Advancing health and well-being, equitably for all people, and sustainably for our planet.

Sustainability Equity. Engagement. The Future of Public Health
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Welcome!

It is my great honor to introduce Cornell’s Master of Public Health Program through this inaugural annual report. Our first students began classes in 2017, and we are proud to have already received full accreditation by the Council on Education for Public Health.

Cornell has a long and storied history of public health teaching, research and service that stretches across our colleges and campuses. We created this program explicitly to offer something different to the field of public health, based on three primary realizations:

- Many of the most pressing public health challenges of our time arise from how humans interact with the environment;
- These and other public health issues disproportionately affect communities already beset by numerous social and structural inequities and injustices;
- To address these challenges, we must train future public health leaders in a new way — integrating perspectives of environmental sustainability and social justice and emphasizing learning through engagement on real world problems.

With these thoughts as guides, we founded our program on principles of sustainability, equity and engagement. We utilize a holistic One Health systems approach (more on page 7) in both our concentration areas: Food Systems & Health and Infectious Disease Epidemiology. These not only build on Cornell’s signature strengths, but are also areas where we identified urgent global need.

The emergence of SARS-CoV-2, which jumped from wildlife to humans, has not only provided a catastrophic example of how our unsustainable use of nature links our food systems and infectious disease, but it has also highlighted the enormous impacts of social and structural determinants of health. The coincident pandemic of social injustice, encompassing systemic violence against Black Americans and other vulnerable populations, and inequalities in wealth, education and access to health care, has combined with COVID-19 to leave our nation reeling. The intersection of sustainability and equity is clearly evidenced by the disproportionately high COVID-19 mortality rates in Black, Brown, and Indigenous Americans.

Our program is dedicated to training the next generation of public health leaders to prevent, prepare for and tackle these interrelated challenges. We are extremely proud of the impacts our first two classes of graduates are already having, continuing Cornell’s tradition of excellence in public health.

We invite you to learn more about us through this report or by contacting us directly. We welcome you to join us in our goal of changing the world by advancing health and well-being equitably for all people and sustainably for our planet.

Alexander J. Travis

director of the Cornell University Master of Public Health Program
professor of reproductive biology
PROGRAM OVERVIEW

Public health at Cornell

From Daniel Salmon, B.V.S. 1872, the first veterinary graduate in North America, who had major impacts on promoting food safety and production in the United States and abroad (and after whom Salmonella is named), to Urie Bronfenbrenner ’38, whose revolutionary work on social and environmental influences on child development led to the creation of the Head Start Program, to the national leadership on COVID-19 demonstrated by Anthony Fauci, M.D. ’66, the research and teaching of Cornell’s faculty and the work of our alumni have literally shaped the health of hundreds of millions of people.

We recognize that the problems we face are complicated and cannot be solved by any single discipline. To draw upon and complement the world-class expertise found in diverse disciplines across our campus in Ithaca as well as Weill Cornell Medicine in New York City, Cornell’s Master of Public Health Program is administered by the College of Veterinary Medicine and run through the Graduate School. We were inspired to take a transdisciplinary approach by the Cornell Atkinson Center for Sustainability, with which the Master of Public Health Program continues to have a close relationship built on our shared goal of effecting change.

Although this report focuses on the activities of the core faculty and staff brought together to train the Program’s students, we wish to acknowledge the significant public health contributions made by a great many faculty across Cornell, through their work as individuals, and through the various health-related centers, programs, hospitals, and services they run. More information on some of our work with partners — on campus and off — can be found later in this report.
One Health & public health

“One Health” is an understanding that human health fundamentally depends on, and is shaped by, the health of our environment, including its animals, plants, and abiotic components. As people increasingly put pressure on the environment to meet the short-term needs of our growing population, diverse forms of feedback arise that harm human health. We are truly just beginning to understand the connections among all the parts of our dynamic local and global systems, and the scope of the human and environmental health challenges we collectively face.

“One Health” is also an approach. There is no way for any one disciplinary training or profession to resolve one of the world’s “wicked problems” on its own. All of us, whether practicing public health professionals, physicians, or veterinarians, biophysical or social scientists, academicians, government officials, or business people, must work together across disciplines, sectors, and scales, for us to have hope of effecting lasting change. Interventions must involve and be sustainable on multiple dimensions — environmentally, economically, and culturally — or else we will continue to chase our tails with short-term fixes that might well cause even worse long-term problems.

Cornell’s Master of Health Program trains our students to use a One Health systems approach. This gives them the skills they need to identify diverse upstream influences and downstream effects, and then design, implement, and test public health interventions that are sustainable for people and planet.

One Health challenges

- Air pollution
- Antimicrobial resistance
- Climate change (e.g. loss of farm production, droughts, floods, wildfires)
- Emergence of new infectious diseases
- Environmental toxins
- Loss of ecosystem services due to biodiversity loss
- Loss of food, forest, soil, and water resources
- Reduced mental health and fitness due to decreased access to nature
- Spread of arthropod vectors of disease
- Sustainable food production and healthy diets
Our program

Mission
To utilize a systems-based approach to promote equitable and sustainable advancements in health and well-being of people in New York State and around the world.

Vision
To advance health and well-being, equitably for all people and sustainably for our planet.

Our program is founded on three pillars
- Sustainability
- Equity
- Engagement

Our team
- 8 staff
- 15 core faculty
- 29 collaborating faculty

Our students

Our partners
- 25+ Cornell centers
- 38+ Regional partners
- 15 International partners
- 40+ Community projects
Our team

MPH Leadership
- Alexander Travis, Ph.D., V.M.D. Director, Professor
- Gen Meredith, Dr.P.H., O.T.R. Associate Director, Lecturer

Food Systems and Health faculty
- Kathryn Fiorella, Ph.D., M.P.H. FSH Chief, Assistant Professor
- Amelia Greiner Safi, Ph.D., M.S. Senior Research Associate, Lecturer
- Elizabeth Fox, Ph.D., R.D.N. Lecturer
- Karla Hanson, Ph.D. Senior Lecturer
- Lara Parrilla, M.P.H., R.D. Community & Academic Partnership Manager, Visiting Lecturer

Infectious Disease Epidemiology faculty
- Gary Whittaker, Ph.D. IDE Co-Chief, Professor
- Karyn Havas, D.V.M., Ph.D., M.S., D.A.C.V.P.M. IDE Co-Chief, Senior Research Associate, Lecturer
- Caroline Yancey, D.V.M., M.P.H. Lecturer, Director of International Programs
- Isaac Weisfuse, M.D., M.P.H. Adjunct Professor
- Irene Sumbele, Ph.D. Visiting Scholar
- Kevin Cummings, D.V.M., Ph.D. Associate Professor
- Lorraine Francis, Dr.P.H., M.P.H., M.H.A. Lecturer
- Yihong Li, Dr.P.H., M.P.H., D.D.S. Senior Lecturer

Master of Public Health Program staff
- Elizabeth Goldberg Assistant Director
- Amie Patchen, Ph.D. Postdoctoral Associate
- Audrey Baker, M.P.A. Manager of Applied Learning and Evaluation
- Benjamin Parker Manager of Student Services
- Katherine Lesser, M.P.H., C.P.H. Student Services Assistant
- Kimberly Scholl, M.A.T. Teaching Support Specialist
- Nicole Beaudoin, M.Ed. Instructional Designer
- Zoë Wakoff, M.P.H. Communications Specialist, Graphic Designer
COVID-19 research and sustainability

COVID-19 underscores the global health and economic impacts of unsustainable human behaviors. First, it exposes how unsafe use of wildlife resources enables viruses to jump from animals into people. With mortality disproportionately affecting those who experience high exposure to air pollution, it also reveals the inequitable impacts of air pollution primarily caused by unsustainable use of fossil fuels.
Dr. Gary Whittaker, professor and coronavirus expert, shares his expertise

Dr. Gary Whittaker is working on the frontline of coronavirus antiviral and vaccine research. His lab is studying SARS-CoV-2, the virus that leads to the COVID-19 infection. Whittaker’s lab focuses both on viral entry into host cells and mutations in the viral RNA genome. These studies inform the development of vaccines, therapeutics, and diagnostic tests, with application toward a number of different coronaviruses. This is important, because a novel coronavirus seems to emerge every ten years or less, according to Whittaker.

“Unless we change something radically, it will happen again, and we want to try to be ready for it more than ever now with drugs or vaccines that are broadly acting. That’s the ultimate goal.”

– Cornell Daily Sun, March 31, 2020 “Virology professor weighs in on a potential COVID-19 cure”

Whittaker’s lab is world-renowned because he takes a comparative One Health approach of looking at coronaviruses that affect and move between different species — exactly what happened with SARS-CoV-2, leading to the COVID-19 pandemic. Since February, Whittaker has been interviewed by multiple news outlets on virology and the origins of the pandemic. On May 26, 2020, the New York Times featured Whittaker along with other experts for Sex? How the Coronavirus Can and Cannot Spread — What you need to know about how the virus is transmitted.” For this article, he explained the life cycle of the virus, how easy it is to destroy the “envelope” of the virus on hands and surfaces, and how heating food kills the virus. He is one of many Cornell M.P.H. faculty providing his expertise to the public and other institutions on the virus itself, as well as the epidemiology of COVID-19, and public health response.

“All viruses need to gain access into host cells to infect, and how they do this can [give researchers insights into methods to] control disease. Coronaviruses... are particularly flexible in how they can enter cells, which makes them especially problematic as emerging viruses.”

– Cornell Chronicle, March 12, 2020 “Cornell experts view coronavirus via multidisciplinary lenses”

In April, Whittaker and colleagues published a paper in the Journal of Molecular Biology, supported National Institutes of Health, that identifies a unique sequence of four amino acids in a specific protein structure in SARS-CoV-2 that allows for entry into host cells. He hopes to find links between this unique sequence and the specific properties of transmissibility and stability of the virus. In collaboration with Dr. Susan Daniel of Cornell’s College of Engineering, he recently published another paper showing that modulating the activity of calcium in cells might provide an entirely new therapeutic approach.

Whittaker is one of the founding professors of the M.P.H. Program, helping design the Program’s Infectious Disease Epidemiology concentration, and teaching principles of infectious disease to first-year M.P.H. students. He also teaches in Cornell’s veterinary curriculum, and mentors M.P.H. students in applied research projects related to infectious diseases and public health.
Cornell M.P.H. alumnus Steven Shelley helps combat TB & COVID-19

After graduating last year, alumnus Steven Shelley moved to Augusta, Maine for a position as Tuberculosis Epidemiologist for the Maine Center for Disease Control and Prevention (MeCDC). Recently, he has also been supporting COVID-19 efforts with the MeCDC. According to Steven, the Cornell M.P.H. classroom discussions about global live animal markets, zoonotic disease, and emergency preparedness helped him feel prepared for the current crisis.

In his role with the MeCDC, Shelley supports tuberculosis (TB) case investigations and coordinates collaboration between epidemiologists and public health nurses across the state of Maine. Though TB poses a major threat worldwide, it is less prevalent in the United States, with a total of 9,025 TB cases reported in the United States in 2018, and a national incidence rate of 2.8 cases per 100,000 population. Maine’s incidence rate is lower, at 1 case per 100,000, and the state investigates about 15-20 TB cases per year. Importantly, 90–95 percent of people with TB never have active TB; instead, the disease can lie dormant, and may become active if their immune system becomes suppressed.

According to Shelley, significant resources are required to conduct screening and contact tracing investigations for every case in Maine, since TB can take months to years to develop into active TB disease, at which point it is then shed continually. Shelley says that some of the most vulnerable populations in Maine require the largest contact tracing investigations, often because they live closely with many others, as with homeless shelters or new arrivals to the state living in high-density housing. Also, a strategy called Directly Observed Therapy (DOT) is used to ensure that active TB patients follow six to nine months of treatment with four different medications. This is critical to reduce development of antibiotic resistance. Public health nurses who make home visits are essential for DOT, and the MeCDC coordinates much of this across the state.

Of course, the COVID-19 pandemic has changed business as usual for the MeCDC. Emergency plans set in place across the country during the H1N1 outbreak in 2009 have helped agencies prepare for the current crisis. In Maine, as with many state and local health departments, they are implementing a “Continuity of Operations Plan” that goes into effect in emergency situations, so that all staff can take on more tasks directly related to the crisis. For example, Shelley reviews electronic lab reports to help assign COVID-19 investigations to field epidemiologists. There has also been a notable impact on the MeCDC’s Tuberculosis Control Program. Public health nurses have been rerouted from some TB control duties to respond to COVID-19 calls and conduct COVID-19 investigations. Of course, this and other fallouts from the pandemic impact resources available to care for TB patients, conduct contact tracing, and even to collect samples to test for suspected active cases. Since TB typically attacks the lungs, TB patients are at high risk due to COVID-19, and the most vulnerable populations, such as the homeless, are doubly at risk.

The MeCDC is also using digital technology in the form of FaceTime or WhatsApp to perform “Video DOT.” This helps address some of the reduction in public health nurses for TB cases, but disadvantaged patients often have the least access to electronic devices. As the pandemic continues to play out, Shelley and many others at the MeCDC must strategically balance available resources to respond to COVID-19 while maintaining other essential programming, like the Tuberculosis Control Program.
COVID-19 outreach

In response to the pandemic, Cornell’s M.P.H. Program performed outreach locally and with partners across the country, to help prevent disease transmission. We are active in promoting the health of our campus and community, with faculty, staff, and students involved in everything from sewing masks to designing and implementing behavioral surveillance studies that assess compliance with mask wearing and social distancing practices.
Taking a One Health approach

“The coronavirus pandemic has highlighted some of the broad connections between people and the environment. Hopefully, that will be a teachable moment for us.”

-Dr. Kathryn Fiorella, Food Systems and Health concentration area chief, assistant professor

Dr. Kathryn Fiorella, chief for the M.P.H. Food Systems and Health concentration and lead instructor for the Food Systems and Health survey course, aims to understand links between environmental change and human health. Her work exemplifies the One Health or Planetary Health perspectives that underpin Cornell’s M.P.H. Program, where understanding the interconnections between living systems can help us to better understand population health. Fiorella’s research focuses on ways that resource access impedes or provides for food, livelihood, and nutrition security, and how human well-being feeds back into the system to affect environmental sustainability. Much of Fiorella’s recent field research has been based in the Lake Victoria fishery in Kenya and rice field fisheries of Cambodia. There, she combines community-based ecological monitoring of fish catch and household survey data to analyze how declining fish availability affects local households, as well as how health outcomes, such as HIV prevalence linked to sex-for-fish transactional exchange, in turn impact the sustainability of fisheries management.

Fiorella draws on interdisciplinary training in ecology, epidemiology, economics, political ecology, and sociology to approach these questions. “When I was studying abroad in Panama [as an ecology student], we spent tons of time in beautiful rain forests, while just outside of them lots of people were farming and making use of natural resources for their livelihoods in ‘degraded landscapes’ that were integral to the food system,” she remembers. She then became more interested in food systems to understand how people “make use of the environment, and how people can continue to use natural resources in the future to support their health and well-being.”

In the classroom, Fiorella designs lectures informed by her research on food insecurity, water, fisheries, and wild foods, nutrition and sustainable diets. “I really want M.P.H. students and others more generally to be able to understand the complexity that exists in our food systems,” she says, “but also to be able to wade through it all and focus in on public health programs and policy opportunities.” She also mentors M.P.H. students in applied projects with fisheries and communities in Kenya and Cambodia, working with partners such as WorldFish.
Interventions in nature to support mental health

"As we say in public health— it’s about making the healthy choice the easy choice."

-Dr. Gen Meredith, associate director

"Science for social justice is about health, sustainability and equity, and empowering kids to be change agents in their communities."

-Dr. Amie Patchen, postdoctoral associate

Dr. Gen Meredith, associate director of the Cornell M.P.H. Program, has a deep interest in preventing mental illness. It began with her training as an occupational therapist, including work with mental health rehabilitation. “Any way we look at the data, regardless of the population, there are ever-increasing rates of mental illness,” she says, highlighting school-age youth, college-age students, adults, Black Americans, and indigenous and migrant communities. She points to the rush, competitiveness, and high-speed technology of modern society as contributors to the problem — but Meredith wants to find solutions. When she joined the M.P.H. Program, built on One Health and Planetary Health frameworks, she saw an opportunity to braid support for natural environments with initiatives to support mental health.

One way to support mental health, according to copious literature (but also common sense), is to increase people’s access to green spaces and leverage their utility “to mitigate stress and increase well-being overall,” says Meredith. At the same time, “our experiences with green spaces influence our ability to understand the power of our environment, so engaging with nature through time outside allows us to become better environmental stewards, too.” While time in nature can improve the health of people in the short-term, Meredith also realized it could lead to “a generation of planetary health and climate change leaders” in the long-term.

First, Meredith’s team is focused on the more proximal goal — finding and addressing the barriers to people getting outside. This began with a scoping review of the literature related to college-aged students, in partnership with the Cornell Health Nature Rx initiative, where physicians and clinicians had already begun to write prescriptions for students “telling them to go outside.” But, says Meredith, they also wanted to know the minimum time, or “dose” in nature that would result in mental health benefits. Now, providers can discuss how much time —as little as 10-30 minutes — of sitting or walking outdoors can decrease markers of stress.

Next, the M.P.H. Program hired Amie Patchen as a postdoctoral associate for a newly funded Healthy Kids, Healthy Planet (HKHP) initiative. Patchen’s research and teaching has focused on engaging people in science, and how youth can impact their communities’ engagement with science. At first, HKHP’s goal was to try to measure the effects of elementary school students spending time outside on their mental health and environmental attitudes, but they quickly found that most elementary school teachers interviewed encountered many challenges that made it difficult to take students outside. “So we took a half-step back,” says Meredith, to assess the barriers and then provide relevant tools and resources.

“The first step was developing partnerships with schools, learning from teachers what they were already doing, and understanding the baseline,” says Patchen. Even though it was “very, very clear that everybody wanted students to spend time outside,” teachers explained that multiple factors made
regular time outside challenging. Initially, while administrators were supportive of teachers’ efforts, they did not realize the range of obstacles that limited outdoor education in their schools. “There are barriers at many levels — some classroom, some curricular, and some at the district or state level,” says Patchen.

So far, Patchen has focused projects and workshops on the teacher and classroom level. She designed an Outdoor Toolkit, elucidating the benefits of, barriers to, and strategies that support outdoor time in elementary schools. In the spring, HKHP distributed funds to eighteen teachers from three Ithaca City Schools, each with different populations and equity concerns, to implement strategies from the Outdoor Toolkit and take kids outside. One week later, schools in New York State closed for the semester because of the COVID-19.

In anticipation of the coming fall semester amidst a pandemic, when teachers may need the benefits of outdoor education more than ever, Patchen now aims to work with a designer to develop a generic set of “blueprints” with diagrams and basic tools that can be used in any school, while students are physically distancing. Many of the same barriers identified pre-COVID will be pertinent this fall, such as how to deal with rain or wet surfaces. “We’re trying to figure out how to make outdoor time a regular, routine part of the school day,” says Patchen, pointing to the norm in schools now, where field trips might happen once or twice per year. “Being in nature regularly and repeatedly is beneficial — and that’s a whole different ball game.”
Profiles in emergency preparedness: Myranda Baumgartner

"If more people had basic understanding of the principles and protocols of emergency management, just imagine the leg up our society would have."

-Myranda Baumgartner, M.P.H. '20

Myranda Baumgartner came to the Cornell M.P.H. program “in a roundabout way,” when public health was just one of the fields she was considering. She found the Cornell M.P.H. website and discovered the concept of One Health, which pivots on the inter-connections between human, animal, and environmental systems in population health. This interdisciplinary, systems-based framework “really hit home,” and she applied.

In her first semester with the program, Baumgartner was still considering a future career in veterinary medicine — until Dr. Isaac Weisfuse led the emergency management module in an M.P.H. Foundations course. She was assigned to the operations team for an incident command system exercise, workshopping a fictional U.S. county’s response to a novel influenza pandemic. Their main task was to triage distribution of the first 1,000 vaccines, considering everyone from the elderly and children to frontline workers. “It was very hard to do, but I want to do it every day!”

Baumgartner is attracted to emergency management because it “keeps me on my toes, on the front line” and because it ties so many things together, “like One Health, climate change, human health, animal health, infectious disease epidemiology, and even policy and politics.” For her applied practice internship, Baumgartner returned to her home state for the summer with the Texas Department of State Health Services (DSHS) in Austin, where she reviewed and reported on community assessment and mortality surveillance data, and also collected, analyzed, and presented surveillance data from shelters during Hurricane Harvey during a week-long emergency activation training.

Later, in spring 2020, she spent her capstone semester designing an emergency preparedness course proposal for the M.P.H. program, including everything from justification and objectives to course structure details to a competency assessment plan, with Dr. Lorraine Francis as her faculty mentor. “She is such a wealth of knowledge, and it was amazing to have the chance to pick her brain,” says Baumgartner, “but the best thing about our partnership was that Francis treated me as an equal, asked me about Texas and Hurricane Harvey, and really valued my opinions.”

Since graduating, Baumgartner has returned to the Texas DSHS performing epidemiologic surveillance on COVID-19 and in response to natural disaster events such as hurricanes.
Profiles in emergency preparedness: Lorraine Francis

"If you really want to work with countries in emergency situations, it might mean taking a step back from leading and being open to appreciating and supporting what already exists on the ground."

-Dr. Lorraine Francis, lecturer

Dr. Lorraine Francis joined the M.P.H. Program in 2019, bringing 16 years of expertise in infectious disease epidemiology and surveillance, and response to public health incidents across several countries in the Caribbean.

"You never know what to expect when you enter an emergency situation," says Francis, speaking of her experiences in the Caribbean. “You are not on vacation when you go into one of these countries during an emergency. You are there to support post-disaster surveillance efforts or the prevention and control of disease outbreaks.” She tells students they must also be ready to assist with data collection and analysis. She identifies competency, patience, diplomacy, and the ability to work in multidisciplinary teams as the key skills for this work.

“My experiences are different,” Francis points out, comparing her work with emergencies in the Caribbean to emergency management she has observed in the United States. “We know devastation and destruction,” she says, referring to experiences with yearly tropical storms and hurricanes, as well as the challenges of disease outbreaks such as the Chikungunya and Zika epidemics of recent times. “Each experience further strengthens our individual country systems and overall regional coordination.” In Small Island Developing States, there is the recognition of strength in numbers, and an understanding that no one country has all the necessary resources to deal with a crisis on its own. The Caribbean Community (CARICOM) was established in 1973 to facilitate functional cooperation among 20 countries. It is the oldest surviving integration movement in the developing world, with significant success in functional cooperation across education, health, culture, and security.

Francis co-teaches two public health methods courses with the M.P.H. program - Planning, and Monitoring and Evaluation - and guest lectures in others. She also connects M.P.H. students with partner agencies in the Caribbean for applied project opportunities. This spring, Francis mentored M.P.H. student Myranda Baumgartner in designing a Public Health Emergency Preparedness and Response course that Francis plans to introduce to the M.P.H. program. Francis is also an active participant on several college and university committees tasked with planning for reopening Cornell’s campus in context of the COVID-19 pandemic.
Profiles in emergency preparedness: Alicia Musk

"In my work, I want to make sure everyone has what they need."

-Alicia Musk, M.P.H. '20

“I was always interested in weather events and climate change, and their human and environmental health impacts,” remembers Musk. As a teenager, she followed the infamous 2005 season that included Hurricane Katrina. “I was glued to my TV that season,” she recalls. Once Hurricane Sandy struck and Musk witnessed the devastation in her own community on Staten Island, she realized she wanted to be on the front lines.

“Then, of course, I learned about One Health and the interconnectedness of these systems — climate change, infectious disease outbreaks, and disaster preparedness — when I joined the M.P.H. program.” For her applied practice internship in summer 2019, Musk worked on two projects with the Steuben County Health Department. One involved assessing the county’s main disaster risks, and then creating targeted communication materials for unique communities, including resources and recommended ways to prepare for the potential physical and mental health impacts of events such as floods, severe storms, and power outages, and presenting them to officials across eight counties.

Musk’s second project was, believe it or not, to create a scenario to help the region prepare for a potential global pandemic. She researched past timelines for influenza and SARS, and in August 2019, she introduced a team of emergency planners and senior officials to a fictional influenza virus circulating the globe, with a suspected case in the county by February 2020.

Then, of course, COVID-19 arrived, eerily true to Musk’s timeline. One of her supervisors from the Health Department, Matthew Marmor, offered some humor about the coincidence, telling her, “Your tabletop exercise prepared us — it was so realistic it actually came true!” But in reality, she did prepare them, walking the through a timeline that included travel restrictions, an economic shutdown, a rush to create the need for hand washing and social distancing, how to plan for schools and transportation shutting and what to expect when the healthcare system and frontline workers are overwhelmed.

In her career, Musk wants to pursue disaster epidemiology, and positions in emergency response and coordination. “Maybe FEMA, eventually” she suggests. “I want to help a city or region prepare for every single risk, through training events to practice, practice, practice, with different agencies working together. Then collect feedback, and do it again.” In July, Musk accepted a position as Program Health Analyst with Corning Incorporated in Corning, New York, where she will use COVID-19 data to “inform better decision-making around employee safety and company procedures.”
Profiles in emergency preparedness: Isaac Weisfuse

"There's potential for a public health problem in any emergency — even something as simple as a water main break that can't be fixed for two weeks in July."

-Dr. Isaac Weisfuse, adjunct professor

“I view all our students as future employees,” Weisfuse says of his approach to teaching. Weisfuse teaches M.P.H. students what he would want an employee to know. With a 24-year tenure at the New York City Department of Health and Mental Hygiene, and national public health leadership in pandemic influenza planning, Weisfuse’s emphasis in teaching is “one hundred percent practical.”

One topic Weisfuse teaches is the Incident Command System, a federally mandated approach to managing emergencies. “Every person falls into a role within incident command,” he says. Over a three class exercise, students are divided into groups, based on incident command roles such as health planning, logistics, or finance, and given a fictional emergency scenario with specific tasks to deliver. A few years ago, he utilized a hurricane scenario, but this spring the exercise was based on an influenza pandemic, presenting students with issues we currently face with COVID-19.

Weisfuse creates all course assignments based on his experiences with real emergencies. “In my era, quite frankly, it was trial by fire,” he recalls of his early years in emergency management for New York City, in late 1999. “I didn’t walk into this with a great baseline of knowledge, and there was uncertainty in how to respond.” Among a long list of accomplishments, Weisfuse was the Incident Commander for Y2K and the World Trade Center emergencies. Later, after leading the H1N1 Vaccine Task Force at the Centers for Disease Control, he was the incident commander for the Hurricane Irene Response. He has overseen the development of incident specific plans and guidelines for anthrax, smallpox, plague, tularemia, chemical exposures, hurricanes, earthquakes, cyber-attacks, and radiation and nuclear events. And the list goes on. This year, Weisfuse has also been a key advisor for Cornell University’s COVID-19 response planning.

“I learned emergency management slowly but surely, with help from many people, and I want to pass that knowledge on to our students,” he says. According to Weisfuse, Cornell’s M.P.H. program is unique. “Emergency management isn’t something you normally learn in a public health training program in the United States. But it’s a part of our life now, and it won’t be going away.”
EQUITY

Racism is a public health crisis

Director's message

“The Cornell M.P.H. Program condemns the killings of George Floyd, Ahmaud Arbery, and Breonna Taylor, as well as the many, many other tragic deaths due to racism that have not been as widely publicized. Our university, college, and Program have made it clear: we cannot and will not tolerate racism or discrimination in any form. It is now more than ever our responsibility to make our own voices heard. To advance the health and wellbeing of us all, we must work tirelessly to identify and confront racism, on personal, institutional, and structural levels. To all those suffering, and all those seeking justice, we stand with you in solidarity. We are committed to having anti-racism and anti-discrimination be enduring components of the curriculum, research, and engaged activities of our Program. We are committed to exercising the power represented in the faculty, staff, and students of our Program to undo racism wherever we can, and we will not waver in this effort.”

- Dr. Alexander Travis, director

Equity as a pillar

Equity has been a pillar of the Cornell M.P.H. Program since its inception. The health and wellbeing of one population should not come at the expense of another, whether now or in the future. Our first goal is to “advance equity through public health,” and under this goal our Program has outlined objectives and evaluation measures to recruit and support a diverse student body; recruit and support a diverse team of faculty and staff; promote awareness of issues related to inequity, exclusion, and racism; help dismantle structural racism within and outside our community; and, promote equity and inclusion through teaching, research, and service. Although we have made progress toward each of these aims, we can and will do more to fight injustice.

New commitments

In June, amidst national protests and outcry at the hateful and unjust killings of George Floyd and so many others, Cornell M.P.H. staff, faculty and students came together to call for and develop action plans to meaningfully battle racism and discrimination. Although racism is a crisis that must be addressed now, we also recognize intersectional forms of oppression across society and populations. A new anti-racism and anti-discrimination working group was established to develop and oversee these plans moving forward.

The anti-racism and anti-discrimination plans now in development are being shaped by the input of students, alumni, and partners. These plans will include action steps — beginning this Fall 2020 semester — toward incorporating an explicit anti-racism and anti-discrimination focus throughout the entire Program, including all M.P.H. courses as well as our research and applied learning with community partners. We will also provide support for the trainings and resources our faculty, staff and students need to support these aims. These plans will be posted to the M.P.H. website and updated annually with reporting on outcomes. We intend for the plans to evolve as living documents; they will be an essential part of our recognition of the critical importance of the social determinants of health, and the staggering public health impacts of racism and discrimination.
Building public health through regional partnerships

“We choose to develop and pilot systems that have a strong focus on advancing health equity.”

- Lara Parrilla ’99 community & academic partnership manager, visiting lecturer

One of the first steps in creating a new M.P.H. program — one founded on pillars of equity, sustainability, and community engagement — was reaching out to influential public health organizations in the region to develop impactful partnerships. At the time, Lara Parrilla ’99, was leading Nutrition & Community Development at Cornell Cooperative Extension of Tompkins County (CCE-TC), where she had developed, supported, and expanded food access programs with low-income communities for nearly a decade.

Immediately, Parrilla became a key partner for our Program. In 2018, she and other CCE-TC partners began to work with Food Systems and Health students in the very first Cornell M.P.H. cohort to develop pilot project proposals. Topics ranged from a produce prescription program with healthcare providers for patients with pre-diabetes or diabetes and food insecurity, to a universal school breakfast program with two Ithaca City schools. The next year, in collaboration with agency, nonprofit and foundation partners of the Childhood Nutrition Collaborative, the Tompkins County farm to school program was born, bringing regionally grown, fresh produce to over 12,000 students across eight school districts. M.P.H. student groups have continued to work with these initiatives each semester, developing monitoring and evaluation plans, analyzing evaluation data, and responding to the emerging needs of each program.

In early conversations about the produce prescription program with the Cayuga Center for Healthy Living, Parrilla recalls “they were committed to offering their patients a means to add more vegetables and fruits to their diets, along with a wider network of community support to sustain behavioral changes that could mitigate the effects of diet-related chronic disease.” Today, with support from local farms, Healthy Food for All, and the M.P.H. Program, over 40 primary and specialty care practices in Cayuga Health Partners’ (CHP) clinically integrated network are able to refer their patients to the produce prescription program.

This year, Parrilla has stepped into a new role as community & academic partnership manager and visiting lecturer. She helps build new partnerships and projects that maintain connections between the Cornell M.P.H. Program, CHP and the Cornell Center for Health Equity (CCHEq) — bridging Cornell’s Ithaca and New York City campuses. Ten M.P.H. students worked with Parrilla this summer on behalf of the Tompkins County Health Department to increase capacity for calling local residents who had been tested for COVID-19, “to make sure they understood the requirements of home isolation, and that they had a primary care physician.”

Parrilla kicked off another project this year with CHP and Dr. Jamila Michener, co-director of CCHEq. Their work aims to increase the capacity of primary care providers and community-based organizations to reduce health inequities through partnerships and policies that address the social determinants of health (SDOH) — the conditions in which people are born, grow, live, work and age, and the fundamental drivers of these conditions. Parrilla has been working with students to integrate a screening tool with physician’s offices to assess and respond to the most common unmet social needs in their patient population: food insecurity, housing instability, utility needs, financial resource strain, transportation, childcare and social support. They are also working with 2-1-1 Tompkins/Cortland to develop a community service database so that physicians have the tools they need to respond to these patients’ needs.
Parrilla also points out that the CHP clinic is a perfect incubator for innovation — it’s small and agile enough to iteratively make improvements to the system, producing something sustainable that staff will continue to implement after it is set up. “CHP has the infrastructure to quickly scale up quality improvement initiatives such as this one throughout the 40+ practices they support, which makes it an ideal home for collaborative public health research and practice.”
From applied learning to impact: Addressing barriers to health

"Public health is such a broad field that you can easily incorporate the skill sets you already possess, find your niche, and still have so much you can learn. If you do the legwork, it can be a really enlightening experience."

-Tatiana Thomas, M.P.H. '20

Tatiana Thomas joined the M.P.H. Program in the fall of 2018, after earning her MBA and a graduate certificate in epidemiology. She was driven by a passion for reducing disparities in health outcomes and care. She wanted to learn how to refine her skills in data informatics and financial analysis to “drive toward a goal to increase equity in healthcare.”

When she arrived in Ithaca, Thomas immediately sought out interventions in the local community that were reducing barriers to care for marginalized populations. For her practicum, she reached out to what was then a newly founded organization, The REACH Project, Inc. — often referred to just as REACH, an acronym for Respectful, Equitable Access to Compassionate Healthcare. While based in Ithaca, they have grown quickly in two years, and now provide care to a large service area across New York and Pennsylvania. “REACH was founded through the recognition of the prevalence of a patient population that depends on emergency departments for substance use disorders, and who are often sent away without receiving the comprehensive treatment and the respect they deserve,” says Thomas, who is now the full-time manager of research and clinical informatics on REACH’s newly developed research team.

Thomas is working on multiple grants with REACH, including one she helped write during her M.P.H. practicum, in collaboration with the new rural residency program for Weill Medical students at Cayuga Medical Center, and the Tompkins-Cortland Community College Nursing Program. Through this grant, harm reduction focused modules — which help alleviate barriers to care, including stigma — will be incorporated into the training and education of healthcare providers and clinical staff.

Thomas worked on other engaged projects focused on equity in communities during her time as an M.P.H. student, as well. In a third-semester community-engaged methods course, Thomas and two other students helped to develop a stakeholder-driven monitoring and evaluation plan with the Groundswell Center for Local Food and Farming, an organization based in Ithaca dedicated to “building a more just, sustainable food system.” The plan supports Groundswell's transition of farmed land from an incubator farm program to a community farm, largely comprised of Karen refugees from Burma. The student team met with farmers, staff and board members from the organization to develop the plan, which is intended to “help evaluate processes, guide decision-making during the transition and, ultimately, strengthen food security and food sovereignty of community farmers.”

Thomas credits the M.P.H. Program with helping her appreciate a deeper understanding of the complexity of public health issues and the development of innovative solutions. She says the program introduces students to practical skills that are used in public health interventions every day, from writing grants to developing monitoring and evaluation plans. “I learned that even when looking at a targeted issue, like the opioid epidemic or food sovereignty, there is an interconnected web that first needs to be picked apart in order to address it,” Thomas explains, “especially if you aim to create something sustainable and scalable.”
Considering structural inequities through a communication lens

"There are individual and structural levels of racism and discrimination — and the ways to tackle them are different, as are the specifics. We need to understand from relevant stakeholders what the issues are, the goals, and the barriers. We learn from what has been tried before. Then, we figure how to intervene and pay attention to what works and what doesn’t."

-Dr. Amelia Greiner Safi, M.S. ’06 M.P.H. Program core faculty, Department of Communication senior research associate, Atkinson Center for Sustainability faculty fellow

In 2006, at the start of her doctoral studies in Social and Behavioral Sciences at the Johns Hopkins Bloomberg School of Public Health, Dr. Amelia Greiner Safi, M.S. ’06 began asking questions about inequities across health and society that continue to drive her work today. While she had a longstanding interest in issues of fairness and ethics, a real awareness of the structural factors contributing to inequality took shape during her dissertation research in Baltimore. The city was revising its zoning code for the first time in 40 years. Along with a team, Greiner Safi was interested to see if this rewrite could be used to promote health, given the foundations of zoning — the city had not yet been considering these revisions in terms of health. “The zoning rewrite was a rare policy initiative, allowing me to explore upstream factors that might drive health disparities and how public health research can impact a policy-making process,” says Greiner Safi.

Just prior, she had completed a Master of Science in Communication from Cornell. “My training in risk and science communication ended up being a good foundation to consider equity,” reflects Greiner Safi. “In the context of health, communication has so much to do with perception of whether a particular issue even exists or is considered a problem – which is influenced by who and what people turn to for information and how that topic is framed and explained. I see these factors at play with the heated discussions on structural racism happening now.” For her dissertation, questions about health were focused on communication processes: Do people see health and zoning as related to one another? Are people framing how this code is relevant for people’s daily lives and concerns? Who shows up, and whose interests are represented?

“It was eye-opening; I had thought I had more of a grasp on social issues.” It became apparent to Greiner Safi the extent to which inequities “are everywhere: across race, class, gender, nationality, education, neighborhood, employment… and then they materialize in impacts on physical and mental health.” Recently, Greiner Safi, along with colleague Lara Parrilla, ’99, and others, has been supporting initiatives to improve and rethink diversity, equity and inclusion in health systems. This involves assessing whether there are even data available to track health disparities — for instance, is a patient’s race noted on a health record? — to trying to understand how staff and providers in health care “experience interactions with one another and patients” and what those mean “in terms of inclusion and high quality care.”

Her focus on equity translates to how research is conducted, too. Lower socioeconomic status populations have often been excluded from academic research, she says, and “recruiting practices do not always match the lived reality of potential participants who aren’t able to plan ahead, come to campus or schedule something online.” With colleagues in the Department of Communication, she is studying how use of a mobile research lab might help overcome such barriers.
In the M.P.H. curriculum, Greiner Safi leads Public Health Foundations II, in which the social determinants of health, including discrimination and racism, are key components. These are parts of a framework addressing multilevel influences on health — from genetics to climate change. She also teaches Public Health Communication, where in addition to discussing COVID-19 and “the avalanche of mis- and disinformation” on COVID-19 this year, students will delve deeper into “the social awakening around systemic racism, how race, racism and health are communicated, why racism and discrimination can be uncomfortable to talk about — and, why this matters.”
ENGAGEMENT

Pioneering new approaches to public health education

Dr. Gen Meredith, associate director, receives SUNY Chancellor’s Award for Excellence in Teaching for her dedication to teaching and mentoring M.P.H. students. She is the architect of Cornell’s M.P.H. curriculum which has received national recognition for its integration of community engagement and is recognized for her expertise in preparing the public health workforce of the future.

The Cornell Master of Public Health (M.P.H.) Program has documented new benefits to its integrative training model. Program leaders published a paper describing their novel approach to public health training — and how a learning triad among community partners, students and faculty has organically emerged.

“Other types of education programs employ similar models, but public health education has been left out of the conversation,” says Dr. Gen Meredith, associate director of the program, which recently achieved full accreditation.

The paper, published in the Michigan Journal of Community Service Learning, outlines the benefits emerging from an iterative, flexible learning model. By incorporating projects with and for real-world businesses and non-profits into class-based learning, students build hard skills like data collection and analysis and soft skills like leadership and communication; their community partners gain valuable service and learn more about public health; and faculty members enrich their research and mentorship activities. Simultaneously, this approach builds relationships, and the Program strengthens projects that benefit public health in local communities and work toward structural changes to societal issues.

“We became interested in the type of learning that happens for community partners during this relationship,” says Meredith. “So we looked at what kind of knowledge and skills community partners were interested in gaining, and saw how this overlapped with what we are also trying to help students learn in the classroom.”

The Cornell M.P.H. Program has partnered with more than 50 community partners since its creation in 2016, using the university’s land-grant mission — and groups like Engaged Cornell and the Center for Teaching Innovation — to fully embrace community-engaged, immersive learning experiences for all three groups in the triad.

“We hope our continued research in this area will help elucidate the real and quantified benefit that M.P.H. programs bring to the workforce through an investment in this type of learning,” says Meredith.

Community partners are consequently a crucial part of the model. Baz Perry ’02, equitable food systems coordinator for the Cornell Cooperative Extension (CCE) of Tompkins County, facilitates Cornell’s involvement in the Fruit and Vegetable Prescription Program (FVRx), a partnership that started in 2018. FVRx connects eligible patients who have diet-related illnesses like diabetes and hypertension with fresh, organic food every week from June through mid-November.

Students and faculty in the M.P.H. Program have been working to help Perry ensure their processes and outcomes meet the high standards required to keep FVRx running well. “We are transparent with them about our current program implementation and what our goals are,” she says. “They then are able to
give us fresh insight and analysis into how to improve our processes and, therefore, our outcomes.” Through this exchange, they make improvements and share the experience of implementing those improvements. “This is how they [the M.P.H. students] learn about budget and personnel limitations, and how different public health strategies are able to be implemented in a real-world setting with its diversity of cultures, opinions and anything else that can make a strategy work or need revision along the way,” says Perry. “It’s an iterative dialogue.”

“Learning is happening in multiple directions,” adds Meredith, “which leads to this kind of collective capacity-building of knowledge and skills. Over time you see these relationships are not one-off. Most of what we’re working on are growing into multi-year projects with many branches and offshoots.”

Lara Parrilla ’99, has seen different iterations of projects from both the partner and faculty perspectives. Parrilla is the former nutrition and community development issue leader of CCE Tompkins County and joined the M.P.H. team as a visiting lecturer last semester. Since the start of the Program, Parrilla has contributed to course planning and project ideas. In her current role she’s continuing to supervise student groups as a faculty mentor, and still serves as the lead for the Program’s involvement with Cayuga Health Partners.

“I think the most important thing that is happening between the Program and community partners is a very organic capacity-building of professional development for staff,” says Parrilla. Moreover, layered involvement like Parrilla’s builds trust, which is a foundation of the M.P.H. Program’s model.

“We call for a meaningful trust-building relationship and commitment to try to change the status quo,” says Meredith. “If we came in and said to a community partner, ‘This is how you should run things,’ as public health experts we know that approach is likely to fail. You work with partners to understand what is needed and if or how you can add value.”

Such trust is especially vital now as the country responds to the coronavirus pandemic. M.P.H. students, staff, and faculty are building on these relationships and are working with the Ithaca City School District, for example, on an updated emergency response and food security plan, and even envision building on their long-standing relationship with the Tompkins County Health Department to help design communication strategies for hard-to-reach populations as potential testing or vaccine campaigns for COVID-19 emerge. Says Meredith, “Now more than ever, we can see the importance of an all-hands-on-deck approach to public health.”

Audrey Baker ’09, M.P.A. ’15, manager of applied learning and evaluation, and Dr. Amie Patchen, postdoctoral associate, are co-authors on the study.

By Melanie Greaver Cordova; Article originally published in the Cornell College of Veterinary Medicine News, 7/7/2020 Updated 8/17/2020
Our Courses

Core Courses
- Public Health Foundations I
- Public Health Foundations II
- One Health & Planetary Health
- Public Health Leadership & Ethics
- Epidemiology in Practice
- Biostatistics for Health Sciences
- Applied Data Analysis
- Health Policy
- Public Health Communication

Concentration Courses
- Food Systems & Health
  - Food Systems & Health
  - Food Systems Approaches to Food Safety
  - Public Health Nutrition
  - Electives
- Infectious Disease Epidemiology
  - Principles in Infectious Disease & Health
  - Advanced Epidemiological Concepts
  - Introduction to Disease Vectors
  - Electives

Community-Engaged Methods Courses
- Public Health Assessment
- Public Health Planning
- Public Health Monitoring & Evaluation

Applied Practice Courses
- Public Health & Social Justice Colloquium Series
- Public Health Practicum
- Public Health Capstone
- Public Health Portfolio
“The main thing I learned is that we need insights from different professions to achieve a common goal.”

-Relicious Eboh, current M.P.H. student

During the 2019-2020 school year, M.P.H. student Relicious Eboh worked with Cornell’s Mental Health Review Committee (MHRC), which aims to assess mental health needs on campus and then use that information to improve mental health across Cornell. Students, faculty, and staff provided feedback through a campus survey, dozens of focus groups, “World Café” large group dialogues, and “Telling Stories” writing workshops. Eboh joined this project to practice qualitative and quantitative analysis skills, to work with collaborative professional teams, and to “encourage healthy help-seeking behaviors” on Cornell’s campus.

In her applied practice work with MHRC, Eboh attended focus groups with students groups, including those in athletics, Greek organizations, science clubs, cultural affinity groups, and many others. She also attended the World Cafés. In these sessions, she took notes, transcribed them, and used qualitative analysis software to analyze the differences and similarities between what participants in different groups said. She also used statistical software to analyze participants’ demographic information along the way and adjust MHRC’s outreach and recruitment strategies as necessary, to ensure diversity and inclusivity.

Reflecting on her analyses, Eboh says many students spoke about the need for more diverse representation among staff, counselors and therapists at Cornell. Others, she says, believe mental health at Cornell could benefit from more of a community, rather than an individualized approach; for example, creating more opportunity for exercise and fitness, indoors and out, for all students.

“This was the first time I worked in collaboration with people from different disciplines,” reflects Eboh. After she graduates, Eboh wants to obtain a medical degree and become an infectious disease physician, while also “using public health and medical knowledge to make change at a policy level.”
"If there had been a cohesive, coordinated response, we would not be seeing the high rates of COVID-19 we have in this country."

-Farrah Mawani, current M.P.H. student

Farrah Mawani chose to complete her M.P.H. Applied Practice work with the Tompkins County Health Department (TCHD), under the mentorship of public health preparedness coordinator Nina Saeli. “Nina was amazing,” says Mawani. “She never let me feel lost, gave me really good feedback on my work, explained the reasoning behind things, and helped me understand what to expect in the future working professionally with others.” At the TCHD in the fall, Mawani helped support the development of county response plans for infectious disease outbreaks, as well as for biological, chemical, or radiological/nuclear (CBRN) act of terror. She also worked with Cornell’s College of Veterinary Medicine to analyze potential Point of Dispensing (POD) sites, and then was able to plan and execute a POD site in a mass vaccination exercise at the Ithaca College campus. “One really important thing about POD is the layout of the site,” reflects Mawani, since “people are sick, and people must be distanced.”

“My responsibilities changed dramatically in January,” Mawani remembers, when her supervisor asked her to begin developing materials to train and educate different communities in Tompkins County about COVID-19. Mawani attributes most of the success Tompkins County had in the spring mitigating COVID-19 “to the joint efforts of all the higher education institutions and the Health Department.” Without much guidance at the time from state and federal governments, Mawani and Nina Saeli developed educational materials for county residents throughout January, February and March, “expanding on an existing template from the CDC’s pandemic flu plan and other sources.”

When Mawani was tested for COVID-19 at a testing site outside of a shopping mall in the spring, she took note of how they organized the flow and related it to back to the POD flow system diagrams she had created in her work with TCHD, as well as in her foundational M.P.H. courses.

“The COVID-19 pandemic has shown us why we must place a greater emphasis on emergency preparedness. Our systems are connected at every level: from deforestation that invades animal habitats, to food markets that may carry disease, to infectious viruses that can cause instability across the globe.” Farrah plans to attend medical school, and is intrigued by a career with public health agencies in emergency preparedness. “I think I want to work with individual patients, but have a focus on a wider community level,” she says. “I’m still thinking about it."
Alumni in action: Hirokazu Togo

"Systems thinking is one of the things I have in my mind always, now."

-Hirokazu Togo, M.P.H. ’19

Hirokazu Togo came to Cornell’s M.P.H. Program on a Fulbright scholarship, on a two-year sabbatical from his position as Senior Environmental Health Officer for the Tokyo Metropolitan Government. After graduating as first-ever valedictorian of a Cornell M.P.H. class, in May 2019, Togo returned to his position in Tokyo — now, with greater impact, and greater responsibility.

Togo now takes a lead role in revising Tokyo’s Ordinance for Enforcement of Food Sanitation Act. Through one such revision, Togo has ensured that Tokyo’s food businesses will implement Hazard Analysis and Critical Control Point (HACCP) systems, with which he became familiar as an M.P.H. student. These systems focus more on preventing food-borne illness before food can be contaminated, while the previous ordinance focused more on testing final food products, which had less ability to prevent foodborne disease outbreaks.

When the ordinance is adopted, all food businesses in Tokyo, from restaurants to supermarkets to conveniences stores, will need to document protocols and procedures for handling food, washing hands, and other foodborne illness prevention measures. “This is a big difference,” says Togo.

In February, Togo gave a lecture to environmental health officers across Tokyo on the recommendations to the Japanese government outlined in his M.P.H. Capstone project, a comparison of foodborne disease outbreak surveillance systems in the United States and Japan, using Listeria monocytogenes as a case study. The project began with Togo’s practicum with the New York State Department of Health Bureau of Communicable Disease Control. The lecture was so popular, he was asked to deliver it a second time to environmental health officers who couldn’t make the first. The participants, Togo says, called the ideas “eye-opening.”
Alumni in action: Ana Barsallo Cochez

"I can work with all kinds of people, and get the most out of the interactions, because of the program’s focus on working with diverse groups."

-Ana Barsallo Cochez, M.P.H. '19

After graduating last spring, Ana Barsallo Cochez applied her newly developed skills in outbreak investigation and public health assessment, intervention and evaluation in a six-month position as a malaria consultant with the Pan American Health Organization, a branch of the World Health Organization.

In Panama, malaria is only present in specific regions. Barsallo Cochez worked with indigenous communities in a remote region of Panama, called Guna Yala, and with officials from the Ministry of Health to assess gaps in their systems and help make strategic recommendations. Living in the region for 20 days of each month, she helped to analyze epidemiological, administrative, and logistical approaches to malaria surveillance and response in the region, and to guide actions to help overcome gaps and achieve more efficient, effective diagnosis, treatment and research.

Barsallo Cochez spent her time working with teams to understand what they needed, and strategizing with the Ministry of Health, medical personnel, and community workers who lived in the region’s villages, and vector-control officials. She ran multiple seminars, with community workers involved.

Barsallo Cochez credits the M.P.H. Program with developing many of her skills working with interprofessional teams and applying cultural competence. The M.P.H. Program taught her that every person has something to provide to a solution, and a role to play.
Alumni in action: Miquela Hanselman

"I love [my work]. It’s the perfect mix of everything I wanted to do — being able to represent dairy farmers, and to use what I learned at Cornell to make change."

-Miquela Hanselman, M.P.H. ’19

Miquela Hanselman grew up on a dairy farm in Delaware County, New York, and has always wanted a career where she could advocate for dairy farmers like her family. As a Food Systems and Health student, Hanselman focused on food policy, food safety, and dairy sector communications.

After graduating last May, Hanselman became Manager of Regulatory Affairs for the National Milk Producers Federation, a trade association based in Washington, D.C. that represents dairy cooperatives and their dairy farmer owners across the United States on regulatory, food safety and policy issues. Hanselman mainly works with regulatory agencies, like the United States Department of Agriculture (USDA), the Food and Drug Administration (FDA), and the Environmental Protection Agency (EPA). In her role, she is busy with issues ranging from environmental management, nutrition, and food safety, to animal health, speaking with agency staff and reviewing federal policy language on a daily basis. “Every day is different,” says Hanselman.

Hanselman says she’s known as the “public health person” among her colleagues. This means, she says, understanding how interconnected food production, the environment, and public health really are — how when you pull one lever, so many others are pulled as well. For instance, when she’s working on a proposed regulation for animal health, she can better understand the potential impacts on water issues, and vice versa. She attributes this understanding to the M.P.H. Program, which “helped me see the big picture, and also take it down to a smaller level.”
Our campus partners

These Cornell-wide centers work to promote the health of humans and the ecosystems on which our health depends.

- Animal Health Diagnostic Center
- Atkinson Center for a Sustainable Future
- Center for Transformative Action
- Center for Transportation, Environment and Community Health
- Cornell Center for Behavioral Economics in Child Nutrition Programs
- Cornell Center for Health Equity
- Cornell Center for Social Sciences
- Cornell Center for the Study of Inequality
- Cornell Farmworker Program
- Cornell Health
- Cornell Shelter Medicine
- Cornell Small Farms Program
- Cornell Waste Management Institute
- Dairy Center of Excellence
- Engaged Cornell
- Global Cornell
- Northeast Regional Center for Excellence in Vector Borne Diseases
- NY Integrated Food Safety Center of Excellence
- NYS Integrated Pest Management
- Skorton Center for Health Initiatives
- The Mario Einaudi Center for International Studies
- Water Resource Institute
- Weill Center for Global Health
- Cornell Wildlife Health Center

Our advisory committee

- Oliver Gao, Ph.D., M.S. Professor, Department of Civil and Environmental Engineering; Director and Principal Investigator, Center for Transportation, Environment and Community Health
- Laura Harrington, Ph.D., M.S. Professor, Department of Entomology; Program Director and Principal Investigator, Northeast Regional Center for Excellence in Vector-Borne Diseases
- Anne Jones, D.O., M.P.H. Director, Medical Services at Cornell Health
- David Lodge, Ph.D. Francis J. DiSalvo Director, Atkinson Center for a Sustainable Future; Professor, Department of Ecology and Evolutionary Biology
- Saurabh Mehta, Sc.D., M.S., M.B.B.S. Associate Professor of Global Health, Epidemiology, and Nutrition, Division of Nutritional Sciences
- Monika Safford, M.D. John J. Kuiper Professor of Medicine; Chief, Division of General Internal Medicine, Weill Cornell Medicine; and Director, Cornell Center for Health Equity
- Basil Safi, M.P.H., P.E., M.S. Executive Director, Engaged Cornell/Office of Engagement Initiatives
- Kim Weeden, Ph.D., M.A. Jan Rock Zubrow Professor of the Social Sciences; Stephen H. Weiss Presidential Fellow; Director, Center for the Study of Inequality; and Chair, Department of Sociology
- Martin Wiedmann, Ph.D., Dr.med.vet Gellert Family Professor in Food Safety, Department of Food Science; Co-Director, New York State Integrated Food Safety Center of Excellence
Our community partners

Regional/national partners
- Cancer Resource Center
- Cayuga Health Partners
- Cayuga Medical Center & Cayuga Center for Healthy Living
- Center for Agricultural Development and Entrepreneurship
- Centers for Disease Control and Prevention Public Health Law Program
- Childhood Nutrition Collaborative
- Coalition for Healthy School Food
- Cornell Cooperative Extension
- Fighting Institutional Racism in Medicine
- Food Bank of the Southern Tier
- Food Policy Council of Tompkins County
- Friendship Donations Network
- GreenStar Community Projects
- Groundswell Center for Food and Farming
- Guthrie Medical Group
- Headwater Food Hub
- Healthy Food for All
- Ithaca Children’s Garden
- Ithaca City School District
- National Milk Producers Federation
- National Park Service
- New York FarmNet
- New York State Department of Agriculture and Markets
- New York State Department of Health
- Northeast Pediatrics and Buttermilk Pediatrics
- Paleontological Research Institution
- PepsiCo Sustainability Group
- Primitive Pursuits
- The REACH Project, Inc.
- ScienceHub
- Smithsonian Conservation Biology Institute
- ScienceHub
- USDA Animal and Plant Health Inspection Service
- Tompkins County Office of the Medical Examiner
- Tompkins-Cortland Solidarity Gardens
- Tompkins County Farm to School Project
- Tompkins County Health Department
- Youth Farm Project
International partners

- Community Markets for Conservation
- International Center for Tropical Agriculture Office for Africa
- Kenya Marine And fisheries research institute
- Les Centres GHESKIO
- McKnight Foundation Collaborative Crop Research Program
- Nelson Mandela African Institution of Science and Technology
- Ohio State University’s Global One Health Institute’s Ethiopian office
- Organic Health Response
- Smithsonian Institute Global Health Program
- The Caribbean Public Health Agency
- Quisqueya Permacultura
- US Army Medical Research Unit-Kenya
- Uzbekistan Science Fellowship
- World Health Organization
- WorldFish Cambodia

The M.P.H. Program partners with local, regional, national, and international organizations and communities to work toward bettering the health of humans, animals, the environment, and our world as a whole. Our students, faculty, and staff partner and engage with public health organizations and communities around the world to help solve some of the wicked challenges of our time, from hunger and obesity to antimicrobial resistance and tick-borne disease.
SCHOLARSHIP & OPERATIONS

Sponsored faculty projects

Kevin Cummings
- CVM Research Grants Program in Animal Health (USDA) Leveraging novel diagnostic approaches to improve Salmonella Dublin control in dairy cattle
- USDA Higher Education Challenge (HEC) Grant Multidisciplinary, problem-based lessons on antimicrobial resistance for seamless integration into veterinary curricula Jodi Korich, Clinical Sciences - Co-PI

Kathryn Fiorella
- Cornell Atkinson Center for Sustainability: Academic Venture Fund Spoiling fish as food: Harmful algal blooms in Lake Victoria
- Engaged Cornell Academic Venture Fund Supplemental Award Spoiling fish as food: Harmful algal blooms in Lake Victoria
- Cornell Atkinson Center for Sustainability: Rapid Response COVID Fund Assessing the impact of COVID-19 on food security and food consumption among Kenyan households
- Mario Einaudi Center for International Studies Faculty seed grant award
- National Geographic Society The value of biodiversity in Cambodian flood plain fisheries
- Engaged Cornell Food systems for global health Gen Meredith – PI Rebecca Nelson, Plant Science; Kathryn Fiorella; Audrey Baker; Alexander Travis – Co-PIs

Elizabeth Fox
- Engaged Cornell Planning for emergency and disaster in Tompkins County
- Engaged Cornell Developing curriculum to promote healthy diets in Port-au-Prince, Haiti

Karla Hanson
- USDA (National Institute of Food and Agriculture) Innovative community supported agriculture cost-offset intervention to prevent childhood obesity and strengthen local agricultural economies
- NIH (National Cancer Institute) Evaluation of a civic engagement approach to catalyze built environment change and promote healthy eating and physical activity among rural residents Donald Kenkel, Policy Analysis and Management; Michael Macy, Sociology - Co-Is
- Engaged Cornell Farmer’s market nutrition program assessment

Karyn Havas
- Engaged Cornell Cornell University do-it-yourself outbreak exhibit
- Hatch MRF A survey of biosecurity and Brucellosis status of backyard swine in New York State Caroline Yancey – Co-PI
Gen Meredith

- Engaged Cornell *Food systems for global health* Rebecca Nelson, Plant Science; Kathryn Fiorella; Audrey Baker; Alexander Travis – Co-PIs
- Engaged Cornell *Opening the door to nature-based engagement* Don Rakow, Plant Science; Nancy Wells, Design and Environmental Analysis; Janis Whitlock, Bronfenbrenner Center; Monika Safford, Weill Cornell Medicine; Amie Patchen – Co-PIs
- Engaged Cornell *MPH community engaged learning theory in local and global health* Jeanne Moseley, Nutritional Sciences; Lara Parrilla – Co-PIs
- Engaged Cornell *Community development and empowerment through evaluation* Lara Parrilla – Co-PI; Audrey Baker – Co-PI
- Cornell Atkinson Center for Sustainability *Opening the door to nature-based engagement-building champions for sustainability by boosting health and wellness: multi-site pilot to inform programs and state policy for long-term social and environmental impact* Amie Patchen – Co-PI
- Cornell Atkinson Center for Sustainability *Mapping the flow and efficacy of COVID-19-related information in Tompkins County* Norman Porticella, Communications – PI Jeff Niederdeppe, Communication; Gen Meredith; Amelia Greiner Safi – Co-Is
- Migrations – A Global Grand Challenge *Don’t waste an outbreak: Learning from the past and present to inform the future* Gary Whittaker; Alexander Travis – Co-PIs

Lara Parrilla

- Engaged Cornell *Addressing social determinants of health through policy and partnerships* Jamila Michener, Government – Co-PI
- Engaged Cornell *Unlocking the potential of Community Health Improvement Plans to advance health equity in New York State* Adam Hughes, Cornell Cooperative Extension – PI Lara Parrilla – Co-PI
- Engaged Cornell *MPH community engaged learning theory in local and global health* Gen Meredith – PI Jeanne Moseley, Nutritional Sciences; Lara Parrilla – Co-PIs
- Engaged Cornell *Community development and empowerment through evaluation* Gen Meredith – PI Lara Parrilla – Co-PI; Audrey Baker – Co-PI

Amelia Greiner Safi

- NIH (National Cancer Institute) *The e-cigarette population paradox: testing effective of youth-targeted population warnings for e-cigarettes among two key populations* Sahara Byrne, Communications – PI Rosemary Avery, Policy Analysis and Management - Co-PI; Michael Dorf, Law - Co-PI; Alan Mathios, Policy Analysis and Management - Co-PI; Jeff Niederdeppe, Communications -Co-PI; Amelia Safi - Co-PI
- Engaged Cornell *Mobile research laboratories effective vehicles for engaging underrepresented populations in social science research* Neil Lewis Jr, Communications – PI Amelia Greiner Safi – Co-I
- The Nature Conservancy and the Cornell Atkinson Center for Sustainability *Assessing progress and barriers to ecological restoration of state property buyout programs* Linda Shi, City and Regional Planning – PI Amelia Greiner Safi – Co-PI
- Cornell Atkinson Center for Sustainability *Mapping the flow and efficacy of COVID-19-related information in Tompkins County* Norman Porticella, Communications – PI Jeff Niederdeppe, Communication; Gen Meredith; Amelia Greiner Safi – Co-Is
Alexander Travis

- National Institutes of Health (Institute of Child Health and Human Development) *Membrane lipid regulation of calcium channels in sperm*
- Migrations – A Global Grand Challenge *Don’t waste an outbreak: Learning from the past and present to inform the future* Gen Meredith – PI Gary Whittaker; Alexander Travis – Co-PIs
- Engaged Cornell *Food systems for global health* Gen Meredith – PI Rebecca Nelson, Plant Science; Kathryn Fiorella; Audrey Baker; Alexander Travis – Co-PIs

Gary Whittaker

- NIH (National Institute of Allergy and Infectious Diseases) *Development of a subunit vaccine and MERS-COV and other emerging coronaviruses*
- NIH (National Institute of Allergy and Infectious Diseases) *Structural and functional analysis of the coronavirus spike protein fusion peptide* Susan Daniel, Chemical and Bimolecular Engineering - Co-PI
- NIH (National Institute of Allergy and Infectious Diseases) *COVID-19 supplement to structural and functional analysis of the coronavirus spike protein fusion peptide* Susan Daniel, Chemical and Bimolecular Engineering - Co-PI
- Winn Feline Foundation Inc. *Generating an attenuated feline infectious peritonitis (FIP) vaccine by inactivating endou*
- Winn Feline Foundation Inc. *Mechanism of action of doxycycline in inhibiting feline infectious peritonitis virus*
- NSF (National Science Foundation) *RAPID: Revealing the intermolecular interactions between the SARS-CoV-2/COVID-19 fusion peptide and the host cell membrane that underlie its flexibility in host tropism* Susan Daniel, Chemical and Bimolecular Engineering – PI Nicholas Abbott, Chemical and Bimolecular Engineering; Gary Whittaker - Co-PIs
- Emergent Ventures, Mercatus Center, George Mason University *Impact of FDA-approved calcium-modulating drugs on lessening COVID-19 infection* Susan Daniel, Chemical and Bimolecular Engineering – PI Gary Whittaker - Co-PI
- Cornell Feline Health Center *Feline coronavirus as a cause of upper respiratory infection in shelter cats*
- Cornell Feline Health Center *A multidimensional approach to the characterization of neurological feline infectious peritonitis*
- Cornell University Office of the Vice Provost for Research: SARS-CoV-2 Seed Grants *Diagnostic testing for SARS-CoV-2/COVID-19 at the human- feline interface*
- Migrations – A Global Grand Challenge *Don’t waste an outbreak: Learning from the past and present to inform the future* Gen Meredith – PI Gary Whittaker; Alexander Travis – Co-PIs

Caroline Yancey

- Technology Management Corporation Global for the U.S. Department of Defense Cooperative Biological Engagement Program *Uzbekistan biological sciences fellowship, disease preparedness response planning*
- Engaged Cornell *Tick-borne disease education in summer camps*
- Hatch MRF *A survey of biosecurity and Brucellosis status of backyard swine in New York State* Karyn Havas, - PI Caroline Yancey – Co-PI
**Publications**

Legend: **Bold denotes M.P.H. core faculty** | **Underlined denotes M.P.H. Program staff**


Financial report

The Master of Public Health Program operates primarily from student tuition revenue, and support from the College of Veterinary Medicine and other university sources to fund some faculty salaries. After faculty and staff salaries, our primary expenditures include scholarships and tuition assistance, payments to other departments for courses taken by our students, allocated costs to the university on our tuition revenue, and various forms of non-salary financial support for our faculty.

Other significant budget categories include student services, CEPH accreditation and ASPPH professional membership fees, and general program administration expenses like office supplies and computers. This year we completed repayment of a loan for initial operating expenses from the university facilitated by the College of Veterinary Medicine.

Fiscal year 2020 income (excluding sponsored funds)
- 67% tuition & fees
- 26% college/university faculty support
- 7% gifts

Fiscal year 2020 expenses
- 62% salaries
- 10% professional tuition exchange
- 8% scholarship & tuition assistance
- 6% allocated costs
- 6% faculty support
- 5% university loan payment
- 1% student services
- 1% program administration
- 1% CEPH accreditation & ASPPH professional membership fees
Alumni placement

Our alumni have gone on to work for organizations such as:

- Beth Israel Deaconess Medical Center
- CCE Tompkins County
- Cornell University
- Corning Incorporated
- Deloitte
- Jobs for America's Graduates (JAG)
- Johns Hopkins Bloomberg School of Public
- Kaiser Permanente
- LEARN Charter School Network
- Maine CDC
- National Milk Producers Federation
- Pan American Health Organization
- Pfizer
- Procter & Gamble Company
- Texas Department of State Health Services
- The REACH Project, Inc.
- Tokyo Metropolitan Government
- Wake County, North Carolina, Emergency Operations Center
- World Health Organization

Our alumni have gone on to pursue additional degrees at:

- Cornell University
- Drexel University
- Emory University
- St. George's University
- State University of New York, Buffalo
- University of Minnesota
- University of Pennsylvania
- University of Rochester Medical Center
- Vanderbilt University
What our graduates are saying

"Some of the friends and the faculty and relationships I’ve cultivated in this program will last a lifetime — I was blown away to be surrounded by such diverse, kind, educated people who are so passionate about public health; it was overwhelming at times. To step back, Wow! We have a wealth of knowledge. It's reassuring to know my peers and faculty are out there."

"Learning about systems thinking and One Health was eye-opening, because now I can’t see the effects of anything in isolation. I feel the same about social determinants of health now—in public health, we're looking for the bigger picture."

"My applied practice experience with a Department of Health in New York State really gave me some hands-on skills necessary to pursue a job related to surveillance, including performing data analysis and conducting patient interviews."

"To me, one of the most special things about this program is the faculty. They bring so much to the table and offer so much time and support to the students. I wouldn't be where I am without all of the help of the faculty and they truly make this program what it is."

- M.P.H. student quotes from end of year feedback
Cornell University
College of Veterinary Medicine

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Your support matters.

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