caplan. “This has been my goal throughout my career.” ■



Arthur L. Caplan, PhD, speaks about the ethics of global health at NYU School of Medicine's "Innovations in Health Care Symposium" in 2014.



POPULATION HEALTH IS

1 of 6

EDUCATIONAL PILLARS

that medical students can pursue

2

population health-focused
PhD PROGRAMS

2018

launch of new PhD program in
POPULATION HEALTH SCIENCES

Training the Next Generation

The Department of Population Health is committed to equipping students with the population health skills that they need to practice in a rapidly evolving healthcare environment and to preparing future investigators and scholars for leadership in the interdisciplinary science of population health. The department takes an active role in informing NYU School of Medicine's cutting-edge curriculum, as well as in enhancing the state-of-the-art doctoral programs in the NYU School of Medicine's Sackler Institute of Graduate Biomedical Sciences.

POPULATION HEALTH: A PILLAR OF THE 21ST-CENTURY MEDICAL CURRICULUM

NYU School of Medicine has long taught its students to care effectively for one patient at a time, but with the founding of the Department of Population Health, the medical school has put increasing emphasis on improving outcomes for entire populations. Mark D. Schwartz, MD, professor of population health and medicine and the department's vice chair for education and faculty affairs, has worked with the medical school's deans to establish population health as one of six pillars of the school's curriculum. These educational pillars—areas of focus in cancer biology, cardiovascular disease, metabolism and obesity, microbial pathogenesis, neurodegenerative disease, and now also population health—are central components of the school's revised Curriculum for the 21st Century, introduced in 2012.

Designed to empower tomorrow's physicians to make meaningful contributions to prevention, healthcare value, delivery system science, healthcare policy, and community health, NYU School of Medicine's population health pillar is now one of the most comprehensive integrations of this new field in any U.S. medical school curriculum.

First-year elements of the pillar include lectures and workshops on the social determinants of health, healthcare systems, health policy, and "Health Care by the Numbers," a course built around an online tool containing infographic data on all New York State hospitalizations, including diagnosis, cost of care, length of stay, and outcome.

"Drawing on these data, our medical students engage in interactive panel discussions with leaders of NYU Langone's Tisch Hospital, NYC Health + Hospitals/Bellevue Hospital and the Manhattan VA Medical Center, and then use the tool's data in small group projects to answer pressing questions about the state's healthcare system," says Dr. Schwartz. "A number of these projects have gone on to be published."

In their later years, medical students work with virtual patient panels—de-identified patient records from the NYU Langone physician network—taking on different specialty roles as they study opportunities to improve care delivery.

INTEGRATED POPULATION HEALTH GRADUATE PROGRAMS EXPAND RESEARCH OPPORTUNITIES

In 2017, the department transitioned its long-standing biostatistics and epidemiology doctoral programs to NYU School of Medicine's Sackler Institute of Graduate Biomedical Sciences. With this shift, the programs will benefit from the Sackler Institute's flexible curriculum, rigorous training experiences, and well-established administrative and mentoring support. Doctoral students will gain ready access to the courses, colleagues, and research initiatives in NYU School of Medicine's other biomedical graduate programs—including Sackler-wide courses, research techniques, grant writing, and biomedical ethics. The Sackler Institute will also establish a new disciplinary core—Data, Health, and Medicine—to encompass these in-depth, “cells to society” graduate training programs.

As part of the new core, the department will also launch a doctoral program in population health sciences in 2018. One of just a handful of such doctoral programs nationwide, it will include core work on population health methods and research skills, as well as specialized training in healthcare policy, behavioral change, and mathematical modeling. “We expect a lot of interest, not only from our biostatistics and epidemiology doctoral students but also from other graduate students at NYU and NYU School of Medicine who may want to take selected courses,” says Maria R. Khan, PhD, MPH, associate professor of population health and medicine and graduate adviser of this new doctoral program.

Interested students can also take four-week selective courses on epidemiology, medical ethics, population health science, and health policy, as well as three-month research concentrations with department faculty. In addition, the department hosts a symposium for medical students, faculty, and staff titled “Controversies in Population Health,” which addresses emerging, challenging themes in population health—such as healthcare legislation efforts, rationing versus efficiency, the role of e-cigarettes, health disparities, and the price of care.

“Our medical students are graduating into a world where they will be held increasingly accountable for outcomes in the populations they serve,” says Dr. Schwartz. “By including population health sciences in our medical school curriculum, we’re preparing them to succeed in that world.”

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— MARK D. SCHWARTZ, MD



Lorna E. Thorpe, PhD, MPH, (*right*) discusses the intersection of health equity and medical care with a group of medical students.

“By having our graduate students be part of Sackler, we are facilitating their connections with the rest of the basic sciences,” explains Dr. Schwartz. “For example, a number of our doctoral candidates are studying patient samples as part of their microbiome investigations, or analyzing gene arrays to see how they relate to environmental influences and population health outcomes, working side by side with the experts in these areas.”

The research opportunities have already begun to multiply. In the epidemiology doctoral program, “students work with a wide array of collaborators, including bench scientists, computational biologists, and urban policy experts,” explains Lorna E. Thorpe, PhD, MPH, professor of population health, director of the department’s Division of Epidemiology, and vice chair for strategy and planning. Making the program even more appealing is its open model, in which doctoral students can gravitate to the concentration of their choice. All eight applicants offered admission to the epidemiology doctoral program’s 2017 cohort accepted. “It’s a spectacular, highly competitive group,” adds Dr. Thorpe.

The population health perspective is also a point of differentiation for NYU School of Medicine’s doctoral program in biostatistics. Like the epidemiology program, it has an open format in which candidates choose their area of specialization over time. “If they fall in love with statistical genetics or biomedical computing, they can switch gears and follow that interest,” says Andrea B. Troxel, ScD, professor of population health and director of the department’s Division of Biostatistics. “It’s an unusual model that gives students a great amount of flexibility.”

While most graduate-level biostatistics programs are administered by schools of public health, the program’s location in the School of Medicine offers students in-depth training in both biomedical subjects and an array of analytic methods. Dissertations involve exploring a novel analytic tool, which often includes addressing a current biomedical science problem with one of the division’s collaborators from the School of Medicine. “With the skills our students learn, they can go on to work in a wide range of activities in academia, government, or the private sector,” notes Dr. Troxel. ■

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CURRENT RESEARCH PROJECTS

DIVISION OF BIOSTATISTICS

Novel Statistical Methods in Analyzing Microbiome Data for Longitudinal Study. PI: Huilin Li. Funded by NIH/NIDDK.

EHR Nudges: Development and Testing of a Behavioral Economics Electronic Health Record Module. PI: Andrea Troxel. Funded by NIH.

DIVISION OF EPIDEMIOLOGY

Oral Microbiome in Esophageal Adenocarcinoma. PIs: Jiyoung Ahn, Zhiheng Pei. Funded by NIH/NCI.

Prospective Study of Human Oral Microbiome and Pancreatic Cancer Risk. PI: Jiyoung Ahn. Funded by NIH/NCI.

Effect of Probiotic and Prebiotic Supplement Use on the Human Microbiome. PI: Jiyoung Ahn. Funded by NIH/NCI.

Foregut Microbiome and Risk of Gastric Intestinal Metaplasia, and Gastric Cancer Risk. PI: Yu Chen. Funded by NIH/NCI.

World Trade Center Exposures, Neuropathic Symptoms and Nervous System Injury. PI: Michael Marmor. Funded by CDC.

Component A: Impact of Community Factors on Geographic Disparities in Diabetes and Obesity Nationwide. PI: Lorna Thorpe. Funded by CDC.

The NYU Women's Health Study. PI: Anne Zeleniuch-Jacquotte. Funded by NIH/NCI.

DIVISION OF HEALTH AND BEHAVIOR

CENTER FOR HEALTHFUL BEHAVIOR CHANGE

Correlates of Behavioral and Anthropometric Risk Factors for Cardiovascular Disease in Asian American Women. PI: Tanya M. Spruill. Funded by AHA.

Tailored Sleep Health Education: A Community-Engaged Approach. PI: Girardin Jean-Louis. Funded by NIH/NHLBI.

Program to Increase Diversity in Faculty Engaged in Behavioral and Sleep Medicine. PI: Girardin Jean-Louis. Funded by NIH/NHLBI.

Tailored Peer-Based Sleep Health Education and Social Support in Blacks with OSA. PI: Girardin Jean-Louis. Funded by NIH/NIMHD.

Congruent Mentorship to Reach Academic Diversity (COMRADE) in Neuroscience Research. PI: Girardin Jean-Louis. Funded by NIH/NINDS.

Health Disparities Fellowship. PI: Girardin Jean-Louis. Funded by Association of Black Cardiologists.

Mentoring URM Scientists in Behavioral and Cardiovascular Health to Increase Academic Workforce Diversity. PI: Girardin Jean-Louis. Funded by NIH/NHLBI.

Enhancing Leadership Capacity to Mentor Scientists in Translational Behavioral AD-Related Research. PI: Girardin Jean-Louis. Funded by NIH/NIA.

Center for Stroke Disparities Solutions. PI: Gbenga G. Ogedegbe. Funded by NIH/NINDS.

STEP 2015-2016. PI: Joseph E. Ravenell. Funded by the New York State Education Department.

Communities Partnering in Navigation in New York City. PI: Joseph E. Ravenell. Funded by the New York City Department of Health and Mental Hygiene via Public Health Solutions.

Tailored Approaches to Improve Medication Adherence in Hypertensive Latinos and Blacks. PI: Antoinette M. Schoenthaler. Funded by Merck & Co., Inc.

The Effect of Insufficient Sleep on Cardiovascular Disease Disparity between Blacks and Whites. PI: Azizi A. Seixas. Funded by NIH/NHLBI.

Lifestyle Management of CKD in Obese Diabetic Patients. PI: Mary Ann Sevvick. Funded by NIH/NIDDK.

Behavioral Management of Phosphorus in Hemodialysis. PI: Mary Ann Sevvick. Funded by NIH/NIDDK.

A Telephone-delivered Mindfulness Intervention for Patients with Comorbid Depression and Chronic Disease. PI: Amanda Shallcross. Funded by NIH/NCCAM.

SIP 14-007: Managing Epilepsy Well (MEW) Network Collaborating Center. PI: Tanya M. Spruill. Funded by CDC.

Evaluating a Mindfulness-Based Intervention for Diverse Prehypertensive Women. PI: Tanya M. Spruill. Funded by AHA-NY.

Adherence to PAP Treatment: Influences of Co-Morbid Insomnia and of Race/Ethnicity. PI: Natasha J. Williams. Funded by NIH/NHLBI.

SECTION ON HEALTH CHOICE, POLICY AND EVALUATION

Evaluation Services to the Corporation for Supportive Housing (CSH). PI: Carolyn Berry. Funded by NYU Wagner via Corporation for Supportive Housing.

Proposal for Evaluation of NICH. PI: Carolyn Berry. Funded by the Helmsley Charitable Trust.

Evaluation Technical Assistance to NYCT, Year 2. PI: Carolyn Berry. Funded by the New York Community Trust.

Impact of Racially Targeted Food and Beverage Ads on Adolescent Behavior. PI: Marie Bragg. Funded by NIH/NIH Office of the Director.

Neighborhoods, Mobility and HIV Among Young MSM. PI: Dustin T. Duncan. Funded by NIH/NIMH.

Activity Space Neighborhoods, Drug Use and HIV among Black MSM in the Jackson, MS MSA. PI: Dustin T. Duncan. Funded by NIH/NIDA.

Impact of Neighborhoods and Networks on HIV Prevention and Care Behaviors among Black MSM in the Deep South. PI: Dustin T. Duncan. Funded by NIH/CDC.

PrEP Uptake and Adherence Among Young Black MSM: Neighborhood and Network Determinants. PI: Dustin T. Duncan. Funded by NIH/NIMH.

Impact of the Food Environment on Child Body Mass Index. PI: Brian D. Elbel. Funded by NIH/NIDDK.

Healthy Neighborhoods Fund Evaluation. PI: Brian D. Elbel. Funded by the New York State Health Foundation.

Double Up on Food Bucks. PI: Brian D. Elbel. Funded by the Robert Wood Johnson Foundation.

Impact of the Built Environment on Child Body Mass Index. PI: Brian D. Elbel. Funded by NIH/NIDDK.

Assessing the Strategy for Driving Health Systems to Engage in Population Health. PI: James R. Knickman. Funded by the Robert Wood Johnson Foundation.

SECTION ON HEALTH EQUITY

Project REACH FAR. PI: Nadia S. Islam. Funded by CDC.

SIP 15-004: Muslim Americans Reaching for Health and Building Alliances (MARHABA). PI: Nadia S. Islam. Funded by CDC.

Integrated Community-Clinical Linkage Model to Promote Weight Loss among South Asians with Pre-Diabetes. PI: Nadia S. Islam. Funded by NIH/NIDDK.

NYU Center for the Study of Asian American Health. PI: Chau Trinh-Shevrin. Funded by NIH/NIMHD.

New York University, City University of New York Health Promotion & Prevention Research Center (NYU-CUNY PRC). PI: Chau Trinh-Shevrin. Funded by CDC.

Common Threads 2016 Pilot. PI: Stella S. Yi. Funded by Common Threads.

CENTER FOR EARLY CHILDHOOD HEALTH AND DEVELOPMENT

Translating Scientific Discoveries. PI: Spring R. Dawson-McClure. Funded by the Bezos Family Foundation.

A Longitudinal Study of Latino Students' Grade 3 Academic Achievement: The Role of Early Childhood Family and School Characteristics. PI: Laurie M. Brotman. Funded by University of Texas.

Efficacy Follow-Up of ParentCorps: Long-term Impact of Early Childhood Family-Focused Intervention on Academic Achievement. PI: Laurie M. Brotman. Funded by U.S. Department of Education.

ParentCorps NYC. PI: Laurie M. Brotman. Funded by the New York State Office of Mental Health.

Research to Practice: Scaling in NYC. PI: Laurie M. Brotman. Funded by the Bezos Family Foundation and the Einhorn Family Charitable Trust.

UPK Mental Health PD Series. PI: Laurie M. Brotman. Funded by New York City Department of Education.

DIVISION OF COMPARATIVE EFFECTIVENESS AND DECISION SCIENCE

SECTION ON VALUE AND EFFECTIVENESS

The Operations Research Collaboration for Alcohol Abuse and AIDS: ORCAA. PI: Ronald Scott Braithwaite. Funded by NIH/NIAAA.

4/6 COMpAAAS U01: Operations Research Study. PI: Ronald Scott Braithwaite. Funded by NIH/NIAAA.

Should Screening and Treatment Strategies for Unhealthy Alcohol Misuse in HIV-infected Persons Vary with Smoking, Depression, and Substance Abuse? PI: Ronald Scott Braithwaite. Funded by NIH/NIAAA.

Treatment and Outcomes in Diabetic Breast Cancer Patients. PI: Heather Gold. Funded by NIH/NCI.

Longitudinal Study of Trauma, HIV Risk, and Criminal Justice Involvement. PI: Maria Khan. Funded by NIH/NIDA.

Stop-and-Frisk, Arrest, and Incarceration and STI/HIV Risk in Minority MSM. PI: Maria Khan. Funded by NIH/NIDA.

NCATS Diversity Supplement. PI: Aisha Langford. Funded by NIH/NCATS.

SECTION ON TOBACCO, ALCOHOL, AND DRUG USE

SIP 15-003: Proactive Care Coordination for Cancer Survivors Who Smoke. PI: Paul Krebs. Funded by CDC.

Extended-Release vs. Oral Naltrexone Alcohol Treatment in Primary Care. PI: Joshua D. Lee. Funded by NIH/NIAAA.

Extended-Release Naltrexone Opioid Treatment at Jail-to-Community Re-entry. PI: Joshua D. Lee. Funded by NIH/NIDA.

Development of a Text Messaging Tool to Support Buprenorphine Treatment in Primary Care. PI: Joshua D. Lee. Funded by NIH/NIDA.

Screening and Brief Intervention at the Intersection of Policy and Practice. PI: Jennifer McNeely. Funded by NIH/NIAAA.

Leveraging Technology to Address Unhealthy Drug Use in Primary Care Settings. PI: Jennifer McNeely. Funded by NIH/NIDA.

Development of a Rapid Survey to Detect Use of New and Emerging Drugs. PI: Joseph Palamar. Funded by NIH/NIDA.

Integrating Financial Management Counseling and Smoking Cessation. PI: Erin Rogers. Funded by the Robin Hood Foundation.

Implementing Tobacco Use Treatment Guidelines in Dental Public Health Clinics. PI: Donna Shelley. Funded by NIH/NCI.

Implementing Tobacco Use Treatment Guidelines in Community Health Centers in Vietnam. PI: Donna Shelley. Funded by NIH/NCI.

Health Systems for a Tobacco-Free New York. PI: Donna Shelley. Funded by New York State Department of Health.

Using Practice Facilitation in Primary Care Settings to Reduce Risk Factors for Cardiovascular Disease. PI: Donna Shelley. Funded by AHRQ.

COLA: Health Systems for a Tobacco-Free New York. PI: Donna Shelley. Funded by New York State Department of Health.

Linking Low SES and Racial/Ethnic Minority Populations to Evidence-based Cessation Treatment through Health System Changes. PI: Donna Shelley. Funded by Pfizer, Inc.

Modulation of Oral Microenvironment by E-cigarette Aerosol Mixtures. PI: Donna Shelley. Funded by NYU College of Dentistry.

Measure Development to Accelerate the Translation of Evidence-based Clinical Guidelines into Practice. PI: Donna Shelley. Funded by NIH/NCATS.

Feasibility and Acceptability of a Text Messaging Intervention to Increase Smoking Cessation in Vietnam. PI: Donna Shelley. Funded by NIH/NCI.

Midcareer Investigator Award in Patient-Oriented Research. PI: Scott E. Sherman. Funded by NIH/NIDA.

DIVISION OF HEALTHCARE DELIVERY SCIENCE

Health Information Technology in Heart Failure Care. PI: Saul Blecker. Funded by AHRQ.

Clinical and Translational Science Institute University of Pittsburgh Sub-award. PI: Michael Cantor. Funded through a subcontract with University of Pittsburgh.

Understanding Hospital Readmission Rates: Patient, Hospital and Community Effects. PI: Leora Horwitz. Funded by AHRQ.

Greater New York City Practice Transformation Network. PI: Leora Horwitz. Funded by Center for Medicare and Medicaid Innovation.

NYU Patient Imaging Quality and Safety Laboratory (PIQS Lab). PI: Leora Horwitz. Funded by AHRQ.

Coordinating Efforts to Enhance Hospitals' Role in Population Health. PI: Leora Horwitz. Funded by Robert Wood Johnson Foundation.

Language Barriers and Post-Acute Outcomes in Home Care: A Mixed Methods Analysis. PI: Simon Jones. Funded through a subcontract with NYU College of Nursing.

DIVISION OF MEDICAL ETHICS

The Collaborative Network for Clinical Research in Immune Tolerance. PI: Arthur L. Caplan. Funded by the Benaroya Research Institute at Virginia Mason.

Compassionate Use Advisory Committee. PI: Arthur L. Caplan. Funded by the Janssen Research Foundation.

WCG Foundation Grant. PI: Arthur L. Caplan. Funded by the WCG Foundation, Inc.

Ghanaian Research Integrity Development. PI: Arthur L. Caplan. Funded by the Office of Research Integrity.

ADDITIONAL PROJECTS

Substance Abuse Research Education and Training (SARET). PI: Marc N. Gourevitch. Funded by NIH/NIDA.

City Health Dashboard: A National Resource for Urban Health. PI: Marc N. Gourevitch. Funded by the Robert Wood Johnson Foundation.

Integrating Community Health Workers into Primary Care Teams to Improve Diabetes Prevention in Underserved Communities. PI: Mark D. Schwartz. Funded by NIH/NIDDK.

Abbreviations: **AHA**, American Health Association; **AHRQ**, Agency for Healthcare Research and Quality; **CDC**, Centers for Disease Control and Prevention; **NCATS**, National Center for Advancing Translational Sciences; **NCCAM**, National Center for Complementary and Alternative Medicine; **NCI**, National Cancer Institute; **NHLBI**, National Heart, Lung, and Blood Institute; **NIA**, National Institute on Aging; **NIAAA**, National Institute on Alcohol Abuse and Alcoholism; **NIAID**, National Institute of Allergy and Infectious Diseases; **NIDA**, National Institute on Drug Abuse; **NIDDK**, National Institute of Diabetes and Digestive and Kidney Diseases; **NIH**, National Institutes of Health; **NIMH**, National Institute of Mental Health; **NIMHD**, National Institute on Minority Health and Health Disparities; **NINDS**, National Institute of Neurological Disorders and Stroke.

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