Yale Public Health

Fall 2022



A PUBLICATION OF THE

Yale SCHOOL OF PUBLIC HEALTH



Yale Public Health

CELEBRATING OUR COLLABORATIVE CULTURE

Fall 2022

HEALTH JUSTICE

Global Health Justice Partnership brings law and public health together to promote health justice.



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TRACKING COVID-19

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Yale SCHOOL OF PUBLIC HEALTH

DEAN'S MESSAGE



Melinda Pettigrew Interim Dean and Anna M.R. Lauder Professor of Epidemiology (Microbial Diseases)

When Charles-Edward Amory Winslow arrived at Yale in 1915 to open a new Department of Public Health at the Yale School of Medicine, one of his first acts was to ensure that public health courses were also listed as electives in the offerings of other Yale schools. Winslow, widely regarded as a seminal figure in public health, did so because he knew that addressing society's complex public health issues requires collaboration across academic disciplines, government structures, private entities, community organizations, and among individuals themselves.

That fundamental understanding of the importance of innovation and collaboration in improving public health remains at the core of the Yale School of Public Health's mission 107 years later. It is within this context that I am proud to share with you the Fall 2022 issue of *Yale Public Health*, which celebrates YSPH's long-standing and distinctly collaborative culture.

In these pages, we highlight some of our many collaborations across Yale, including our work with Yale's Cancer Outcomes, Public Policy, and Effectiveness Research (COPPER) Center, the Global Health Justice Partnership, and within our own Institute for Global Health.

We also highlight our partnerships outside of Yale, where YSPH faculty, staff, students, and trainees are collaborating with government agencies, private corporations, and numerous nonprofit organizations in a variety of creative ways.

Lastly, I would like to encourage you to read two very special stories. The first (on page 28) tells the tale of how a generous gift from Robert, Virginia, and Derek Shiller and the Shiller Foundation has allowed us to offer our students and local community organizations three new fellowships focused on improving equity in maternal health. The second (on page 36) celebrates the tremendous dedication and energy of our alumni who collaborate with their alma mater by mentoring students, raising funds, and helping us to enhance our programs and services.

I think that this cumulative picture of our collaborative culture at YSPH would make C.-E. A. Winslow very, very proud.

Melinda Pettigrew, PhD '99

Yale Public Health The Journal of the Yale School of Public Health Fall 2022, Vol. 14

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Yale Public Health is published annually and is distributed to alumni, faculty, students and friends of the Yale School of Public Health.

Printer AM Lithography



Printed on recycled paper with soy-based inks

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A digital archive of Yale Public Health is available at ysph.yale.edu/about/communications/publications/.

ADVANCES

PROXIMITY TO FRACKING SITES ASSOCIATED WITH RISK OF CHILDHOOD CANCER

Pennsylvania children living near unconventional oil and gas (UOG) developments at birth were two to three times as likely to be diagnosed with leukemia between the ages of 2 and 7 as those who did not live near this oil and gas activity, after accounting for other factors that could influence cancer risk, a novel study from the Yale School of Public Health has found.

The registry-based study, published in the journal *Environmental Health Perspectives*, included nearly 2,500 Pennsylvania children, 405 of whom were diagnosed with acute lymphoblastic leukemia (ALL), the most common type of cancer in children.

ALL is a type of leukemia that arises from mutations to lymphoid immune cells. Although long-term survival rates are high, children who survive this disease may be at higher risk of other health problems, developmental challenges, and psychological issues. Unconventional oil and gas development, commonly referred to as fracking (short for hydraulic fracturing), is a method for extracting gas and oil from shale rock. The process involves injecting water, sand, and chemicals into bedrock at high pressure, which allows gas and oil to flow into a well and then be collected for market.

For communities living nearby, UOG development can pose a number of potential threats. Chemical threats

include, for example, air pollution from vehicle emissions and well and road construction, and water pollution from hydraulic fracturing or spills of wastewater. Hundreds of chemicals have been reportedly used in UOG injection water or detected in wastewater, some of which are known or suspected to cause cancer. The paucity of data on the association between UOG and childhood cancer outcomes has fueled public concerns about possible cancer clusters in heavily drilled regions and calls for more research and government action.

"Unconventional oil and gas development can both use and release chemicals that have been linked to cancer, so the potential for children living near UOG to be exposed to these chemical carcinogens is a major public health concern," said the study's senior author, Nicole Deziel, MHS, PhD, associate professor of epidemiology at the Yale School of Public Health.

"Studies of UOG exposure and cancer are extremely few in number. We set out to conduct a high-quality study to further investigate this potential relationship," added Cassandra Clark, PhD '22, the study's first author and a postdoctoral associate at the Yale Cancer Center. "Our results indicate that exposure to UOG may be an important risk factor for ALL, particularly for children exposed *in utero*."

HEART MEDICATIONS TIED TO GREATER HEART ATTACK RISK

For people with coronary heart disease, beta blockers can improve survival and quality of life, while aspirin and other antiplatelet medications can reduce the risk of a heart attack.

But those protections could backfire during hot weather, when heart attacks are more likely. A new study found that, among people suffering nonfatal heart attacks associated with hot weather, an outsize portion are taking these heart drugs.

The study appears online in *Nature Cardiovascular Research*.

"Patients taking these two medications have higher risk," said Kai Chen, PhD, an assistant professor in the department of epidemiology (environmental health) at the Yale School of Public Health and first author of the study. "During heat waves, they should really take precautions."



Using a registry, the authors looked at 2,494 cases in which individuals experienced a nonfatal heart attack in Augsburg, Germany, during hot months (May through September) between 2001 and 2014.

In previous research, they had shown that exposure to either heat or cold made heart attacks more likely, and they calculated that heat-related heart attack rates would rise once the planet has warmed by 2 to 3 degrees Celsius over preindustrial times.

The current study built on that research by examining patients' medication use prior to their heart attack.

It turned out that users of beta blockers or antiplatelet medications were likelier to have heart attacks during the hottest days compared with other days. Antiplatelet medication use was associated with a 63% increase in risk, and beta blockers with a 65% increase. People taking both drugs had a 75% higher risk. Nonusers of those medications were not more likely to have a heart attack on hot days.

The study doesn't prove that these medications caused the heart attacks, nor that they make people more vulnerable to heart attack. Although it's possible that they did increase the risk of heart attacks triggered by hot weather, it's also possible that patients' underlying heart disease explains both the prescriptions and the higher susceptibility to heart attack during hot weather.

Still, there is at least one clue that these two medication types may render people more vulnerable: For the most part, other heart medications didn't show a connection to heat-related heart attacks. (An exception was statins. When taken by younger people, statins were associated with an over threefold risk of a heart attack on hot days.)

"We hypothesize that some of the medications may make it hard to regulate body temperature," Chen said. He plans to try to untangle these relationships in future studies.

Jenny Blair



YALE STUDY IDENTIFIES CAUSES OF CANCERS

A team of Yale-led researchers can now quantify the factors causing changes in DNA that contribute most to cancer growth in tumors of most major tumor types.

In a paper published in *Molecular Biology and Evolution*, the researchers said their novel molecular analysis approach brings clarity to a long-standing debate over how much control humans have over developing cancer across time.

Looking at instances of specific genetic mutations can reveal the extent to which preventable exposures like ultraviolet light caused tumor growth in 24 cancers, said Jeffrey Townsend, PhD, the Elihu Professor of Biostatistics in the department of biostatistics at YSPH.

"We can now answer the question – to the best of our knowledge – 'What is the underlying source of the key mutations that changed those cells to become a cancer instead of remaining normal tissue?" he said.

Some of the most prevalent cancers in the United States are known to be highly preventable by human decisions. Skin cancers like melanoma emerge in large part because of prolonged exposure to ultraviolet light, and lung cancers can often be traced back to tobacco use. But scientists have long struggled to gauge how much any individual's tumor developed as a result of preventable actions compared with aging or "chance."

Previously, scientists have shown that they can reliably predict how certain factors cause specific mutations that alter the genome in tissues. By combining this knowledge with a method that quantifies the contribution of each mutation to cancer, Townsend and his colleagues showed the specific percentage of the blame to be assigned to known and unknown but identified factors in the emergence of cancer.

"That gives us the last puzzle piece to connect what happened to your genome with cancer," he explained. "This is really direct: We look in your tumor, and we see the signal written in your tumor of what caused that cancer."

Matt Kristoffersen

ECONOMIC BURDEN OF LYME DISEASE COULD BE NEARLY \$1 BILLION ANNUALLY

The economic burden of Lyme disease in the U.S. could be nearly \$1 billion annually, according to a study by researchers from the Yale School of Public Health, the U.S. Centers for Disease Control and Prevention, and health officials from four states heavily impacted by the disease.

The report, the CDC's most comprehensive evaluation of the economic impact of Lyme disease to date, looked at the total cost of diagnosed Lyme disease cases between September 2014 and January 2016 and followed reported cases in four states where the tickborne disease is prevalent: Connecticut, Maryland, Minnesota, and New York.

"Lyme disease represents a substantial economic burden to individuals and U.S. society," said Sara Niesobecki, MPH, one of the study's co-authors and an investigator with the Connecticut Emerging Infections Program at YSPH. "The aggregate cost of diagnosed Lyme disease could be close to \$1 billion annually but this does not include suspected, undiagnosed, or nonacute cases."

The researchers acknowledge that further evaluation is warranted to determine the total economic burden attributable to Lyme disease in the U.S.

Niesobecki is coordinator of the TickNET Program at the Yale School of Public Health, one of four TickNET sites nationally that assisted the CDC in developing protocols and collecting data for the study. TickNET is a collaborative public health effort that was established by the CDC in 2007 to help coordinate surveillance, research, education, and prevention of tickborne diseases.

In estimating the economic burden of Lyme disease, the researchers collected data for direct medical costs, nonmedical costs, and losses in productivity from patients clinically diagnosed with Lyme disease. They also collected billing code information from patients' health care providers to assess societal costs (all costs, no matter who pays them, whether the patient, health care system, third party payer/ insurance, or government) and out-of-pocket patient costs. They determined that the average out-of-pocket patient cost was approximately \$1,200 per illness and the average societal cost was about \$2,000 per patient.

"Most patients had low costs, but some experienced very high costs related to Lyme disease," Niesobecki said. "Patients with later stages of disease had double the costs of those with early disease."

Using these data and additional information on the estimated number of Lyme disease cases diagnosed in the United States, the researchers estimated that the annual total cost of diagnosed Lyme disease could be \$345 million to \$968 million (in 2016 U.S. dollars).

"These findings emphasize the importance of effective prevention of Lyme disease and early and accurate diagnosis in order to reduce illness and the associated costs to the patient and society," said Niesobecki. "They can also be used in cost-effectiveness analyses of current and future Lyme disease prevention methods, such as a vaccine."

The Connecticut Emerging Infections Program is funded through a cooperative agreement with the CDC and is a partnership between the Connecticut Department of Public Health and Yale School of Public Health. There are 10 Emerging Infections Program sites in the country, and four of those sites – Connecticut, Maryland, Minnesota, and New York – participate in TickNET.

The study estimating the economic burden of Lyme disease was published May 11 in *Emerging Infectious Diseases*. Information from a media advisory issued by the CDC was included in this article.

AS U.S. LAUNCHES NEW CRISIS HOTLINE, NEARLY HALF OF COUNTIES LACK RESPONSE TEAMS

A new 988 Suicide and Crisis Lifeline launched by the U.S. government is supposed to make it easier for people experiencing a mental health crisis to get help. But a Yale School of Public Health study has found that not all Americans will have the same access to appropriate follow-up care.

The 988 Lifeline, which went into effect on July 16, replaces the National Suicide Prevention Lifeline and offers expanded services, including support for people struggling with substance use and other behavioral health issues. The Lifeline is intended to direct calls to mental professionals – including crisis intervention teams (CIT) if necessary – rather than law enforcement.

While most callers' needs can be met over the phone, 10% to 20% of calls require an in-person response to further assess the situation or transfer the caller to an appropriate care facility if necessary, according to the Yale study. But not all U.S. communities have access to crisis teams to provide that critical in-person support.

A study by researchers at YSPH found that nearly half of all U.S. counties -1,512 of 3,142 (48%) - lacked access to a facility providing community CIT services in 2020. While almost 90% of U.S. residents live in a county with access to CIT, 1 in 9 U.S. residents live in counties without access to these services. The problem is particularly acute in rural areas. Researchers found that counties without access to crisis intervention teams tended to have a greater percentage of older and uninsured residents. They also were the counties with higher suicide mortality rates.

"This is concerning because rural America has some of the highest suicide rates and significant mental health needs," said Helen Newton, MPH, PhD, a YSPH postdoctoral fellow and the study's lead author. The study appears in *JAMA Network Open*.

The cross-sectional study looked at 10,591 mental health treatment facilities in all 3,142 counties across the 50 U.S. states and the District of Columbia that were listed in the 2020 National Directory of Mental Health Treatment Facilities, which is maintained by the U.S. Substance Abuse and Mental Health Services Administration. The directory



notes which facilities offer a crisis intervention team. The authors identified the counties in which those facilities were located as of 2015 and 2020, respectively. They then assessed how access to crisis intervention teams was associated with regional social and demographic characteristics and state Medicaid policies.

The new 988 Lifeline is expected to increase demand for community behavioral health services, which was already on the rise prior to COVID-19, according to the American Hospital Association. The AHA estimates that 21% of U.S. adults (some 52 million people) have mental, behavioral, or emotional disorders.

Ashley Liebre



COLLABORATIVE

From documenting potential war crimes in Ukraine to investigating malaria in Senegal, Yale School of Public Health scientists collaborate with partners across the globe in addressing some of the most pressing health challenges of today. The eight stories that follow highlight just a few of YSPH's many collaborative endeavors across Yale, Connecticut, the U.S., and the world. As a public health leader and force for innovation, the Yale School of Public Health prides itself on its interdisciplinary focus and multifaceted approach to solving the complex public health issues of our time.

CULTURE

FEATURE



GLOBAL HEALTH JUSTICE PARTNERSHIP BRINGS STUDENTS TO THE FRONT LINES OF PUBLIC HEALTH POLICY, PRACTICE, AND LAW

BY COLIN POITRAS

From advocating for South African gold miners with occupational lung disease to challenging Connecticut quarantine policies during the 2016 Ebola epidemic, Yale's Global Health Justice Partnership (GHJP) has been an active voice on pressing global, national, and local health issues for the past decade.

A joint program of the Yale School of Public Health (YSPH) and Yale Law School (YLS), the GHJP offers students the opportunity to work in teams with peers from different disciplines to address critical topics at the intersection of public health, rights, and justice in the 21st century.

These projects, overseen by leading faculty from YSPH and YLS, often involve outside partnerships with other universities, nongovernmental organizations, government agencies, and local grassroots organizations as well as policy and advocacy groups around the world.

The GHJP has collaborated with the New Haven Sex Workers and Allies Network (SWAN), National Association of Community Health Workers, American Civil Liberties Union, Center for Reproductive Rights, Public Citizen, Center for Human Rights and Global Justice (NYU School of Law), World Medical Association, CREA (India), Black Mamas Matter Alliance, and Haitian Environmental Law Association (Association Hatïenne de Droit de L'Environment) among many other groups and organizations in the U.S. and globally.

For co-director Gregg Gonsalves, PhD '17, a YSPH associate professor of epidemiology (microbial diseases), the GHJP's crossover focus on law, policy, and public health is unique. "It's not like any program at any other law school or public health school that I'm aware of," he said.

Gonsalves, who is also an associate professor of law (adjunct), is one of three leaders of the GHJP. The other co-directors are Law Professor Amy Kapczynski, JD '03, and Associate Professor of Law (adjunct) and Assistant Clinical Professor of Public Health Alice "Ali" M. Miller, JD. A cornerstone of the GHJP is a practicum/clinic course and other project-driven work that teaches students how to engage critically and constructively with the evolving tools of law, policy, and rights in the context of health and human rights.

"Our student teams are interdisciplinary, joining law and public health students to benefit from their different kinds of expertise, and also to teach students how to appreciate and do work across these silos," Kapczynski said. "The design of our projects, partnerships, and teaching is organized by principles of health justice work, meaning that we not only aim to influence the structural and political determinants of health, but also aim to build power among the people most affected so that over time they have more say over their circumstances."

"Working locally in New Haven and Connecticut has become more and more central to our work over time," she continued, "because we also believe in the importance of deep and ongoing partnerships that allow our students to get outside of the classroom."

As part of its mission, the GHJP seeks to make critical policy interventions and perform crosscutting research that promotes health justice nationally and globally. The partnership produces policy reports and commentaries, organizes conferences and events, and provides research in support of litigation promoting health justice and equity in the U.S., as well as in regional and global forums. It also offers students fellowship opportunities for advanced study. The issues addressed in GHJP policyoriented projects are often further interrogated in more academic-focused writing as well, by students, fellows, and faculty associated with GHJP. WE ALSO BELIEVE IN THE IMPORTANCE OF DEEP AND ONGOING PARTNERSHIPS THAT ALLOW OUR STUDENTS TO GET OUTSIDE OF THE CLASSROOM."

~Amy Kapczynski

Former GHJP clinical fellow Francesca Maviglia, MPH '20, praised the partnership for helping her become more self-reflexive and critical in her analysis when engaging in health justice issues.

"The multiple vantage points offered by law, public health, and human rights were particularly useful," Maviglia said. "A different disciplinary perspective can illuminate repercussions or consequences that are not readily apparent." She said she will always strive to maintain the rigorous practice she learned at the GHJP in her public health work rather than settle for simple answers.

Maviglia used her fellowship to advance the health and rights of New Haven sex workers through harm reduction and advocacy. The project resulted in a joint report by the GHJP and the New Haven-based grassroots organization Sex Workers and Allies Network (SWAN) titled "Mistreatment and Missed Opportunities: How Street-Based Sex Workers are Overpoliced and Underserved in New Haven, CT." The report has been cited by other organizations and advocacy groups, and current projects are continuing from where the SWAN project left off. Current GHJP students are mapping the ability of Connecticut service providers to reach, adequately serve, and ultimately advocate for and with LGBTQ+ and substance-using people in sex work.

In a separate project in 2019, former GHJP students Rita Gilles, YLS '20, and Isabel Echarte, YLS '21, applied innovative legal theories to help hold a landlord accountable for excessive rates of asthma and other health conditions in New Haven's notorious Church Street South apartment complex. Their efforts contributed to a class-action lawsuit that resulted in a preliminary \$18.5 million settlement in the tenants' favor.

"The work of the GHJP is not just to be part of efforts for policy change; we are here as a site for networks of students to find each other across disciplines, discover the strengths and challenges of the tools in law and public health, and put them to work together in ways that can be sustained after graduation," Miller said. "The goal is not just for student projects to have an impact (as they have, both locally and globally) but for students to see themselves and their work as accountable to the movements and collaborating partners with whom we work for the long haul."

OTHER PROJECTS UNDERWAY AT THE GHJP INCLUDE:

PHARMA JUSTICE

GHJP undertakes research and advocacy to ensure more integrity and transparency in clinical pharmacology research and to bring about a more just system for the development and distribution of medicines.

GENDER, SEXUALITY, AND RIGHTS

GHJP applies a nuanced, multidisciplinary approach to forge new alliances and provide analytics for new policies. GHJP recently collaborated on a submission to explore the boundaries of "gender-based persecution" under the International Criminal Court, and an amicus to the European Court of Human Rights supporting a challenge to testosterone-based gender regulations in sports for intersex athletes.

INFECTIOUS DISEASE AND JUSTICE

GHJP focuses on key structural factors associated with the transmission and effects of infectious disease, marshaling existing data, and doing new research to support public health and clinical interventions.

DATA FOR HEALTH JUSTICE

GHJP mobilizes a variety of disciplines from management science to mathematical modeling to investigate key issues in global health justice and their individual and societal impacts, and to shape solutions and interventions.

LOCAL HEALTH JUSTICE

Because health status tracks other forms of exclusion and privilege, GHJP works in New Haven and Connecticut to improve health in marginalized communities as a means to build power that can have democratizing structural effects, with impacts that redound beyond health.

YOUTH EQUITY SCIENCE/YES

The Youth Equity Science/YES Project is a collaboration between mental health and human rights experts to benefit LGBT youth. YES aims to promote LGBT youth equality, health, and well-being and decrease health and wellness disparities. YES interventions for health justice of LGBTQ youth include interrogation of the status of LGBTQ+ youth in child welfare services, and use of a rights-based approach to end conversion practices globally.

BIOMEDICAL DATA Science program Accepts four New Fellows



BY ELIZABETH LIN



Top Left to Bottom Right: 2022 Fellows Rong Li, Dylan Duchen, Chuanpeng Dong, & Shubham Tripathi





Yale and Boehringer Ingelheim have partnered to create a Biomedical Data Science Fellowship program for postdoctoral fellows. The program awards postdoctoral researchers a three-year fellowship that includes access to Yale's robust computational resources, biomedical data repositories, and faculty expertise as well as Boehringer Ingelheim's corporate labs, scientists, and executives.

"The collaboration with Boehringer Ingelheim is designed to create a world-class data science program that will drive development of novel methods and tools to analyze and interpret the many large and complex biomedical datasets that have been generated in recent years," said Hongyu Zhao, PhD, Ira V. Hiscock Professor of Biostatistics and a Yale professor of genetics and of statistics and data science. Zhao is the program's principal investigator.

With the program now in its second year, four new postdoctoral fellows – Rong Li, Dylan Duchen, Chuanpeng Dong, and Shubham Tripathi – began their work in September.

Li plans to analyze tumor, gene, and protein data in order to identify more specific subtypes of cancers for personalized patient treatment.

Duchen will use graphs to model immune cell profiles in individuals and identify which biological factors lead to better efficacy of treatments in patients.

Dong will use machine learning models to predict which paralog pairs (gene copies with different functions) could be effective in cancer immunotherapy.

Tripathi will create a mathematical model to determine which genes and cells directly affect immune responses, with the ultimate goal of being able to modulate this response. "These projects rely on data from both Yale and Boehringer Ingelheim, and the more data we share, the more we progress," said Xinxin "Katie" Zhu, MD, executive director of the Yale Center for Biomedical Data Science and manager of the fellowship program. "You cannot look at yourself as industry or academia. Boehringer Ingelheim and Yale share the same goal of talent development and retention and through this [partnership], we find the best of the best in the candidate and keep growing them."

Dhananjay Bhaskar, a 2021 program fellow, said the program reshaped how he approaches research. "The scientific process is iterative and nonlinear, and the partnership with BI [Boehringer Ingelheim] has given me insight into the unique challenges and opportunities in conducting research for industry. It has been a wonderful learning experience that has broadened my perspective on how computational biology research can be applied to product development, cascading down to improved clinical outcomes and benefits to society," he said.

The purpose of the fellowships goes far beyond advanced training in biomedical data science. "Of course, we're going to sharpen their [technical] skills, but that's not the only thing this fellowship is for," Zhu said. "We would like to prepare them to be the next generation of leaders in the field and to have them serve as a bridge between universities and industry."

Zhao considers the partnership as only the beginning of what will eventually be many future collaborations. "I think it's an anchor to really start bringing people together," he said. "There are a lot of things that can be derived from this." In the past year, Yale and Boehringer Ingelheim have already partnered on a project sponsored independently of the fellowship program.

"This is a win-win both for Yale and for BI, where the partnership is a matchmaker, a platform for people to get to know each other," said Zhu. "And we don't want to stop there ... we want to be the bridge. We want to be the liaison. We want to build a community."



2021 fellow Dhananjay Bhaskar

"

THE SCIENTIFIC PROCESS IS ITERATIVE AND NONLINEAR, AND THE PARTNERSHIP WITH BI [BOEHRINGER INGELHEIM] HAS GIVEN ME INSIGHT INTO THE UNIQUE CHALLENGES AND OPPORTUNITIES IN CONDUCTING RESEARCH FOR INDUSTRY. IT HAS BEEN A WONDERFUL LEARNING EXPERIENCE THAT HAS BROADENED MY PERSPECTIVE ON HOW COMPUTATIONAL BIOLOGY RESEARCH CAN BE APPLIED TO PRODUCT DEVELOPMENT, CASCADING DOWN TO IMPROVED CLINICAL OUTCOMES AND BENEFITS TO SOCIETY."

~Dhananjay Bhaskar

"

I THINK IT'S AN ANCHOR TO REALLY START BRINGING PEOPLE TOGETHER. THERE ARE A LOT OF THINGS THAT CAN BE DERIVED FROM THIS."

~Hongyu Zhao

THESE PROJECTS RELY ON DATA FROM BOTH YALE AND BOEHRINGER INGELHEIM, AND THE MORE DATA WE SHARE, THE MORE WE PROGRESS."

~Xinxin "Katie" Zhu

HUMANITARIAN RESEARCH LAB Documenting Potential War Crimes in Ukraine

THE FINDINGS WERE COLLECTED ON A SCALE OF METHODICAL COMPLEXITY THAT COULD NOT HAVE BEEN POSSIBLE WITHOUT THE COLLABORATION OF THE NATIONAL LAB SYSTEM, AND A CONSORTIUM OF FOR-PROFIT, NONPROFIT, AND GOVERNMENTAL ORGANIZATIONS COMING TOGETHER TO ANALYZE REPORTED WAR CRIMES."

~Nathaniel Raymond

BY ASHLEY LIEBRE

Bottom: Filtration activities at this Bezimenne Filtration Post include registration, holding, and secondary interrogation. Twenty blue tents and nine white tents have been erected. There is a queue of vehicles 15-mile-long that ends at the site, with most vehicles coming from the direction of Mariupol (west). People appear to be gathering around a small structure consistent with a possible aid distribution site.

Opposite Page: Mapping Russia's detention operations in Donetsk province, August 2022. The Yale School of Public Health's Humanitarian Research Lab (HRL) is documenting potential violations of international law and crimes against humanity by Russia and Russia-aligned forces in Ukraine as part of a new Conflict Observatory initiative led by the U.S. Department of State.

An August 25 report released by the Yale HRL corroborated the existence of a reported "filtration system" in the Donetsk province of eastern Ukraine where Russians and Russia-aligned forces were allegedly holding Ukrainian citizens and prisoners of war at specific sites. Approximately 21 filtration sites were identified with high confidence by the Yale HRL, including registration points, holding areas, and prison facilities for long-term detention.

The Yale HRL, which is funded in part by the YSPH Rapid Response Fund, is also monitoring the destruction of health facilities and schools in Ukraine. Using satellite imagery analysis and open-source investigative methods, the Yale HRL identified 22 health care facilities and 30 schools that were damaged by sustained Russian bombardment in the Sievierodonetsk district between February 13 and June 13, 2022.

In producing its reports, the Yale HRL is working in close collaboration with the U.S. State Department's Bureau of Conflict and Stabilization Operations (CSO), geographic mapping software company Esri, the Smithsonian Cultural Rescue Initiative, PlanetScape Ai, and other partners in supporting the Conflict Observatory.

Student researchers on the team have benefited from the experience of collaborating with YSPH faculty and other governmental and nongovernmental organizations.

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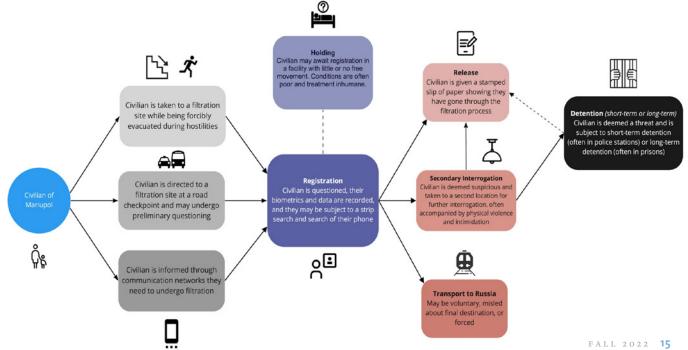
"As researchers, we are not in a position or capacity to end foreign conflict; however, our research helps to anticipate the associated triggers that create public health crises," said Associate Professor Kaveh Khoshnood, MPH '95, PhD '89, the lab's faculty director and co-founder of the Yale Violence and Health Study Group. "Armed conflict is a public health problem in addition to a political or military issue. Our student interns are learning that solutions to public health challenges within this context require collaboration with a variety of organizations that bring different expertise."

Yale HRL Executive Director Nathaniel Raymond, a lecturer at YSPH, praised said the lab's reports would not be possible without the collaboration of multiple partners across different fields.

"The findings were collected on a scale of methodical complexity that could not have been possible without the collaboration of the national lab system, and a consortium of for-profit, nonprofit, and governmental organizations coming together to analyze reported war crimes," he said.

The lab's research is intended to identify and document detailed information about possible violations of international law and human rights.

"Many countries have not been held accountable for war crimes because there hasn't been a lot of evidence-based research into their activities," Khoshnood said. "Evidence provides a stronger case for international government organizations to address crimes against humanity. This requires our research to be specific, robust, and detailed."



CROSS-COUNTRY COLLABORATORS MONITOR THE SPREAD OF COVID-19

BY MATT KRISTOFFERSEN

On January 20, 2022, during the height of the omicron variant's winter sweep across the nation, a map of U.S. COVID-19 cases looks like a blizzard.

Then, by spring 2022, as the county-level case counts fell nationwide, one can see a gradual thaw: A nation awash in light blue – what the map's legend signals as startlingly high infection numbers – slowly switches over to the deep purple hues of a waning pandemic.

It's a colorful way of displaying epidemiological findings on a granular level. But to the creators of covidestim (a combination of "COVID-19" and "estimate"), including Yale School of Public Health Professor Ted Cohen, MD, DPH, it's something far more valuable. The intense collaboration behind covidestim has produced valuable snapshots of the COVID-19 epidemic in real time, taking into account delays and incompleteness of surveillance data.

Covidestim is a statistical model that the researchers developed with financial support from the U.S. Council of State and Territorial Epidemiologists. It runs with support from Amazon and the Yale Center for Research Computing. It does what the researchers call "nowcasting" of the pandemic. To see the latest covidestim model, visit *covidestim.org*.

"Our goals with this project are focused on developing as granular as possible a picture of the current state of the epidemic, given all the limitations with the available data," said Cohen, a professor of epidemiology (microbial diseases).

Unlike popular COVID-19 case counters like the Johns Hopkins COVID-19 Dashboard, covidestim estimates the numbers of infectious individuals regardless of whether they are symptomatic or have been tested for disease. It works by combining county- and state-level observations of case numbers, hospitalizations, deaths, vaccination rates, and existing data on the natural history of the virus to estimate the numbers of unobserved infections that have occurred in a specific location. The estimates that the team generates are accompanied by uncertainty bands.

"It's important to quantify and communicate our current levels of uncertainty because infections happening today result in clinical cases, hospitalizations, and deaths in future weeks. As a result, estimates for what's happening right now or in the very recent past are imprecise," Cohen said.

Cohen credits his collaborators, especially the two scientists with whom he has worked for more than a decade on other projects – Harvard Associate Professor Nick Menzies and Stanford Professor Joshua Salomon – with helping to make covidestim a reality.

The cross-country teamwork has definitely been beneficial, Menzies said.

"Having a foothold in three different institutions in three different states gives us access to a wider set of experts and decision-makers to work with," he said.

The open-source nature of the project is one of its greatest assets. Anyone can freely download covidestim's code to generate models with their own data. This allows researchers to modify and track the path of other pathogens as needed.

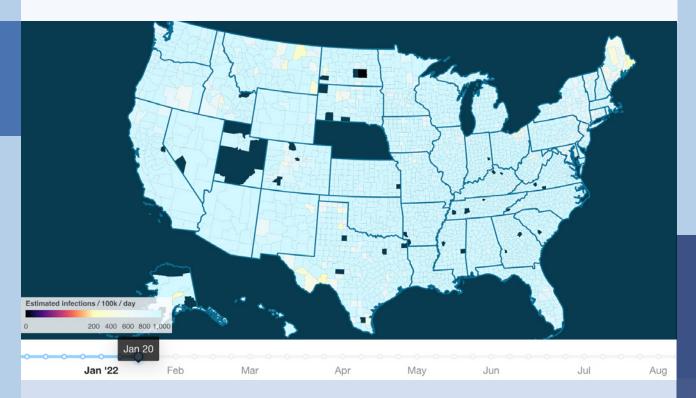
"We didn't want to set ourselves up as gatekeepers," Menzies said.

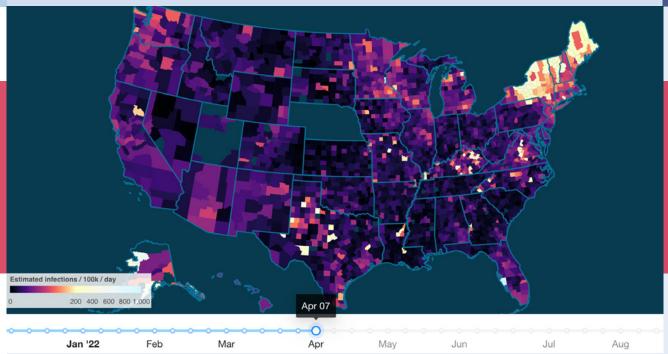
Since 2020, the covidestim project has helped researchers, decision-makers and members of the public health community understand where COVID-19 was spreading, Cohen said. The "nowcast" team produces helps with that process.

"We're trying to estimate something that is not as easily seen. It's an invisible quantity," Cohen said. "But it's one of great epidemiologic importance."

WE'RE TRYING TO ESTIMATE SOMETHING THAT IS NOT AS EASILY SEEN. IT'S AN INVISIBLE QUANTITY ... BUT IT'S ONE OF GREAT EPIDEMIOLOGIC IMPORTANCE."

~Professor Ted Cohen





Top: A map of the United States is awash in light blue reflecting a very high COVID-19 case count during a surge of the omicron variant in the winter of 2022.

Bottom: A map of the United States is almost entirely deep purple in the spring of 2022 as the omicron variant surge recedes.

FEATURE

CLIMATE CHANGE REPORT SHOWCASES BENEFITS OF INTERDISCIPLINARY COLLABORATION

BY PAM JOHNSON

Hotter summer days and other extreme weather events being driven by climate change are putting increased pressure on Connecticut residents already struggling to pay their utility bills – and the situation is impacting some residents' health. That is just one of the key findings included in a new collaborative report led by the Yale School of Public Health's Center on Climate Change and Health (YCCCH).

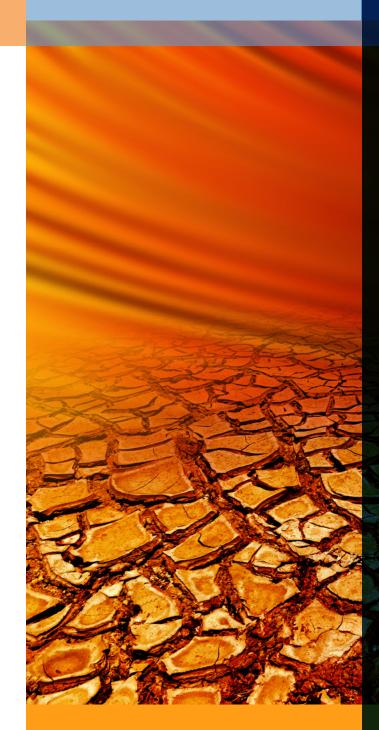
The report, "Energy Justice and Health in a Changing Climate," was released in July by YCCCH in collaboration with Vermont Law and Graduate School (VLGS), Yale School of the Environment (YSE), and Operation Fuel, a Connecticut-based nonprofit energy assistance and advocacy organization committed to equitable energy access. It was the result of a collaborative, project-based course entitled the YSPH Clinic in Climate Justice, Law, and Public Health. The clinic is supported through a grant from the Stavros Niarchos Foundation Fund.

"We're leaning in on showing how climate change is a health issue, and how public health brings that into perspective," said Laura Bozzi, PhD '13, YCCCH director of programs and Yale's faculty adviser for the project. "But understanding the problem and the solutions needed to address it also takes environmental managers, lawyers, the humanities, and social sciences. We wanted to construct a clinic where students with different expertise could come together around a particular project."

Student researchers from YSPH, YSE, and VLGS wrote the report, which showed that energy insecurity is also a health issue and placed it in the context of solutions that take climate change into account.

Working in collaboration allowed students to share their strengths and learn from one another, said YSPH project lead Erika-ann Kim, MPH '22.

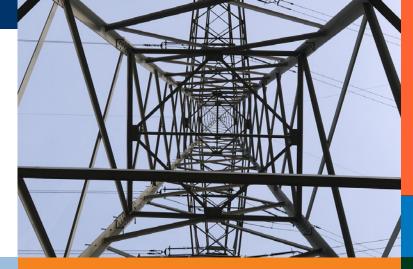
"I knew the qualitative methodology," said Kim. "What I was not familiar with was implementing that into things



RESEARCH IS BETTER, IT'S MORE RELEVANT, IT'S MORE USABLE, IT'S MORE RESPECTFUL TO THE COMMUNITY IT IS SERVING WHEN THE RESEARCH QUESTIONS, METHODS, ANALYSIS, AND DISSEMINATION ARE DONE COLLABORATIVELY."

~Laura Bozzi





like policy and creating that bridge between taking research results and actually using them to inform structural changes. I'm really grateful that I was able to get that experience."

Because the project was so crosscutting, it was valuable to have people with different skill sets, said project lead Sarah Gledhill, a Master of Environmental Management candidate at YSE.

"I feel like every member of the team brought different things which made us stronger together," Gledhill said. "I had never done qualitative research, but we had a lot of people who had already done focus groups for other types of research, whereas I could talk more about energy efficiency and how buildings work."

Joining Gledhill and Kim as project leads were Jhena Vigrass and Epongue Ekille, from YSE; and Kimberly Mashke and Olivia St Pierre, from VLGS.

The student researchers held discussions with 22 Connecticut residents in focus groups gathered with assistance from Operation Fuel. The groups represented Connecticut's diverse population, including low-income residents, individuals from communities of color, older adults, persons with disabilities, and those living with chronic diseases.

"I've done community participatory-based research before, but I've never really done it like this, where we were so intertwined in communication with our community partners," said Kim. "Every step of the research process involved not only us as researchers, but also Operation Fuel, and everyone else. I see that type of collaboration as a huge highlight of this project."

"Research is better, it's more relevant, it's more usable, it's more respectful to the community it is serving when the research questions, methods, analysis, and dissemination are done collaboratively," said Bozzi. "I think the Operation Fuel project is a good example of that."

MULTIDISCIPLINARY COPPER CENTER BRINGS A PUBLIC HEALTH LENS TO CANCER CARE

BY JENNY BLAIR

New cancer treatments can look promising in clinical trials. But they do no good if patients don't receive them. That innovative, purportedly miraculous medication? Are clinicians prescribing it? Can patients afford it? Does it significantly improve patients' lives?

Studying cancer treatment outcomes is the mission of the Cancer Outcomes, Public Policy, and Effectiveness Research (COPPER) Center, a collaborative effort of the Yale Cancer Center and the Schools of Medicine and Public Health.

Guided by a big-picture point of view that owes much to public health, COPPER's researchers shed light on everyday cancer care that takes place outside the controlled setting of a drug trial.

"A primary goal of cancer research is not just to discover new treatments and come up with new FDA therapies," said COPPER Director Cary Gross, MD, a professor of medicine (general medicine) and of public health (chronic disease epidemiology). "The real goal is to have an impact on patients' lives."

A PUBLIC HEALTH LENS

Gross co-founded COPPER in 2009 with Professor of Epidemiology (Chronic Diseases) Xiaomei Ma, PhD.

"Our cancer center really excels with regard to basic science, molecular discoveries, and translational research.

But at the time, there was not a lot of focus on looking at the public health impact of these discoveries," Gross said. "Xiaomei and I were hungry to find more collaborators who were interested in taking a big-picture approach" to cancer care research.

Associate Director Pamela Soulos, MPH '09, signed on with COPPER after graduating from YSPH as a newly minted data analyst.

"It's blossomed into this wonderful collaboration between the School of Medicine, the School of Public Health, and the Yale Cancer Center. We have over 30 different faculty collaborators," Soulos said. Any given project could involve physicians of different specialties, data analysts, and PhD-level researchers, she explained.

"We don't do projects where one investigator has an idea, one analyst does the analysis, and then it's done. We really value input from multiple people," Soulos added.

Michaela Dinan, PhD, an associate professor in the Yale School of Public Health's department of chronic disease epidemiology and co-leader of the Cancer Prevention and Control research program at Yale Cancer Center who studies patients' access to care as well as their long-term health outcomes, can attest to that. She cites COPPER as one of the reasons she came to Yale in early 2021, "specifically, the collaborative nature" of the center.

Public health faculty like Dinan have been invaluable COPPER collaborators, according to Gross, and not merely for their skill at designing studies that get at the truth.

They "think of patients thousands or millions at a time," he said. "They think of the population impact of what we're trying to do."

KEY CANCER QUESTIONS

Getting at that impact means asking fundamental questions about cancer care. Melinda Irwin, MPH, PhD, associate dean of research at YSPH and associate director for population sciences at Yale Cancer Center, said COPPER's interdisciplinary approach helps researchers address some of the most pressing questions involving cancer outcomes and care. "When you have cancer epidemiologists collaborating with surgeons, medical oncologists, and internists, all asking a similar question but from a slightly different perspective, innovative approaches and solutions occur."

One example, Soulos said: "Do treatments that are deemed superior in clinical trials actually turn out to be superior when they're used in a real world setting, i.e., in patients out in the community?"

Sometimes the answer is no.

For one thing, cancer patients who enroll in clinical trials tend to be younger, healthier, and white and are not representative of the cancer community as a whole. Those differences can affect how well trial results apply to most cancer patients.

In addition, a trial might prove a new drug can shrink a tumor, but overlook the most important outcomes, Gross explained. "We don't know necessarily whether it's actually helping people live longer or have a better quality of life."

Another key question: Is cancer treatment bankrupting patients?

Ryan Chow is an MD/PhD candidate trained in tumor immunology. As a future oncologist, Chow decided to look into the economics of cancer care after learning that some effective drugs can cost upwards of six figures a year – what is called cancer's "financial toxicity."

In a research collaboration with Gross, Chow found that the U.S. spends twice as much on cancer care as the average high-income country, yet cancer death rates here are near the average.

"It became pretty revealing how little of a relationship there was," Chow said. "There are a number of countries that spend less than the U.S. on cancer, yet they have better cancer outcomes than the U.S."

How could the U.S. improve? It might not take "glorious, beautiful headline-grabber things," Chow said. "It could just be more efforts towards effective screening, effective prevention, and managing lifestyle changes that could reduce your risk of developing cancer in the first place. That's what COPPER's mission is about."

With hundreds of publications to its credit, findings from COPPER studies can change how clinicians make decisions, Soulos said. Or they may affect a policy decision that ultimately winds up improving patient care.

"Even if it's a couple of steps removed from actual translation into practice," Soulos said, "it still feels like an honor to be part of that process."

Members of the core COPPER team: *Front row, from left*: Meghan Lindsay, MPH '22; Cary Gross, MD; Madhav KC, PhD. *Back row, from left*: Maureen Canavan, PhD '11, MPH; Pamela Soulos, MPH '09; Michaela Dinan, PhD; Ilana Richman, MD, MHS '20; Laura Baum, MD, MPH.



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WHEN YOU HAVE CANCER EPIDEMIOLOGISTS COLLABORATING WITH SURGEONS, MEDICAL ONCOLOGISTS, AND INTERNISTS, ALL ASKING A SIMILAR QUESTION BUT FROM A SLIGHTLY DIFFERENT PERSPECTIVE, INNOVATIVE APPROACHES AND SOLUTIONS OCCUR."

~Melinda Irwin

FEATURE

YSPH PARTNERS WITH CONNECTICUT DEPARTMENT OF PUBLIC HEALTH ON WORKFORCE TRAINING PROGRAMS



Connecticut Department of Public Health

BY KATHI TRAUGH

THE PUBLIC HEALTH TRAINING ACADEMY IS ENVISIONED AS A COMPREHENSIVE AND CONVENIENT ONE-STOP RESOURCE FOR PUBLIC HEALTH TRAINING FOR NEW AND EXISTING MEMBERS OF CONNECTICUT'S PUBLIC HEALTH WORKFORCE.



Yal

The Connecticut Department of Public Health is partnering with the Yale School of Public Health to deliver two new workforce development initiatives intended to enhance training for current and future public health workers in the state.

The Public Health Training Academy of Connecticut and the Public Health Fellowship Program will be managed by YSPH's Office of Public Health Practice (OPHP) in collaboration with DPH and other public health agencies, and academic and community partners. OPHP's faculty director, Rafael Pérez-Escamilla, PhD, will serve as the principal investigator on this initiative, and the office's executive director, Susan Nappi, MPH '01, will serve as project director. The programs are supported by the CDC's Crisis Response Cooperative Agreement's COVID-19 Public Health Workforce Supplemental Funding. Both initiatives are anticipated to ramp up later this year.

The Public Health Training Academy is envisioned as a comprehensive and convenient one-stop resource for public health training for new and existing members of Connecticut's public health workforce. Starting this fall, OPHP will conduct a rapid assessment of DPH training needs and then develop a plan for the training academy.

The training academy will have two distinct tracks: a core track that will focus on fundamental public health practice skills and the knowledge needed by all workers, and a professional development track that will focus on building management and supervisory skills. While the training academy's initial plan will center on addressing the immediate needs and gaps of the state-level workforce, many training programs will also be available to local and community-based practitioners. CT TRAIN, which is

an online gateway to a comprehensive catalog of free public health training opportunities provided by the TRAIN Learning Network, will be used as the learning management system. Training sessions will be delivered in a variety of formats, including in-person, instructor-led programs; on-demand, self-study courses; and a "train the trainer" program.

The Public Health Fellowship Program will aim to build interest in public health careers by supporting students in high-quality public health field placements throughout Connecticut and providing them with \$3,500 stipends. The program will be open to third- or fourth-year undergraduate or graduate-level students at any accredited academic institution and in any degree program relevant to public health. Fellows will be placed at DPH, local health departments, and community-based agencies around the state. Host site agencies will be required to provide students with a well-structured opportunity to experience public health practice and to learn about public health careers. Stipends will be paid to fellows directly by Yale. The launch of the program is projected for late fall 2022.

These initiatives are an extension of the OPHP and YSPH's long-standing relationship with Connecticut's DPH on workforce development activities. Specifically, OPHP has served as the administrative entity for the New England Public Health Training Center (NEPHTC) activities in Connecticut for over 20 years and has also spearheaded the Connecticut Partnership for Public Health Workforce Development, a stakeholder group, which has served both as an advisory body to NEPHTC's activities and as a structure that facilitates statewide networking and collaboration on professional development activities.



F PUBLIC HEALTH

For more information on these initiatives, contact Kathi Traugh at *kathi.traugh@yale.edu*.



YALE INSTITUTE FOR GLOBAL HEALTH BRINGS RESEARCHERS TOGETHER TO IMPROVE WORLD HEALTH

BY KENNETH BEST

The Yale Institute for Global Health (YIGH) is the focal point for global health at Yale, bringing together expertise and knowledge from across campus and around the world. YIGH drives Yale's global health mission by fostering collaboration across disciplines and seizing opportunities for innovation to speed the translation of new scientific discoveries into better health for all.

"YIGH is at the intersection of intellectual rigor, experience, and creativity where collaboration with partners around the world inspires ideas and solutions to our world's health challenges," said Saad Omer, MBBS, MPH, PhD, FIDSA, director of YIGH. "Innovation comes from any – and everywhere, making YIGH one of the most impactful scientific exchanges, particularly with colleagues in low- and middle-income countries."

Sten Vermund, MD, the Anna M.R. Lauder Professor of Public Health and Professor of Pediatrics in the Yale School of Medicine, led the effort to launch YIGH while serving as dean of the Yale School of Public Health from February 2017 to July 2022. He had previously directed similar global health initiatives at the University of Alabama (Birmingham) and Vanderbilt University.

After arriving at YSPH, Vermund reached out to nursing school Dean Ann Kurth, MPH, PhD, the Linda Koch Lorimer Professor of Nursing, and Robert Rohrbaugh, MD '82, associate dean for global health education at YSM, to discuss bringing Yale's global health initiatives under a single entity.

"It makes sense to have an umbrella institution because you can be working in the same country as a colleague and not know each other's work," Vermund said. "You can be traveling back and forth to that country and not know that a colleague could benefit immensely from your knowledge and experience."

One of the ways YIGH fosters collaboration is through its Faculty Support Initiative and Faculty Networks. These efforts facilitate global health funding and offer tailored global health resources and learning opportunities for YIGH-affiliated faculty across Yale. YIGH Faculty Networks include faculty with combined expertise in priority global health topics such as malaria, noncommunicable diseases, vaccines, global surgery, maternal-child mental health, and more.

The institute also recognizes innovative faculty research teams with its annual Hecht awards.

The awards, which provide up to \$50,000 in funding, are intended to support and encourage collaborative new initiatives addressing global health. Faculty from the Yale Schools of Public Health, Medicine, Nursing, Environment, and Architecture were among this year's winners. Projects funded in 2022 address climate change and urban health, substance use disorder and mental health, and the relationship between food insecurity and hypertension.

"Over the past few years, the YIGH Faculty Network program has seen significant growth and we now have a portfolio of networks tackling some of the greatest global health challenges," said Jeremy Schwartz, MD, associate professor of medicine and epidemiology and YIGH Faculty Network development leader. "The Hecht Global Health Faculty Network Award has provided a great incentive and structure for networks to coalesce around innovative and important ideas."

One of those who has benefited from YIGH support is YSPH Assistant Professor Amy Bei, PhD.

A member of MalarYale, YIGH's multidisciplinary faculty research group focused on tackling malaria, Bei said her collaborations with MalarYale's faculty network led by Sunil Parikh, MD, MPH, Michael Cappello, MD, and others helped her expand a research initiative beyond her extensive research in Senegal to gain a better picture of genetic diversity in malaria vaccine candidate antigens across Africa. Understanding the functional role of genetic diversity in new vaccine antigens is critical to the development of a malaria vaccine.

In pursuit of this goal, Bei received a YIGH Spark award. The award provides seed funding to help researchers pursue important projects, apply for larger grants, and advance their careers. As a result of the combined research and fiscal support she received from YIGH, Bei was able to secure a much larger Ro1 grant for her project from the National Institutes of Health. Ro1 grants fund mature research projects that are hypothesisdriven.

"The Spark award provided the necessary resources to generate preliminary data that ultimately resulted in my first Ro1 to be funded," said Bei. "I believe it tipped the scales in that the first submission requested additional preliminary data and we were able to generate it thanks to the Spark funds."

IT MAKES SENSE TO HAVE AN UMBRELLA INSTITUTION BECAUSE YOU CAN BE WORKING IN THE SAME COUNTRY AS A COLLEAGUE AND NOT KNOW EACH OTHER'S WORK."

~Dr. Sten Vermund

Left Page: Staff from the Hagarla Institute hand out masks and document the health conditions of individuals living in camps for internally displaced people in Somalia.

Top Right: Yale Assistant Professor Kristina Talbert-Slagle, PhD '10 (second from right), an associate director at the Yale Institute for Global Health, with representatives of Vanderbilt University and the University of Liberia College of Health Sciences in recognition of a partnership that is creating a Center for Teaching, Learning, and Innovation in Liberia.

Middle Right: Assistant Professor Amy Bei with students while doing malaria research in Senegal.

Bottom Right: Aedes aegypti mosquitoes land on a net.



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YIGH IS AT THE INTERSECTION OF INTELLECTUAL RIGOR, EXPERIENCE, AND CREATIVITY WHERE COLLABORATION WITH PARTNERS AROUND THE WORLD INSPIRES IDEAS AND SOLUTIONS TO OUR WORLD'S HEALTH CHALLENGES."

~Saad Omer





VOICES

COUCES

Quotables from YSPH faculty in the news



JUNE 13, 2022 SCIENTIFIC AMERICAN On the need for healthcare reform in the U.S.

"Health care reform is long overdue in the U.S. Universal single-payer health care is both economically responsible and morally imperative."

Alison Galvani, PhD Burnett & Stender Families Professor of Epidemiology (Microbial Diseases)



JULY 8, 2022 THE NEW YORK TIMES On the public health response to monkeypox in the U.S.

"The machine is just so ossified. The house is on fire, and it's like everything is moving at sort of normal speed."

Gregg Gonsalves PhD '17 Associate Professor of Epidemiology (Microbial Diseases)



AUGUST 16, 2022 THE NEW YORK TIMES On the potential global trajectory of the Zika virus

"It is going to come back and hit us, whether it's in the Americas or other places in the world. We haven't done what's really needed and set up good surveillance in these low-income countries."

Albert Ko, MD Raj & Indra Nooyi Professor of Public Health & Professor of Epidemiology (Microbial Diseases)



APRIL 23, 2022 THE NEW YORK TIMES On the negative health impacts of ageism

"We absorb these [age] stereotypes through disparaging media portrayals and fairy tales about wicked old witches. But institutions express a similar prejudice, enforcing what is called 'structural ageism.' Reversing that will require sweeping changes — an 'age liberation' movement."

Becca Levy, PhD Professor of Public Health (Social & Behavioral Sciences)



MARCH 29, 2022 THE NEW YORK TIMES On racial disparities in the diagnosis and treatment of long COVID

"We expect there are going to be greater barriers to access the resources and services available for long Covid. The pandemic isn't over, it isn't over for anyone. But the reality is, it's certainly not over in Black America."

Marcella Nunez-Smith MD, MHS '06 Professor of Public Health (Social & Behavioral Sciences)



JUNE 8, 2022 THE BOSTON GLOBE On the importance of Black churches

"If we needed to keep businesses around, then potentially keeping religious institutions around is important as well because they are institutions that improve equity in these communities."

Yusuf Ransome, MPH, DrPH Associate Professor of Public Health (Social & Behavioral Sciences)



JULY 13, 2022 STAT On availability of Novavax vaccine for COVID-19

"Optimism that the Novavax vaccine will have a significant impact on the number of unvaccinated Americans is misplaced ... the vast majority of those unvaccinated have made their choice for unrelated and deeply ingrained reasons."

Jason Schwartz, PhD Associate Professor of Public Health (Health Policy)

CAMPAIGN

100

Three women take part in a Hands on Peru nutrition program.

SHILLER FOUNDATION GIFT EXPANDS STUDENTS' PUBLIC HEALTH LEARNING EXPERIENCES

BY CHERYL SERRA

The Yale School of Public Health's Health Equity Fellowship Program (HEFP) extends students' knowledge of complex public health care systems beyond the classroom with the goal of improving health care for historically marginalized populations. The program, made possible in part by a generous gift from the Shiller Foundation, provides students opportunities to learn firsthand the value of partnerships, communication, and innovation to improve communities and public health outcomes.

As a YSPH student studying chronic disease epidemiology, Vanessa Blas, MPH '23, is interested in reproductive health and maternal and child health. She's also passionate about advancing health equity and eliminating health disparities in traditionally underserved communities.

She found a perfect match for her academic and professional interests when she was selected for a fellowship at Waterbury Bridge to Success (BTS), a partnership of more than 90 community and civic leaders, educators, and organizations working for equitable change for Waterbury's children, youth, and families. Of particular interest to Blas is Bridge to Success's #Day43 Black maternal health initiative, which aims to transform systems and raise awareness of Black women's maternal health in Waterbury.

"It was a great experience working as the #Day43 Health Equity Research Fellow, as I constantly felt supported by everyone on the BTS team," Blas said. "Through this fellowship, I learned a lot about science and health communication and writing, valuable skills in the medical and public health fields."

Blas is one of several students to benefit from the YSPH Health Equity Fellowship Program (HEFP) coordinated by the Office of Public Health Practice along with the Community Alliance for Research and Engagement, the Yale-Griffin Prevention Research Center, and Southern Connecticut State University. The Fellowship Program has supported 23 equity fellowships since 2020. The fellows attend YSPH and SCSU.

Three new fellowships focused specifically on equity and maternal health are now included in the HEFP, thanks



Robert and Virginia Shiller

to a generous gift from the Robert and Virginia Shiller Foundation. In addition to support for students, the Shiller Foundation gift provides three inaugural community organizations – All Our Kin, Hands on Peru, and Waterbury Bridge to Success Partnership – with funding to support new partnerships with the HEFP.

For her summer HEFP internship, Olivia M. Rua, MPH '23, worked with All Our Kin, which helps family child care providers with licensing. Rua is in the chronic disease epidemiology, maternal and child health promotion track. Her work through the HEFP has provided her with the proverbial leg up on professional experience.

While involved in her internship, Rua familiarized herself with current licensing regulations and how the organization helps providers through the licensing process. She also researched lead in drinking water and the lead drinking water analysis that is required by the state for child care providers. The experience taught Rua the importance of communication in public health when working with various partners, such as municipal stakeholders and the Connecticut Department of Public Health.

"From this research with these stakeholders, I was able to create qualitative analysis reports to help guide All Our Kin in supporting family child care providers with the lead drinking water analysis," Rua said.

Jessica Robles, YSPH '23, was a Health Equity Fellow hosted by Hands on Peru as part of the YSPH Global Health Concentration. Located in Trujillo, Peru, the organization focuses on improving access to health by empowering the local population through public health awareness and teaching.

"Over the summer, we created a 10-week health education program geared toward helping mothers provide well-balanced meals by focusing on culturally acceptable, cost-effective, and sustainable food," Robles said. Each topic covered, such as school lunches, consisted of a two-part course: education and cooking. The program's goal was to increase nutritional knowledge and empower women to provide a well-balanced meal for their families. Program data indicates they were successful.

Hands on Peru co-founder and Executive Director Katie Baric said the YSPH fellowships are extremely helpful in measuring outcomes and increasing program sustainability.

"The students assist our local program coordinators and teach them about best public health implementation practices and data collection," Baric said. "The training is a two-way street. Hands on Peru serves as a platform for students to engage in participatory, community-based public health programs, and the student serves as a guide and teacher for local staff in terms of data collection and impact evaluation."

She added the organization could not have done some of its essential work without the support of Robles, the fellowship, and the donors who funded it.

SHILLER FOUNDATION DONATIONS CENTER ON IMPROVING LIVES AND PROMOTING GENEROSITY

For Robert and Virginia Shiller, sharing their wealth and supporting social programs is a core part of their life philosophy. Robert Shiller, PhD, a Nobel Prize-winning economist and Sterling Professor of Economics at Yale, said he wants to dispel the myth that people who go into finance and banking do it solely for the purpose of increasing their personal wealth. He wrote a book in 2021, *Finance and the Good Society*, that discusses the concept of "creative philanthropy."

"Government does a lot for us, but governments tend to become bureaucratic, and they don't perform as creatively as we'd like," Shiller said. "The Yale School of Public Health's Health Equity Fellowships bring different people and organizations together and allow for creative voices."

Virginia Shiller, PhD, a psychologist and assistant clinical professor at the Yale Child Study Center, said the foundation is still evolving, but the gift to support the Health Equity Fellowship Program was a natural fit because "we've always felt that family planning organizations were very worthy and often underfunded."

Derek Shiller, their son, is a valued trustee of the Shiller Foundation and sees a pattern in its charitable giving. In addition to helping people who are dealing with unfortunate situations and trying to improve their lives, the foundation supports work that is innovative and improves the way that things are done.

"It's one thing to be able to help out someone who needs it today, but to figure out a way that that can be made more sustainable – that's something my parents appreciate," he said.

Susan Nappi, MPH '01, executive director of the YSPH Office of Public Health Practice, touted the fellowship program and the Shiller Foundation's donation.

"The support we have received from Drs. Robert and Virginia Shiller allowed us to explore an internship model that not only provides support for our students, but for our community organizations as well," Nappi said. "This is the type of equity we strive for – one that honors our relationships with our community partners."



 THE SUPPORT WE HAVE RECEIVED FROM DRS. ROBERT AND VIRGINIA SHILLER
 ALLOWED US TO EXPLORE AN INTERNSHIP
 MODEL THAT NOT ONLY PROVIDES SUPPORT
 FOR OUR STUDENTS, BUT FOR OUR
 COMMUNITY ORGANIZATIONS AS WELL.
 THIS IS THE TYPE OF EQUITY WE STRIVE FOR
 — ONE THAT HONORS OUR RELATIONSHIPS
 WITH OUR COMMUNITY PARTNERS."

~Susan Nappi



CONTINUENTS ASSIST OUR LOCAL PROGRAM COORDINATORS AND TEACH THEM ABOUT BEST PUBLIC HEALTH IMPLEMENTATION PRACTICES AND DATA COLLECTION. THE TRAINING IS A TWO-WAY STREET. HANDS ON PERU SERVES AS A PLATFORM FOR STUDENTS TO ENGAGE IN PARTICIPATORY, COMMUNITY-BASED PUBLIC HEALTH PROGRAMS, AND THE STUDENT SERVES AS A GUIDE AND TEACHER FOR LOCAL STAFF IN TERMS OF DATA COLLECTION AND IMPACT EVALUATION."

Left Bottom: Hands on Peru Executive Director Katie Baric with two of the children from the program.

Right Top: Yale Health Equity fellow Jessica Robles (wearing scarf) and local nutritionist Yessenia Arteaga greet participants in a weekly nutrition program.

~Katie Baric

COLLABORATION DRIVES INNOVATION

Collaboration is central to what we do at the Yale School of Public Health. This is reflected in our many partnerships with colleagues across Yale. Our center partnerships help drive breakthrough discoveries and insights that may not have been realized otherwise. What follows are brief summaries of some of our leading YSPH centers and partnerships.

YALE INSTITUTE FOR GLOBAL HEALTH

The **YIGH** is the focal point for global health at Yale, bringing together expertise and knowledge from across campus with partners around the world. YIGH supports collaborative research and scholarship for faculty through the **Faculty Support Initiative** and **Faculty Network** programs. Seed grants including the Hecht Global Health Faculty Network Award and the Global Health Spark Award nurture novel ideas that lead to larger funding and partnership opportunities. YIGH contributes to the development of future leadership in global health by training aspiring professionals who understand the critical importance of good health for a just and equitable society through the Leadership in Global Health Fellowship and the Global Health Case Competition.

INNOVATEHEALTH YALE

IHY, housed at the Yale School of Public Health, supports the creation of innovative solutions to challenges in public health and education for underserved communities in the United States and low-resource countries. The program was founded by **Martin Klein, MPH '86, PhD**, who was its first director and is now the senior adviser to the YSPH dean and director of the school's Executive MPH program. As one of the first innovation programs based at a school of public health, we support programming, mentoring, and funding to accelerate impact and make a difference in the world. To date, InnovateHealth Yale has coached over 200 students, funded 40 startups, awarded over \$300,000 in startup funding, and seen our supported startups receive over \$10 million in follow-on funding.

YALE CENTER FOR ANALYTICAL SCIENCES

The **YCAS**, a center for collaborative science, includes biostatisticians, epidemiologists, and data managers who provide expertise in design, conduct, and analysis of health care studies. Last year, YCAS conducted 361 consultations for 237 investigators and collaborated on 108 grant submissions and 159 publications. Collaborations range from single-site to large multicenter studies. Recent collaborations include a \$35 million National Institutes of Health/ Patient-Centered Outcomes Research Institute (PCORI) pragmatic trial to prevent falls in the elderly conducted across 10 U.S. health care systems; a Veterans Affairs/ Department of Defense nonpharmacologic pain management research collaboratory; a PCORI/National Institute on Aging multicenter pragmatic trial of dementia, and the autism biomarkers consortium for clinical trials.

COLLABORATIVE CENTER FOR STATISTICS IN SCIENCE

The major research activities at **C2S2** include methodological and software developments for understanding the mechanisms for complex diseases that have implications for prediction, prevention, and treatment of those diseases through the use of genetic, imaging, demographic, behavioral, and clinical data; and coordination and collaboration in national and international research consortia for conducting multicenter clinical trials, in particular, relating to the treatment of infertility. We assess the efficacy and safety of medications and ingredients that are commonly used for treating infertility and that are lacking evidence-based clinical trials.

CANCER PREVENTION AND CONTROL PROGRAM; CANCER OUTCOMES, PUBLIC POLICY, AND EFFECTIVENESS RESEARCH CENTER (COPPER)

The mission of the CPC at the Yale Cancer Center is to conduct exceptional cancer prevention and control research in Connecticut and beyond that informs policy, guides clinical practice, and drives equitable care. Through CPC, faculty from the Yale Schools of Public Health, Nursing, and Medicine collaborate on a broad portfolio of research, employing expertise in cancer epidemiology, comparative effectiveness, health economics, and health services research. Examples of collaborations include work in cancer etiology by Professor Xiaomei Ma, PhD, and Associate Professors Nikolai Podoltsev, MD, PhD, and Amer Zeidan, MBBS; cancer outcomes research by Associate Professor Michaela Dinan, PhD, Professor Cary Gross, MD, and Associate Professor Michael Leapman, MD, MHS ('22); and, in the field of lifestyle and behavioral interventions, work by Associate Dean of Research Melinda Irwin, MPH, PhD, and Associate Professor Tara Sanft, MD.

CENTER FOR METHODS IN IMPLEMENTATION AND PREVENTION SCIENCE

The **CMIPS** was created four years ago under the direction of **Susan Dwight Bliss Professor of Biostatistics Donna Spiegelman, ScD**, to improve implementation of evidencebased interventions to improve health in the U.S. and worldwide. With a growing, robust community of faculty and students at Yale and beyond, we select health issues that carry the greatest burden and hold the greatest promise for amelioration. In New Haven and in Mexico City, we are focusing on interventions to increase adherence to cervical cancer early detection and treatment recommendations in public clinics. Additionally, we are establishing a Global Implementation Science Network to develop, integrate, and scale up evidence-based interventions through the development of adaptable implementation strategies across sectors and settings.

GLOBAL HEALTH JUSTICE PARTNERSHIP

The GHJP, an initiative of the Yale Law School and Yale School of Public Health, was established in 2012 to promote interdisciplinary, innovative, and effective responses to key problems in health justice. It is a transformative collaboration integrating different fields in order to make critical policy interventions, develop new kinds of crosscutting research, and provide educational opportunities straddling a variety of academic disciplines. Leveraging Yale's institutional assets, the GHJP trains students to undertake collaborative, real-world research and advocacy to promote health justice in the U.S. and globally. It also organizes conferences and events; builds partnerships with local NGOs and social movements in New Haven, the U.S., and around the world to move research and critical analyses into action; and nurtures a truly interdisciplinary brain trust dedicated to effecting social change.

GLOBAL HEALTH LEADERSHIP INITIATIVE

The GHLI drives transformation in management, leadership, and organizational performance creating stronger and more resilient health systems for all. Through education and research, we equip groups of people to come together to understand and solve public health challenges in complex contexts. Our work includes three portfolios. To prepare leadership for success, we educate and train professionals to solve complex problems with measurable impact. Collaborators include the National Health Service and the YSPH Executive MPH program. To transform for equity, we foster system- and organizational-level transformation in pursuit of health equity. Collaborators include Yale's Equity Research and Innovation Center, Connecticut Health Foundation, and the Mayo Clinic Care Network. To strengthen health systems, we work with ministries of health to support their visions for health systems strengthening. Collaborators include universities and public health institutes in low- and middle-income countries, UNICEF, Gavi, the Vaccine Alliance, and the U.S. Agency for International Development.

COLLABORATIONS

YALE CENTER FOR STATISTICAL GENOMICS AND PROTEOMICS

The Yale Center for Statistical Genomics and Proteomics directed by Ira V. Hiscock Professor of Biostatistics Hongyu Zhao, PhD, develops novel statistical and computational methods to address important problems in biology and medicine. We primarily focus on -omics data, such as the analysis of genotype, whole exome sequencing, and whole genome sequencing data to identify disease-causing genes and develop risk prediction models for complex diseases; and the analysis of single cell data to uncover novel biological processes and disease mechanisms. We also develop methods and tools to analyze wearable device and imaging data. Our research partners include many labs at Yale and other institutions, research centers such as the Yale Cancer Center and the Yale/NIDA Neuroproteomics Center, as well as national programs such as the VA Million Veteran Program and the National Human Genome Research Institute's developmental GTEx Program.

ELEVATE POLICY LAB

Elevate Policy Lab was founded in 2019 with the dual goals of synthesizing available evidence on mental health as a pathway to disrupt poverty and achieve two-generational outcomes, and supporting policymakers in decisionmaking by providing evidence in an accessible format that demonstrates the impact of investments. Elevate collaborates with government and community partners to directly address maternal mental health as a public sector strategy to disrupt poverty through the Mental Health Outreach for Mothers (MOMS) Partnership. Elevate also partners with communities, government, and policymakers to advance "Triple Bottom Line Justice," collaborating to confront stressors, enhance family stability, and support communities in achieving their vision for the future.

YALE CENTER ON CLIMATE CHANGE AND HEALTH

The **YCCCH** utilizes research, education, and public health practice to help safeguard human health from the adverse impacts of climate change and human activities that cause climate change. We work with academic, government, and civil society partners to advance the scientific understanding of climate change's health effects, and to link this research with policy impact at the local, national, and international levels. Our partners include the Planetary Healthcare Lab at the University of British Columbia, the Pan American Health Organization, Earth Medic/Earth Nurse, University of the West Indies, and the New York City Environmental Justice Alliance.

CONNECTICUT EMERGING INFECTIONS PROGRAM

The **Connecticut EIP** is a partnership between YSPH and the Connecticut Department of Public Health that has been funded by the Centers for Disease Control and Prevention since 1995. Our mission is to control the spread of infectious diseases through public health surveillance and applied epidemiologic research. Our partners are from various sectors around the state and include hospital and private laboratories, health care providers, and local health departments. Within Yale, we have numerous key partnerships with the School of Medicine including laboratory medicine and microbiology, virology, and pathology laboratories. Together, we generate critical information to be used by decision-makers for impactful policies and other public health interventions and programs.

COMMUNITY ALLIANCE FOR RESEARCH AND ENGAGEMENT

CARE collaborates with community partners to improve health among people most impacted by inequities and disparities, specifically Black and Latinx communities and low-income populations, in New Haven and throughout Connecticut. Our collaborations include partnerships with community residents, coalitions, and nonprofit and civic organizations. Partnership with community residents is facilitated through our Community Research Fellows and New Haven Health Leaders programs, our CARE outreach worker team, and our Racial and Ethnic Approaches to Community Health Steering Committee. We also collaborate with the Coordinated Food Assistance Network, New Haven Breastfeeding Taskforce and Healthy Start, Project Access-New Haven, New Haven Health Department, Cornell Scott-Hill Health Center, Fair Haven Community Health Center, Yale New Haven Health, and the Director of Food System Policy for the city of New Haven among others. CARE is co-housed at Southern Connecticut State University's College of Health and Human Services and the Yale School of Public Health.

YALE-GRIFFIN PREVENTION RESEARCH CENTER

The Yale-Griffin PRC works with community partners to develop, implement, and evaluate community-based approaches to address inequities in rates of chronic diseases by working with communities with a focus on the New Haven and the Lower Naugatuck Valley areas. We collaborate with Project Access-New Haven and Griffin Hospital where community health workers support participants in our Virtual Diabetes Prevention Program; Wholesome Wave, an organization dedicated to addressing food security and nutrition; state and local partners to identify strategies that work to address health equity in COVID-19 messaging and vaccine access; the Connecticut Department of Public Health, providing public health workforce trainings to local and state employees; and other organizations and health departments, providing technical assistance throughout the state. The Yale-Griffin PRC is co-housed at Yale School of Public Health and at Griffin Hospital in Derby.

CENTER FOR INTERDISCIPLINARY RESEARCH ON AIDS

CIRA was established in 1997 and is currently New England's only AIDS research center funded by the National Institute of Mental Health. CIRA supports innovative, interdisciplinary research that focuses on the implementation of HIV prevention and treatment and the elimination of HIV disparities. CIRA brings together scientists from 25 disciplines and three institutions: Yale University; the Institute for Community Research in Hartford; and the Institute for Collaboration on Health, Intervention, and Policy at the University of Connecticut. At Yale, faculty from five schools participate in CIRA: the Yale School of Public Health, Yale School of Medicine, Yale Law School, Yale Graduate School of Arts & Sciences, and Yale School of Nursing.

CENTER FOR INFECTIOUS DISEASE MODELING AND ANALYSIS

The goal of **CIDMA** is to optimize the effectiveness and cost-effectiveness of vaccination strategies and other health interventions by quantitatively evaluating and informing public health policies. To achieve this goal, CIDMA applies interdisciplinary mathematical modeling approaches to address public health challenges, both nationally and globally, for a wide range of infectious diseases. Ongoing research projects within the U.S. include hepatitis C, pneumococcal disease, influenza, human papillomavirus, cytomegalovirus, and pertussis. Our international research projects target Zika, Ebola, dengue fever, leprosy, African trypanosomiasis (sleeping sickness), Chagas disease, rabies, and schistosomiasis.

PUBLIC HEALTH MODELING UNIT

The Yale School of Public Health is a leader in the use of mathematical and statistical modeling to inform public health systems, policy, interventions and disease impact. Modeling applications span a variety of areas, including chronic and infectious diseases, implementation science, environmental health, behavioral determinants of health, and health care systems. Modeling techniques can generate predictions about how a system might behave under different circumstances, permitting public health decisionmakers to evaluate the possible effects of health interventions that have not yet been implemented. With faculty embedded in the departments of epidemiology of microbial diseases, biostatistics, and health policy and management, YSPH has a wide impact on population health in public, private, local, national and international settings.

YALE CENTER FOR PERINATAL, PEDIATRIC, AND ENVIRONMENTAL EPIDEMIOLOGY

Research conducted by **CPPEE** focuses on understanding the combined environmental and genetic causes of disease during pregnancy, in the perinatal period, during infancy and childhood. Although this methodological paradigm is used for a range of disorders, a principal research focus is on respiratory disease and asthma. Recent studies have included examining the role of maternal asthma in pregnancy on both maternal health during pregnancy and fetal outcomes, as well as examining the etiology of asthma and other atopic diseases in early infancy and childhood, with an increasing focus on how the genetic inheritance of the child is influenced by environmental risk factors and triggers that increase risk for disease.

OF YALE SCHOOL OF PUBLIC HEALTH ALUMNI ENGAGE WITH YSPH STUDENTS THROUGH VOLUNTEERING, EVENTS, DONATIONS, AND OTHER ACTIVITIES.

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36 YALE PUBLIC HEALTH

ALUMNI

PAYING IT FORWARD

YSPH alumni nurture student growth through a variety of volunteer programs.

BY COLLEEN SHADDOX



Growing up in Texas with parents originally from Mexico, Lupita Galvan Tinoco never met anyone with a public health degree. She discovered her future vocation after volunteering for a hospital program that

connected people with resources outside the traditional definition of health care, like food and housing.

"I did not know that my dream job existed," said Tinoco, MPH '23. The experience led her to the Yale School of Public Health, where she is pursuing a master's degree with a U.S. health justice concentration. Still a year away from graduation, Tinoco is already thinking about her involvement as a YSPH alumna and role model for prospective students.

YSPH alumni are invaluable partners with the school who raise money for financial aid, help students make career connections, address cultural barriers, and more. For Tinoco, alumni service is a way of sharing her passion for public health with others.

A member of the YSPH Emerging Majority Student Association (EMSA) Executive Board, Tinoco collaborates with alumni on the Emerging Majority Affairs Committee (EMAC). "It was encouraging to think that there was a group concerned about what [students] needed before we even stepped onto campus," she said.

EMAC is a committee of the Association of Yale Alumni in Public Health (AYAPH) that is dedicated to advancing diversity, equity, inclusion, and belonging (DEIB) within YSPH's student and alumni communities. AYAPH and EMAC's commitment to DEIB was recognized in 2019 when they were honored with the Yale Alumni Association Board of Governors Excellence Award. I'M A BLACK WOMAN, SO SOMETIMES I DO EXPERIENCE BIAS AND I HAVE TO FIGURE OUT, 'HOW CAN I CHALLENGE THAT IN A WAY THAT HELPS THE NEXT PERSON?"

~Modupeore "Ore" Shenbanjo Henriques



EMAC Chair Modupeore "Ore" Shenbanjo Henriques, MPH '16, is a YSPH alumnus who is paying it forward. Henriques works directly with the school's administration to make sure the school is doing all it can to advance

DEIB. For example, EMAC championed adding questions like "Have you experienced microaggressions?" to student surveys that traditionally focused solely on academics. EMAC and EMSA also organize panels where students have an opportunity to hear from alumni about their experiences.

"There's always that elephant in the room," Henriques said. "I'm a Black woman, so sometimes I do experience bias and I have to figure out, 'How can I challenge that in a way that helps the next person?" Tinoco and Henriques hope to sponsor more alumni panels for students during the 2022–23 school year.

OUR FUTURE STUDENTS ARE GOING TO BE OUR LEGACY."

~Elaine Anderson





Alumni volunteers also play a crucial role in building YSPH's annual Alumni Fund, which supports student aid. Elaine Anderson, MPH '76, and Robert Steele, MPH '71, PhD '75, have both served as alumni volunteers in many roles. Each gave up serving as a class agent to become co-chairs of the Alumni Fund.

More than 65 alumni currently serve as class agents, helping classmates stay in touch with each other and the school. This, in turn,

often motivates alumni to contribute to the Alumni Fund. Together, Anderson and Steele have spent more than half a century as class agents. Both recognize that robust financial aid is key to recruiting an excellent and diverse group of students.

"I am embarrassed to ask people for money normally and shy away from getting involved in any fundraising for other organizations," said Anderson, who served as YSPH's director of community, alumni, and special studies for 30 years. "But for the School of Public Health, it totally makes sense, and I've never felt there was something that I had to apologize for."

Steele earned his MPH and doctorate (psychology) from Yale without incurring debt. He believes supporting students is both a way of paying it forward and making an investment that keeps on giving. YSPH's Alumni Engagement Program is another way for alumni to help the generations of students behind them. Alumni who participate in the Alumni Engagement Program mentor graduates in a variety of ways, such as helping them draft cover letters and prepare for job interviews. The alumni-student connections made through the program often last far beyond the academic year.



Douglas Spivak, MPH '20, was grateful for the assistance he received from the Alumni Engagement Program when he was a student. Spivak, who wanted to work in hospital administration in Boston, chose YSPH alum Michael Gillespie, MPH '89, vice president of clinical services at Boston Children's Hospital, as a mentor. Spivak praised the insight he received from Gillespie, which he said could "only come from a working professional." Spivak, who is a senior

administrative manager at Massachusetts General Hospital, says he is interested in mentoring students as a new YSPH alum.

Gillespie also praised the Alumni Engagement Program, saying he learns as much from the mentees he works with as they do from him.

Alumni are eager to volunteer, Anderson said, because so many believe YSPH has been foundational to their success and want the school to continue providing students the excellent resources they enjoyed. "Our future students are going to be our legacy," she said.

VOLUNTEER

To learn more about alumni volunteer options, visit *ysph.yale.edu/alumni* or write to *ysph.alumni@yale.edu*. YSPH is recruiting for the following roles:

- PARTICIPATING IN THE ALUMNI ENGAGEMENT PROGRAM
- JOINING EMAC
- JOINING AYAPH
- WELCOMING STUDENTS TO CITIES
 AROUND THE WORLD
- SPEAKING AT THE SCHOOL
- HIRING STUDENTS
- PROVIDING INTERNSHIPS
- PARTICIPATING IN REGIONAL EVENTS
- SERVING AS ALUMNI FUND AGENTS

NUMBER OF YSPH STUDENTS WHO PARTICIPATED IN THE ALUMNI ENGAGEMENT PROGRAM IN FISCAL YEAR 2022.

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STATHIS ANTONIADES, MPH '99, was chosen

as president of University Hospitals (UH) Cleveland Medical Center. Antoniades brings more than 20 years of large health

system and academic medical experience to UH. Following graduation from YSPH, he joined Massachusetts General Hospital and served in increasingly responsible roles until joining Lahey Hospital & Medical Center in 2013 as vice president, medical services, research, and education. He became chief operating officer in 2017 and managed the organization through a financial turnaround as well as the COVID-19 pandemic. With his leadership, Lahey earned the CMS Five-Star rating for 2020 and 2021 and ranked in *U.S. News & World Report* as the fourth-best hospital in Massachusetts in 2019, 2020, and 2021.

REBECCA BAKAL,

MPH '17, was named to the 10th annual "Double Chai in the Chi: 36 Under 36" list of young Jewish movers and shakers in Chicago who are making

major contributions through their work, and in the Jewish community and beyond. Bakal worked full time in the Jewish community for four years, first as a health educator and then as a program manager at the Norton & Elaine Sarnoff Center for Jewish Genetics. In this position, she visited Jewish organizations throughout Illinois to educate the community about Jewish genetic conditions and encourage genetic testing. She is also a doula, providing support during pregnancy, birth, and afterward. She serves on a community engagement workshop at the National Human Genome Research Institute at the NIH, the Associate Board of EverThrive Illinois, and Northwestern University's Biomedical Institutional Review Board.

HEIDI BOERSTLER, MPH '81, DrPH '87, is a professor emeritus of health administration, law, and ethics at the Business School, University of Colorado, where she teaches ethics and health law in the Executive MBA/ HA program. She is also a graduate student at the University of Pennsylvania, where she is doing research on the stories people tell about turning points in their lives, collecting narratives from an ethnically and culturally diverse group of older Americans as they describe their lives and the socioecological and cultural factors that influenced the choice to make a change or not. Heidi would love to hear from classmates and friends at *heidi.boerstler@ucdenver.edu*.

DARRYL CROMPTON, MPH '76, published a paper in the *Journal of Health and Life Sciences Law*. The article is titled "President Biden's Executive Order 13995 on COVID-19 and Health Equity: Seeking Justice in a Public Health Crisis." Crompton looks at the feasibility of the president's executive order and makes specific recommendations to improve its chances of success.



PETER GORTON, MPH '79, published a historic novel, *The Boys* of Cortlandt & The Iron Men of Croton, a story that follows two sets of friends from the two eras and examines their friendships and the theory

of historic recurrence, or the repetition of patterns through heredity and ancestry. In a subtle way, the novel examines the potential of Nietzsche's beliefs of connectivity through time as it may include personality, human behavior, family, and ancestry/heredity and how culture may also repeat.



LIANNE EPSTEIN JACOBS, MPH '14, and DANIEL JACOBS, MPH

'12, PhD '16, welcomed their daughter, Rebecca Brooke Jacobs, on February 14, 2022. They currently live in

Chicago, where Lianne works in health communication strategy for Vitality Group and Daniel is the managing director at Pathway Bioventures, an early-stage biotechnology venture fund.



BARMAK KUSHA,

MPH '98, was promoted to director of infection prevention and control at HCA Florida Trinity Hospital, a 340-bed acute care hospital in the

Tampa area. Kusha joined Trinity Hospital as an infection preventionist in 2019.



YUNA LEE, MPH '09, PhD '17, was elected Academic-at-Large of the Health Care Management Division of the Academy of Management. AOM is the preeminent

professional association for management scholars and practitioners. Lee will be representing the views of academics and leaders who specialize in health care management across a global community that spans over 120 countries.



LUIS LOZANO, MPH

'13, is a physician assistant, specializing in internal medicine and migrant health. He completed his physician assistant training at Northern Arizona

University. Lozano provides medical care to a culturally diverse group of patients, most of whom do not speak English. Additionally, he volunteers as a medical provider for a free clinic in Tucson and continues a family tradition of urban farming.



KEVIN NELSON, MPH '92, a health care executive and prominent advocate for children, has been elected to Intact America's board of directors. Nelson, CEO at Aetna Better

Health of New York, has spent more than 30 years in the health care and humanitarian fields and is passionate about protecting children's health and welfare. Intact America is a national organization working to end the routine circumcision of baby boys.

ALUMNI NEWS





EDWARD RAFALSKI,

MPH '90, PhD, is coeditor of a new book, Healthcare Analytics: Emergency Preparedness for COVID-19. He is the chief strategy and marketing officer for BayCare Health System in Clearwater, Florida. As a clinical assistant professor at the University of Illinois School of Public Health, his health services research and teaching interests

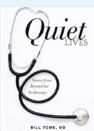
include the effects of market economics on health care services, health care decision support, quantitative methods, managerial epidemiology health disparities, marketing, and strategic management.



MPH, DVM, PhD '20, was selected as a recipient of the inaugural Marie Sklodowska Curie Award. This award recognizes Japanese female

KAYOKO SHIODA,

researchers in the early phases of their careers. There were 80 applicants this year, and Shioda was one of four recipients. Her research spans infectious disease outbreak response work in more than 30 countries.



WILLIAM TOMS, MPH '71, MD '71, has written a book of stories about his patients and medicine called *Quiet Lives*. Toms has practiced family medicine for over 45 years. During these years

he has gotten to know many people who came to him as patients and ended up becoming his friends. Over the years he has written stories he has heard and witnessed and includes them in the book out of respect, admiration, and affection for so many of these "patient-friends." His greatest honor has been the trust that his patients placed in him to be their doctor. He hopes these stories help to illuminate the truth and power in the quiet lives of these "patient-friends."

PATTI ROSE TRUEHEART, MPH '85, has written a book titled *A Return to Black Love: The Joys of Black Fatherhood, Motherhood and Marriage Revealed.* The book offers insight into Black fatherhood, motherhood, and marriage featuring six heartwarming, intimate, and delightful interviews about Black love including conversations with a professional basketball player, a college president, a DJ, a music producer, teachers, an actress and more.

HAVE AN UPDATE? Your classmates want to hear about you! Send your news (and photos) to *ysph.alumni@yale.edu*.



Yale School of Public Health alumni, students, and faculty celebrate the announcement of YSPH's transition to an independent professional school at Yale. *February 2022*

IN MEMORIAM

IN MEMORIAM

JENNIFER KELSEY, MPH '66, PhD '69, died on October 13, 2021, at the age of 79. She was a Yale faculty member in the Department of Epidemiology and Public Health for 14 years. Known for her work in the epidemiology of diseases of the musculoskeletal system, Dr. Kelsey co-authored the textbook Methods in Observational Epidemiology and wrote, Epidemiology of Musculoskeletal Disorders. She would go on to lead the division of epidemiology at the Columbia University Mailman School of Public Health and later at the Stanford University Medical School. Former YSPH Dean Sten Vermund, MD, PhD, shared an office with Dr. Kelsey at Columbia when he was starting his career. "Her skill set for mentoring and collaborating was extraordinary," he said. Dr. Kelsey was a member of advisory committees and study sections for the National Institutes of Health and the U.S. Environmental Protection Agency. In 2000, she received the Distinguished Alumni Award from the Yale Department of Epidemiology and Public Health. She also received the Wilbur Cross Medal from Yale in 1995 and the American Public Health Association's John Snow Award in Epidemiology in 1991. She was an honorary fellow of the American College of Epidemiology.

ROBERT "BOB" ANDERSON,

MPH '66, a former Commander in the U.S. Public Health Service Commissioned Corps, died on February 20, 2022, at the age of 80. A Connecticut native, he later moved to the West Coast where he served as a National City Reserve Police Officer and Judge Pro Tem of the San Diego Superior Court.

GERARD "ROD" BARBER, MPH '67, PhD, died on December 18, 2021, at the age of 78. He was a professor at the Kent School of Social Work for 34 years.

STEVEN BELOFF, MPH '72, of Framingham, Massachusetts, died on June 8, 2021, at the age of 78. A captain in the 9th Infantry in Vietnam, he was the proud recipient of the Bronze Star and Combat Medical Badge. After obtaining his master's degree in public health, he went on to a long career in managed health care.



CARLOS CEBALLOS, MPH '81, of North Haven, Connecticut, died on January 14, 2022, at the age of 71.

During a career in public health administration, he worked at Fair Haven Community Health and the Connecticut State Department of Health Services. He became coordinator of school-based health centers for the New Haven Public School system during which time he expanded the program providing equitable access to medical and dental care to students in New Haven.



RODNEY MICHAEL DOURRON, MPH '92, died on November 1

on November 1, 2021, at the age of 58. After obtaining a

medical degree from the Medical College of Georgia, he served residencies at Stanford Hospital and Bridgeport Hospital. Most recently, he was chief of obstetrics and gynecology at Emory Decatur Hospital.



JOE TOM EASLEY, MPH '86, a prominent gay rights activist and lawyer involved in the repeal of the "Don't

ask, Don't tell" policy that discriminated against gays in the military and whose wedding in 2003 was among the first same-sex marriages featured in the *New York Times*, died on February 13, 2022, at a hospital in Miami Beach. He was 81.

CASEY JAMES FINCH, MPH '13, of Overland Park, Kansas, died on May 7, 2022, at the age of 38. As a YSPH student, he was awarded the Dean's Prize for his thesis. He served in the U.S. Air Force and U.S. Navy and participated in Operation Iraqi Freedom. He ended his military career as an Air Force captain, where he battled infectious diseases and managed a medical group. As a civilian, he most recently worked at PricewaterhouseCoopers as a health care consultant.

Lt. Col. JOHN ROBERT GALBRAITH

(Ret), MPH '62, of Lakeland, Florida, formerly of Colorado Springs, died on January 1st, 2022, at the age of 94. John lived a full and productive life, leaving an admirable legacy that included a long career in the Air Force.

BARBARA "BOBBSIE" GRANGER.

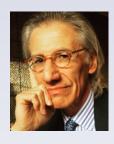
MPH '80, died on July 29, 2021, in Westford, Massachusetts, at the age of 94. She served as a research assistant to Yale Professor Dr. David Musto on his landmark book, The American Disease: Origins of Narcotic Control. Following graduation, she became the director of the advocacy project for the National Home Caring Council. She also worked with the Center for Care of the Aged/Research and Education, a program jointly run by Bellevue Hospital and New York University.

ELIZABETH "BETH" HADLEY,

MPH '89, died on July 23, 2021, in Guilford, Connecticut at the age of 66. She held numerous positions in the federal government, including serving as an appointee of the Obama Administration to the Office of Personnel Management.

PETER J. LEVIN, MPH '65, died in Carmel, California on October 8, 2021, at the age of 82. He had a diverse and well-traveled 50-year career in public health. He served as deputy commissioner, New York City Department of Health; chief operating officer, Bronx Municipal Hospital Center; executive director, Stanford University Medical Center; dean of three colleges of public health (University of Oklahoma, University of South Florida, and the State University of New York at Albany); and health policy counsel to Senator Connie Mack (R-FL). Though he held degrees from Harvard, Yale, and Johns Hopkins, he never doubted that wisdom was as likely to be heard at the bus stop as the lectern.

NORMA L. METTLER, MPH '68, DPH '70, of Monmouth, Illinois died on April 20, 2022, at the age of 87. She spent most of her life as a teacher at Monmouth Early Learning Center. It is estimated that she taught over 1600 students at MELC.



RICHARD MUGLIA, MPH '76, died from complications

of pancreatic cancer on April 30, 2022 at his home in

Chilmark, Massachusetts. He was 71. A Yale E. Richard Weinerman Fellow, he spent most of his life focused on international law where he represented investment banks, international corporations, and individuals in

transactions involving listings on the New York and London stock exchanges.

MARCIA RICHARDSON, MPH '79, of North Branford died peacefully in her home on May 29, 2021, at the age of 93. She was a reporter for the New Haven Register and very involved in the League of Women Voters.

CAROLYN KELLER WELLS, MPH '80, died on February 17, 2022, at the age of 79. Her career in health care spanned five decades, including her time as a lecturer for the Yale School of Medicine's Robert Wood Johnson Clinical Scholars Program. She trained generations of medical trainees in methods of epidemiology and biostatistics. She was an important research partner to Yale Sterling Professor of Medicine and Epidemiology Dr. Alvan Feinstein, who is regarded as one of the founders of modern clinical epidemiology. Their work on methods of stratification in lung cancer pioneered approaches to data analysis that have become commonplace today. She was also instrumental in recognizing the medical concept of stage migration.

SEND OBITUARY NOTICES TO ysph.alumni@yale.edu



DREAMER GIRLS PROJECT IS A 'DREAM Come true' for ysph Professor

Assistant Professor Ijeoma Opara, MPH, PhD, had wanted to create a healthy support network for Black teenage girls since she joined YSPH in 2021. But her vision actually goes back much farther.

"I conceptualized the Dreamer Girls Project 12 years ago after my father died," said Opara, a faculty member in the department of social and behavioral sciences and founding director of the Substances and Sexual Health Lab at Yale. "I wanted to create a program just for Black teen girls where they can receive support from older peer-like mentors, gain exposure to careers, foster sisterhood, and be empowered to take control of their health, including mental and sexual health."

Opara's vision manifested itself in other ways at first, beginning with a 2019 research initiative called The Dreamer Girls Project, which is funded by a pilot grant through the Research Education Institute for Diverse Scholars program. The project focused on strength-based approaches to prevent HIV/STIs and drug use among Black girls. But it wasn't until Opara came to YSPH that her dream for the program was finally realized. For two days in late July, two groups of Black teenage girls from New Jersey – 30 from East Orange, 20 from Paterson – toured the Yale campus to see for themselves that college life can be a reality, not something that's out of reach and left to the realm of dreams and wishes.

"The highlight of the visit for me was when I overheard one of the teen girls whispering to her friend, 'I want to go to Yale now,'" Opara said. "It brought me so much joy to hear that. I remember being a young Black girl from Jersey City, and never having the opportunity to even dream of attending or working at an institution like Yale. My goal for this trip was for the girls to see themselves here, not to be intimidated, and to aspire to be here if they want to."

Opara said that during one group's pizza lunch, the girls told her that Yale was the best campus tour they've attended. "They were also inspired to see me and to be around such a young-looking Black female professor," she said. "Another girl mentioned that she never thought Yale would be an option for her but now, she wants to work hard to be a part of the Yale community. She intends to apply for Yale for undergrad and would like to be a part of my lab's youth advisory board and other youth-engaged activities."

After touring campus, Opara spoke to the girls about the field of public health and how they, too, could further their education at Yale.

"You work hard, you study – these students here are not smarter than you," Opara said. "They've just had access; they've had more opportunities. But I'm here as a representative to show you can do this. And I'll do all I can to make sure that every one of you, if you want to be at Yale, you will be at Yale in some capacity."

MY GOAL FOR THIS TRIP WAS FOR THE GIRLS TO SEE THEMSELVES HERE."

~Ijeoma Opara



While the tours were primarily for high school students planning for college, some of the participants were college students considering transfers.

"Yale has always been my dream school, but due to circumstances, I was unable to attend here," said Nessa Nnze Eze. "I am now considering transferring [to Yale] and I feel like the Dreamer Girls Project ... will benefit not only the people of Yale, but urban communities who are part of it."

Funcia Jean-Louis, a rising senior at George Washington University, said she met Opara last year at a youth workshop she attended as part of the East Orange Summer Work Experience Program. She was so impressed that she became involved in local public health programs.

"I knew she was in a profession I feel like I was interested in studying, so I reached out to her and got to have a firsthand experience in working with girls in the Paterson area and East Orange area about health preventions, substance use, and things like that, something I identified with," Jean-Louis said. "Just coming back today to see the program ... was very inspiring, just because I know there's just so much potential in East Orange, and just giving them opportunities like this, to go out there and branch out, it's very fundamental at this time."

The East Orange officials who accompanied the girls on the tour were likewise impressed.

"Today was important because we saw students that had never been on college campuses before ... and through this experience, they shared that this is attainable," said Kelly Williams, director of educational support services and parent relations for the East Orange School District. "It doesn't matter what ZIP code, it doesn't matter what family you were born into – college access is readily available for all students, no matter where you come from, what gender, etc. And so this was important."

"Just the excitement and awe of the students filled my heart today," said LaDonna Johns, manager of the Mayor's Office of Employment and Training for the city of East Orange. "It's so wonderful to let our students know that they, too, can achieve the goal of attending a university like Yale, that they've had a chance to look and see up-close all the buildings, the African American presence in some of the buildings ... it's just been a wonderful event."

These were the first two Dreamer Girls tours, and Opara said there will be more. She's already gearing up for the next one.

"I am working out the details with my community partners but as long as I am at Yale, Black teen girls will have a presence here," she said. "Organizing these tours, plus lunch and meetings, does take a lot of time and I am grateful for my staff and students for their help. I am planning the next private campus tour for some time in fall '22, and I hope to organize these tours at least once each semester."

Fran Fried

Opposite Page: YSPH Assistant Professor Ijeoma Opara, front, took Dreamer Girls from New Jersey on a tour of Yale's Old Campus.

Above Left: Dreamer Girls from Paterson, New Jersey, pause in front of the New Haven Free Public Library.

Above: Opara, in orange, brought New Jersey Dreamer Girls to the YSPH Substances and Sexual Health Research Lab.

I LOOK FORWARD TO WORKING WITH YOU TO FURTHER REFINE OUR DISTINCTIVE ACADEMIC, RESEARCH, AND PRACTICE VISION AND ITS IMPACT ON THE FIELD OF PUBLIC HEALTH AND THE COMMUNITIES WE SERVE."

~Melinda Pettigrew



Yale School of Public Health interim Dean Melinda Pettigrew, PhD '99

MELINDA PETTIGREW BEGINS TERM AS INTERIM DEAN OF YSPH

Deputy Dean Melinda Pettigrew, Yale's Anna M.R. Lauder Professor of Epidemiology (Microbial Diseases), began her term as interim dean of the Yale School of Public Health on July 1.

Sten Vermund, MD, PhD, returned to full-time teaching and research when his five-year term as dean ended on June 30, 2022. A search advisory committee led by Melinda Irwin, MPH, PhD, the YSPH associate dean of research and Susan Dwight Bliss Professor of Epidemiology (Chronic Diseases), is working to identify potential candidates to serve as the next dean.

In announcing the interim appointment of Pettigrew, PhD '99, Yale President Peter Salovey praised her experience, knowledge, and dedication.

"Many of you know Dean Pettigrew well," Salovey said. "She has been part of the YSPH community for two decades. A renowned investigator and award-winning educator, she has devoted considerable time to enriching the intellectual environment of the school."

Pettigrew has led efforts to develop distinctive educational programs at YSPH, first as associate dean of academic affairs (2011–17) and then as senior associate dean for academic affairs (2017–22). In these roles, she expanded the academic affairs team, oversaw the development of online education degree and certificate programs, and helped launch multidisciplinary concentrations in U.S. health justice, climate change, global health, and public health modeling. An internationally recognized infectious disease epidemiologist, Pettigrew conducts research on the global health threat of antibiotic resistance.

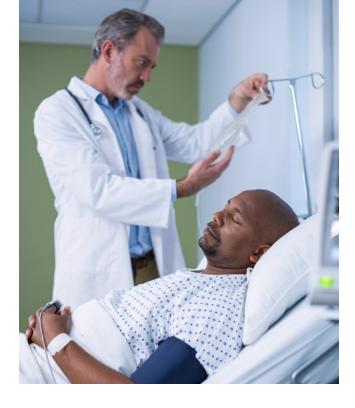
In a message to the YSPH community, Pettigrew said she was honored to serve as interim dean and noted that "this is a critical time in the history of YSPH."

"Our work moving forward will focus on mapping out strategies for a successful transition to an independent professional school and on securing an additional \$50 million in endowment funds that will allow us to obtain the maximum benefit from the university's investment and confidence in public health at Yale," she said.

Pettigrew also took a moment to lay out her vision for the year ahead.

"As Interim Dean, I will strive to create and sustain an environment where our faculty, staff, and students feel part of a community and are empowered to discover, innovate, and affect change," Pettigrew said. "We will continue with a strong and unwavering commitment to combating racism as we will never achieve health for all until we address the injustices of racism. We will work together on navigating the transition of SARS-CoV-2 from a pandemic to endemic virus. We will expand our efforts to advocate for equitable global health responses to newly spreading pathogens such as monkeypox, 'old' pathogens such as tuberculosis, and population displacement due to political instability, climate change, and war. We will continue to address planetary health, focus on chronic diseases such as cancer, and advance public health prevention across the lifespan.

"I look forward to working with you to further refine our distinctive academic, research, and practice vision and its impact on the field of public health and the communities we serve," she said.



A CULTURE NEEDS TO BE FOSTERED WHERE PEOPLE CAN COME TOGETHER AND DO PROBLEM-SOLVING AROUND THESE COMPLEX ISSUES, ESPECIALLY RELATED TO RACISM."

~Erika Linnander

GLOBAL HEALTH LEADERSHIP INITIATIVE TARGETS INEQUITIES IN SEPSIS OUTCOMES AND CARE

The Yale Global Health Leadership Initiative (GHLI) has been awarded a highly competitive research grant exceeding \$1 million to reduce inequities in sepsis care and outcomes among African American/Black and Latinx communities.

The Ro1 grant was awarded by the National Institute of General Medical Studies, a division of the National Institutes of Health. Advancing health equity and social justice is one of the core values of the Yale School of Public Health. A detailed description of the novel research initiative appears in *BMC Health Services Research*.

Sepsis is a life-threatening medical condition in which the body is harmed due to an immune dysfunction while responding to an infection. It is one of the leading causes of death in the U.S. African American/Black and Latinx people with sepsis experience higher rates of complications, deviations from standard care, and readmissions than non-Hispanic white populations, the researchers said. The goal of the funded research is to develop and evaluate a coalition-based leadership intervention that will help eight U.S. hospital systems and their communities address structural racism and drive measurable reductions in inequities in sepsis care and outcomes, said Erika Linnander, MPH, MBA, director of the GHLI and one of the principal investigators for the project.

"Any complex health outcome that requires the coordination of various parts of a health care system is perfect for an intervention on leadership and organizational culture," Linnander said. "A culture needs to be fostered where people can come together and do problem-solving around these complex issues, especially related to racism."

Over the next three years, the researchers will develop and test the intervention using quantitative and qualitative data analysis to observe changes in organizational culture. The team will then examine the impact of change in organizational culture on the reduction of racial inequities related to sepsis focusing on three outcomes: early identification and treatment, readmissions, and mortality.

The other principal investigators for the study are Yale School of Health Professor Leslie Curry, MPH, PhD, and Dowin Boatright, MD, MBA, MHS '17, assistant professor of emergency medicine at the Yale School of Medicine.

Ashley Liebre

NEW ACTIVIST IN RESIDENCE PROGRAM TARGETS SOCIAL JUSTICE

The Yale School of Public Health's U.S. Health Justice Concentration launched an Activist in Residence program in February.

Ijeoma Opara, MPH, PhD, assistant professor of public health (social and behavioral sciences), said the program aims to bring activists who are engaged in current social justice issues to Yale to advance their platform and provide students with the opportunity to work on social justice issues.

"As a public health school that is dedicated to advancing health equity through a social justice lens, it is essential that students and faculty are working collaboratively with activists and leaders in other sectors that intersect with public health," Opara said. "This is how the most innovative and impactful public health work happens."

The activist in residence will lead seminars, give talks pertaining to their work, and advise students. The inaugural program runs through February 2023; new activists will be brought in annually.

Veteran activist, attorney, and political strategist Angelo Pinto is the program's first activist. Pinto, of Teaneck, New Jersey, is co-founder of Until Freedom, a social justice organization devoted to police accountability and criminal justice reform.

An NAACP Image Award winner who has been named to the *Black Enterprise* 40 under 40 and the *Ebony* Power 100, Pinto has devoted much of his adult life to the cause of justice. Among other things, he co-created a teach-in at Occupy Wall Street about the prison-industrial complex; co-founded Justice League NYC, which led mass demonstrations in the wake of Eric Garner's death at the hands of the New York Police Department; and helped gain the release of rapper Meek Mill from prison.

This chance to work with a nationally acclaimed activist fits well within the larger curriculum of the U.S. Health Justice Concentration, which includes a class on Public



Yale School of Public Health Activist in Residence Angelo Pinto is an activist, attorney, and political strategist.

Health Activism and Advocacy. "This is a pilot program," said U.S. Health Justice Concentration Director Danya Keene, PhD, an associate professor of public health (social and behavioral sciences). "But if the program proves to be successful, we hope to secure funding and support to keep it as a central component of the educational structure of YSPH."

Pinto said he first thought of the intersection of public health and incarcerated people when he worked with a medical malpractice law firm in his first job out of college. It's a connection he wants to foster while at YSPH. He already sees some of the strengths the school has to offer: "a diverse student body – not just diversity in background and experience, but in areas I want to create change in the world. It creates a lot of intersectional points."

"Coming to Yale and connecting with the School of Public Health, I certainly want to raise coalition-building, connecting with the professors across the landscape," Pinto said. "Also, the students today are very savvy; a lot of them have experience being activists and organizers." He said one of the goals of the program is to provide students with training in community organization and other skills to help them realize the changes they wish to see in the world.

Fran Fried



NICCOLAI BRINGS TO THE ROLE A LONG HISTORY OF DEDICATION TO EXCELLENCE IN THE STUDENT EXPERIENCE AND LEADERSHIP SUCCESSES AT YSPH.

Associate Dean of Academic Affairs Linda Niccolai, PhD

PROFESSOR LINDA NICCOLAI APPOINTED ASSOCIATE DEAN FOR ACADEMIC AFFAIRS

Professor Linda Niccolai, PhD, started her new role as associate dean for academic affairs on July 1, 2022. The primary function of the associate dean is to oversee and coordinate the educational curriculum at YSPH, sustaining positive momentum in the development of a distinct and innovative academic vision for the school.

Niccolai is currently interim chair of the department of epidemiology of microbial diseases. She also directs the Connecticut Emerging Infections Program (CT EIP) at Yale and the HPV Vaccine Working Group at Yale. In her new position, Niccolai will chair YSPH's Education Committee, which is responsible for educational policy and programs, including MPH, MS, and PhD programs, joint degree programs, as well as YSPH's role in public health education at Yale College and online programs, such as the Executive MPH, certificate programs, and future degree and nondegree programs.

Niccolai brings to the role a long history of dedication to excellence in the student experience and leadership successes at YSPH. A member of the faculty since 2002 and instructor of the core epidemiology class since 2008, she has taught and mentored hundreds of students, earning her the YSPH Award for Excellence in Teaching. Also, during her tenure as director of CT EIP, over 200 MPH students have been trained in applied public health through employment, practicum, internship, and thesis opportunities that provide the valuable practical experience essential for the future public health workforce. Skilled in academic administration, Niccolai has served as both a member and chair of the YSPH MPH Admissions Committee and as chair of the Academic Advising Committee for the department of epidemiology of microbial diseases.

In addition to serving as the CT EIP director, Niccolai has held several leadership positions at YSPH, including at the Center for Interdisciplinary Research on AIDS in the Development Core, Office of International Training, and Community Research Core. She is also the founder and director of the HPV Working Group at Yale, an initiative that brings together diverse scientists from across the health sciences schools, as well as the Yale COVID-19 Contact Tracing Program.



STEN VERMUND'S TENURE AS DEAN OF YSPH MARKED BY HISTORIC GAINS... AND COVID-19

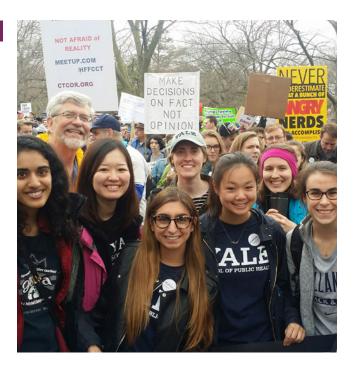
Sten Vermund's time as dean of the Yale School of Public Health will forever be associated with COVID-19. After all, nearly half of his term from February 2017 to July 2022 was dominated by the devastating global pandemic, which dramatically changed the world and how YSPH operates. So Vermund, MD, PhD, the Anna M.R. Lauder Professor of Public Health, may be remembered for how he navigated the school through the sudden transition to virtual learning, COVID-19 tracking and surveillance, local and global guidance from faculty experts, and steep fluctuations in enrollment. But there is much more to his legacy as a leader of one of the nation's top public health schools.

During Vermund's time as dean, YSPH experienced its largest jump in the national rankings put out by the U.S. *News & World Report* in more than a decade. The school now ranks at number 11, its highest ranking ever. Vermund also established the school's first Office of Diversity, Equity, Inclusion, and Belonging led by Associate Dean Mayur Desai, MPH '94, PhD '97. In a reflection of their personal commitment to DEIB, Vermund and his wife, Pilar Vargas, MD, created the Dr. Pedro Vargas and Pilar Bodas de Vargas Fund for Diversity, Equity, Inclusion, and Belonging exclusively dedicated to the school's DEIB efforts. The gift was one of several private donations quietly made by Vargas and Vermund during his tenure as dean.

Growing the school's endowment was a top priority when Vermund began his leadership role, and he steps down from the job having garnered unprecedented development funds, over \$70 million in the past three years alone. One of the most significant highlights of Vermund's term was his success in revamping and greatly expanding the school's Office of Public Health Practice providing students plenty of guidance and internship opportunities to hone their public health skills and improve their prospects for future jobs. The office, alongside unprecedented engagement by Vermund and a host of YSPH faculty, has increased the school's interactions with state, local, and community partners to historic levels of intensity.

In February 2022, in the most historic moment for the school under Vermund's leadership, Yale President Peter Salovey, Provost Scott Strobel, and School of Medicine Dean Nancy Brown, MD, announced that YSPH would be transitioning to a self-supporting independent graduate school after decades of operating as a department under YSM. Concurrent with that announcement, university leaders pledged \$150 million of endowment support for YSPH's teaching, research, and practice missions, to complement \$50 million to be raised by YSPH. THIS IS A TIME OF RISING AWARENESS IN THE FIELD OF PUBLIC HEALTH BOTH INSIDE AND OUTSIDE THE UNIVERSITY AND I'VE BEEN VERY PLEASED TO SUPPORT THE FACULTY, STAFF, AND STUDENTS TO ACHIEVE GREATER SUCCESS AND IMPACT."

~Sten Vermund



In describing his proudest achievements as dean, Vermund cited the expansion of the Office of Public Health Practice and stronger engagement with the community as being high on the list. He was also proud of the fact the school has improved its alumni outreach, services to alumni, and fundraising through motivated donors who are deeply supportive of YSPH's mission to improve health care for all. He praised the star caliber of the school's newly recruited faculty and said YSPH has improved teaching quality and been a magnet for students as reflected by rising student demand and yield. He said it also was gratifying to partner with the Schools of Medicine and Nursing to create the Yale Institute for Global Health and to create YSPH's new hybrid Executive MPH program.

"It has been a great privilege to work at the Yale School of Public Health as dean," Vermund said. "This is a time of rising awareness in the field of public health both inside and outside the university, and I've been very pleased to support the faculty, staff, and students to achieve greater success and impact."

Top: Dean Sten Vermund joins Yale School of Public Health students in a local march in defense of science in 2017. *Middle:* Vermund speaks at the Yale Center Beijing in 2019. *Right:* Vermund and his bicycle were frequently spotted in downtown New Haven.





IT IS A RECOGNITION OF EXCELLENCE BEYOND MYSELF. IT IS ... FOR ALL OF US WHO DEDICATE THEIR CAREERS IN ADVANCING STATISTICAL SCIENCES FOR A BETTER WORLD."

~Heping Zhang



Susan Dwight Bliss Professor of Biostatistics Heping Zhang, PhD

YALE BIOSTATISTICIAN HEPING ZHANG DELIVERS PRESTIGIOUS NEYMAN LECTURE

Heping Zhang, the Susan Dwight Bliss Professor of Biostatistics at the Yale School of Public Health, delivered the prestigious 2022 Neyman Memorial Lecture – one of the highest honors in statistical societies.

Given every three years, the Neyman Lecture, presented by the Institute of Mathematical Statistics (IMS), highlights innovative work at the intersection of statistical theory and scientific research.

Named for groundbreaking Polish statistician Jerzy Neyman, a founder of modern statistical inference, the lecture has been given by just over a dozen of the top researchers in the field. The IMS, a leading statistical society, also invited Zhang to contribute an article related to his lecture to its publications.

Zhang, PhD, is a distinguished Yale scientist who has performed pioneering work in a variety of fields, including epidemiology, statistical genetics, child and women's health, and substance use. He has produced more than 350 research publications that have helped to inform public health practice through innovative developments and applications of statistical methods. He and his students are actively investigating how genetics affects complex human conditions, including neurological development and mortality related to COVID-19. Additionally, Zhang's work as the director of the Collaborative Center for Statistics in Science has led to breakthroughs in evaluating the effectiveness of infertility treatments, including ovulation stimulation, dietary regiments, and technologies related to in vitro fertilization.

In addition to his other roles, Zhang is a professor with Yale's Child Study Center, and a professor of statistics and data science at Yale. He is also affiliated with Yale's Institute for Global Health.

Zhang is a fellow of the American Statistical Association and a fellow of the Institute of Mathematical Statistics. He was named the 2008 Myrto Lefkopoulou distinguished lecturer by Harvard School of Public Health and a 2011 IMS Medallion Lecturer. He was the founding editor-inchief of the journal *Statistics and Its Interface* and is the past coordinating editor of the *Journal of the American Statistical Association*.

Zhang delivered the Neyman Lecture at the IMS annual meeting in London in June. "This is an extraordinary honor," he said. "It is a recognition of excellence beyond myself. It is for my students, for my research team, for my colleagues at Yale and collaborators everywhere, and for all of us who dedicate their careers in advancing statistical sciences for a better world."

YALE SUPERFUND RESEARCH CENTER TO INVESTIGATE WATER CONTAMINANTS LINKED TO CANCER

A new Superfund Research Center (SRC) at Yale will conduct extensive analysis of emerging water contaminants that have been linked to liver cancer.

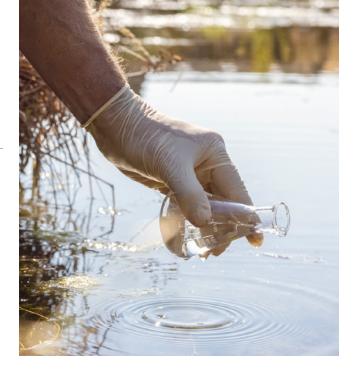
The National Institute of Environmental Health Sciences recently awarded Yale a \$7.35 million grant to support the research program over the next five years. The multidisciplinary center – one of 25 university-based SRCs around the country – will be led by scientists at the Yale School of Public Health and Yale School of Engineering & Applied Science. Researchers from the Yale School of Medicine and Yale School of the Environment also will be involved.

"Given that liver cancer incidence rates have more than tripled since 1980, there is an urgent need to evaluate whether emerging water contaminants may be contributing to this increase," said Vasilis Vasiliou, PhD, chair of the YSPH department of environmental health sciences and Susan Dwight Bliss Professor of Epidemiology. As principal investigator for the project, Vasiliou serves as the center's director.

The center brings together four Yale schools (Public Health, Medicine, Engineering & Applied Science, and Environment) and five Yale centers (Green Chemistry & Green Engineering, Analytical Sciences, Statistical Genomics & Proteomics, Medical Informatics, and Environmental Law & Policy).

Yale's research will focus on a contaminant known as 1,4-dioxane because of its common occurrence in Superfund sites and drinking water supplies. The contaminant has been classified as a possible human carcinogen by the U.S. Environmental Protection Agency.

The specific mechanism through which 1,4-DX may cause cancer of the liver in animals and humans is currently unknown as is its interaction with co-occurring toxic chlorinated solvent contaminants 1,1,1-trichloroethane, 1,1,1-trichloroethylene and 1,1-dichloroethane.



A lack of biomarkers signaling possible exposure to 1,4-DX has hampered epidemiologic studies, risk assessment, and setting standards for the contaminant, Vasiliou said. In addition, the high polarity and low biodegradability of 1,4-DX make it difficult to remove the contaminant from aquifer systems or drinking water. Available treatment technology is both expensive and not readily applied to water supplies.

"By developing networks and systems to detect and destroy pollutants before they enter the body, we will be able to ensure safe drinking water for those affected," said Jaehong Kim, PhD, the program's deputy director and Henry P. Becton Sr. Professor of Chemical and Environmental Engineering at Yale. "This is a great example of how Yale's School of Engineering & Applied Science can expand its research to directly address the human health implications of groundwater contamination."

Nearly all of Yale's environmental engineering faculty are involved in the program.

"We are fortunate that these top researchers from Yale schools have joined forces in applying their expertise to create innovative and cross-disciplinary solutions to solve environmental crises, bringing their research to the broadest benefit of humanity," said Jeffrey Brock, PhD, dean of the School of Engineering & Applied Science.

As part of its mission, Yale's SRC will train future scientists to ensure that the program has a far-reaching impact on how emerging contaminants are addressed both in the U.S. and globally.

Ultimately, the research generated by the program will be used to support improved federal regulation of 1,4-DX to help affected communities and remove the contaminant from water supplies.

AWARDS & HONORS FALL 2022

SERAP AKSOY, PhD, professor of epidemiology (microbial diseases) at YSPH, presented the 2022 annual lecture of the Medical Library Associates in April. The lecture was titled "Advancing global public health: Building bridges across disciplines and advocating for evidence-based health policies." Aksoy is a tropical medicine researcher whose work focuses on the epidemiology of insecttransmitted (vector-borne) and zoonotic diseases.

Yale Professor of Epidemiology **PAUL ANASTAS**, PhD, the Teresa and H. John Heinz III Professor in the Practice of Chemistry for the Environment, was honored with the August Wilhelm von Hofmann Commemorative Medal by the German Chemistry Society. Anastas shared the award with John Warner, senior vice president in chemistry and distinguished research fellow at Zymergen Corporation as well as Global Sustainability Chair at the University of Bath in the U.K. Anastas and Warner are the cofounders of the concept of green chemistry, composed of 12 principles explained in their book, Green Chemistry: Theory and Practice. The von Hofmann medal for special services in chemistry is given to individuals who have achieved great things in chemistry.

Professor Adjunct of Epidemiology (Environmental Health Sciences) LINDA BIRNBAUM, PhD, received YSPH's highest honor, the C-E.A. Winslow Medal, in April. Birnbaum was the first toxicologist and first woman to head the National Institute of Environmental Health Sciences at the National Institutes of Health. She also directed the largest division focusing on environmental health research at the U.S. Environmental Protection Agency. She was honored with the Winslow Medal for her foundational work regarding the health hazards of persistent organic pollutants, mechanisms of action of toxic environmental contaminants, endocrine disruption, and linking real-world exposures to human health problems. Birnbaum was among the first scientists to demonstrate that contaminant exposure early in life was associated with adverse health effects in children.

The following YSPH faculty were inducted into the Connecticut Academy of Science and Engineering in 2022: SUSAN BUSCH, PhD, professor of public health (health policy and management) and professor in the Institution for Social and Policy Studies; TED **COHEN**, DPH, MD, professor of epidemiology (microbial diseases); and co-director, Public Health Modeling Concentration; MARCELLA NUNEZ-SMITH, MHS '06, MD, C.N.H. Long Professor of Internal Medicine (General Medicine), of epidemiology (chronic disease) and of public health (social behavioral sciences), associate dean for health equity research; and director, Equity Research and Innovation Center, Yale School of Medicine; and

SAAD OMER, MBBS, MPH, PhD, FIDSA, director, Yale Institute for Global Health; associate dean (global health research), Yale School of Medicine; Harvey and Kate Cushing Professor of Medicine (infectious diseases); professor of epidemiology of microbial diseases, YSPH; adjunct professor, Yale School of Nursing. Election to CASE is made on the basis of scientific and engineering excellence and distinction achieved through significant contributions in theory or applications.

YSPH professors **KAI CHEN**, PhD, assistant professor of epidemiology (environmental health sciences) and director of research for the Yale Center on Climate Change and Health, and **ROBERT MCDOUGAL**, PhD, assistant professor of biostatistics, were appointed members of the Wu Tsai Institute at Yale. The institute hosts Yale researchers from the natural, social, computational, and engineering sciences. It is devoted to the interdisciplinary study of human cognition. More than 130 researchers from more than 29 departments across five Yale schools are members of WTI.

AMY JUSTICE, MD '88, PhD, the C.N.H. Long Professor of Medicine (General Medicine) at Yale School of Medicine and professor of public health (health policy) at YSPH, was honored with the William S. Middleton Award. The Biomedical Laboratory Research and Development Service established the Middleton Award in 1960 as the highest honor for outstanding



contributions in biomedical and behavioral research. It is awarded annually to senior investigators at the Department of Veterans Affairs to recognize research accomplishments relevant to the health care of veterans.

Two YSPH faculty were recognized for their influential research by Clarivate, a public analytics company. ALBERT KO, MD, and HARLAN **KRUMHOLZ**, MD, were among the researchers named to Clarivate's 2021 Highly Cited Researchers[™] list. The annual list recognizes researchers who have produced multiple highly cited papers over the past decade. Ko is the Ray and Indra Nooyi Professor of Public Health and professor of epidemiology (microbial diseases) at YSPH. He is an infectious disease physician and epidemiologist whose research has yielded critical insights into the health consequences of rapid urbanization and social inequity. Krumholz is the Harold H. Hines Jr. Professor of Medicine (Cardiology) and a professor in the Institute for Social and Policy Studies of Investigative Medicine and of public health (health policy). He is a cardiologist at Yale New Haven Hospital. Krumholz is considered a leading expert in the science to improve the quality and efficiency of health care and eliminate disparities and promote equity.

SAAD OMER, MBBS, MPH, PhD, FIDSA, director, Yale Institute for Global Health; associate dean (global health research); professor of epidemiology of microbial diseases, YSPH; adjunct professor, Yale School of Nursing, was recently appointed the Harvey and Kate Cushing Professor of Medicine (Infectious Diseases) at the Yale School of Medicine.

JOHN PACHANKIS, PhD, the Susan Dwight Bliss Professor of Public Health (Social and Behavioral Sciences) at the YSPH, was named a Fulbright Scholar for the 2022–23 school year. Pachankis directs Yale's LGBTQ Mental Health Initiative and is an affiliated faculty member of the Yale Institute for Global Health. He will be a visiting scholar at the Karolinska Institute in Stockholm, Sweden, one of the world's foremost medical research universities.

Professor RAFAEL PÉREZ-

ESCAMILLA. PhD, was named to the board of directors of Newman's Own Foundation, a prestigious honor in recognition of his extensive service toward maternal and child health. Established by actor and philanthropist Paul Newman, the foundation has donated more than \$570 million in net profits and royalties from Newman's Own products to impactful organizations across the globe. As a member of the board of directors. Pérez-Escamilla will use his public health and leadership experience to further advise the foundation and its donations.

Two YSPH professors were honored by the American Psychological Association's Division 56 for their work in trauma psychology. **ROBERT PIETRZAK**, MPH, PhD, a professor of psychiatry at the Yale School of Medicine and professor of public health (social and behavioral sciences), received the division's 2022 Award for Outstanding Contributions to the Science of Trauma Psychology. **SARAH LOWE**, PhD, associate professor of public health (social and behavioral sciences), who has secondary appointments in YSM's Department of Psychiatry and the Yale School of Nursing, received the division's 2022 Award for Outstanding Contribution to Trauma Psychology by an Early Career Psychologist.

STEN VERMUND, MD, PhD, former dean of YSPH, Anna M.R. Lauder Professor of Public Health, and professor of pediatrics at the Yale School of Medicine, was elected to serve as vice president/presidentelect of the Connecticut Academy of Science and Engineering. Vermund began service as CASE vice president on July 1, 2022, and will become president on July 1, 2024. He will complete his six-year term on June 30, 2028. CASE is a nonprofit institution that provides expert guidance on science and technology to the people and state of Connecticut and promotes the application of science and technology to social and economic well-being.



ELM CITY HEALTH

COMMUNITY IMPACT LAB BRINGS STUDENTS AND COMMUNITY WORKERS TOGETHER TO IMPROVE PUBLIC HEALTH

The YSPH Office of Public Health Practice (OPHP) is launching a new Community Impact Lab later this year as part of its mission to educate and train an inclusive public health workforce that is equipped to address today's complex public health challenges and oppression in all its forms in partnership with the community.

The CI Lab will support YSPH students and community partners by providing public health practice placements and training. The lab will assist students with their Applied Practice Experience while helping them develop innovative practice solutions that are human-centered and co-designed. The initial year of the program will be used to plan activities and training in collaboration with community partners, students, and faculty.

The CI Lab leadership team includes Faculty Director Kathleen O'Connor Duffany, PhD '15, MEd, director of research and evaluation for the Community Alliance for Research and Engagement; OPHP Faculty Director Rafael Pérez-Escamilla, PhD, professor of public health (social and behavioral sciences); OPHP Executive Director Susan Nappi, MPH '01; and the inaugural CI Lab director, Jason Martinez, MS.

Martinez has a long career in community impact work in New Haven and New Haven County. While serving as the director of community impact at United Way of Greater New Haven and vice president of community impact at United Way of Greater Waterbury, Martinez focused his work on basic needs, ensuring those in the region had access to housing and food. Leading the Greater New Haven Coordinated Access Network, he managed an organized and coordinated approach to homeless and housing services by collaborating with



Community Impact Lab Director Jason Martinez (far right), with members of a Community Impact Team in his former role as vice president of community impact for United Way of Greater Waterbury.

numerous agencies within a 19-town catchment area. In addition, as a founding member of the Coordinated Food Assistance Network, Martinez worked to build a unified system that ensures equitable, dignified, and culturally appropriate access to nutritious food for all residents of Greater New Haven.

Martinez also managed the AmeriCorps VISTA initiative at United Way of Greater New Haven, mentoring and supporting VISTA members during their community placements. Most recently, he had the opportunity to join the team at United Way of Greater Waterbury, where he was named vice president of community impact in August 2020. Martinez has an MS in urban education, and he spent five years teaching elementary special education in the poorest county in New York state. He is excited to extend his expertise in equitable partnership at YSPH and to continue supporting the work of historically marginalized communities.

CI Lab activities will include training in equity, evaluation, public health leadership skills, and practice utilizing systems thinking and collective impact frameworks. Immersive practice experiences, mentoring with local community leaders, and targeted placements will all act as conduits for students to engage with the community they live in while seeing collective impact in action. The YSPH CI Lab will also create metrics in key areas, such as food insecurity, to assess the collective impact of local efforts while developing a tracking tool to capture these metrics.

The lab will help manage, coordinate, and expand public health practice opportunities and experiential learning to support YSPH students and the community through increased internships, volunteer opportunities, and service. Community service through the CI Lab will be streamlined and supported to address community-identified needs. Students will have the opportunity to engage with organizations through planned visits, allowing them to gain a broader picture of what New Haven is really like.

Susan Nappi

For more information on the CI Lab, contact Susan Nappi at *susan.nappi@yale.edu*.

YSPH AROUND THE WORLD

MEXICO YSPH Center for Methods in Implementation and Prevention Science partners with the National Institute of Public Health of Mexico to teach students implementation science in public health. **ITALY** YSPH, Yale School of Medicine, and the University of Rome Tor Vergata launch a joint research and training program intended to improve global protections against chemical, biological, radiological, and related catastrophic events. **CHINA** A partnership with the National Cancer Center of China provides opportunities for collaborative research, clinical trials, and workforce training at YSPH, Yale Institute for Global Health, and Yale Cancer Center.

BRAZIL Professor Albert Ko has a long-standing infectious disease research and training partnership with the Oswaldo Cruz Foundation (Fiocruz), the research branch of the Brazilian Ministry of Health.

SENEGAL, AFRICA Assistant Professor Amy Bei conducts extensive malaria research with multiple partners in Africa including the Institut Pasteur and Hôpital Aristide Le Dantec in Senegal. INDIA Yale Institute for Global Health, The CoWrks Foundry, and RMZ Foundation launch the Sustainable Health Initiative, which provides guidance and funding to innovative startups.

A sampling of the international public health partnerships underway at the Yale School of Public Health. Yale School of Public Health 60 College Street P.O. Box 208034 New Haven, CT 06520-8034 *ysph.yale.edu* Non-Profit U.S. Postage **PAID** New Haven, CT Permit No. 526

