

University of Washington

Public Health

THE MAGAZINE OF THE SCHOOL OF PUBLIC HEALTH



“We Can’t Do It Alone”

What happens when a university invites *everyone* to solve the world’s greatest health challenges?

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Navigating the UW's Population Health Initiative

What we bring to the table

When I arrived as the new dean at the UW School of Public Health last year, I was thrilled to join a university whose top administrators shared the same values of social justice and equity.

The UW had launched a 25-year Population Health Initiative (PHI) – an ambitious effort that seeks to engage the entire University in improving the health of populations globally and locally.

But navigating sentiment surrounding the initiative has been tricky. Many of our faculty, staff and students naturally wondered: What is the difference between population health and public health? Are other parts of the University encroaching on our field of expertise? These and other questions sparked deep discussions about the role we play in solving population health issues.

It's helpful to remember the PHI is a cross-campus effort that encourages all schools and colleges to take part. It's not just about the School of Public Health. The goal is to get other people on campus – who have great tools and skills – to work on important problems that we haven't been able to solve by ourselves. I realize that "population health" may have other significance to some people. To me, it means we're actively opening up our tent to include others.

The School of Public Health brings to the table a wealth of expertise, a deep understanding of the needs of the populations we serve, and decades of experience developing genuine partnerships with communities and public health practice agencies.

I hope you enjoy the stories in this inaugural issue of our new UW Public Health magazine. In addition to an in-depth look at the

PHI, you'll find more examples of how we collaborate and create impact:

- A partnership with the Colleges of Engineering and Environment on assessing food security and nutrition in Cambodia.
- A whole-genome sequencing project that features the rigorous methodology of our biostatisticians, and how we train others to access and use the data.
- "A SEAL Team" that puts on display our expertise in partnering with the practice community.
- A story on public health victories in the Washington State Legislature that shows what "impact" really means to us. It's not just articles and publications; it's about new laws and policy change.
- And an update on our re-envisioned Master of Public Health, which illustrates how we train the next generation of change agents to reflect all of our values.

As we prepare over the next year to move from many of our scattered locations into the new Hans Rosling Center for Population Health, we will understandably experience new challenges. We are excited not only to have almost half the School together in one building, but also to be co-located with a key strategic partner, the Institute for Health Metrics and Evaluation. The physical location of the new building – between the Health Sciences complex and upper campus on 15th Avenue – will help ensure that the work we do really is "bigger than just us."

Hilary Godwin



Dean, UW School of Public Health



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Big Wins

for **public health** in Washington state

WRITTEN BY
**SALLY
JAMES**

New laws and policy changes favored public health during the 2019 session of the Washington State Legislature – the best year in nearly a decade for public health gains. Many advocates from the UW School of Public Health (SPH) have worked for years, in a variety of ways, to champion these changes.

FOUNDATIONAL PUBLIC HEALTH SERVICES

A key policy win establishes a literal “foundation” of health as a public expectation. Known as Foundational Public Health Services, these are sometimes compared to a 911 system, which works essentially the same everywhere in the state. Leaders of the Washington State Association of Local Public Health Officials, along with State Secretary of Health John Wiesman, worked for years to establish this bedrock of services, which includes communicable-disease monitoring and vaccination.

“Washington and Oregon lead the nation in this field, and this legislation could serve as a model for other states,”

said Betty Bekemeier, director of the School’s Northwest Center for Public Health Practice and member of a Foundational Public Health Services policy advisory committee.

Before the law and without this focus on foundation, she added,

“You could drive across the state and not be certain that our public health system could consistently and adequately meet basic local needs for things like responding to pertussis or food-borne illness outbreaks.”

Said Aaron Katz, principal lecturer in health services, “The pedigree for foundational health goes back as far as 1993, when the legislature mandated a biennial public health improvement plan.” Many financial problems, in addition to the 2008 recession, took vital funds away from county health departments across Washington, he said. Foundational Public Health Services will restore some, but not all, of those dollars. Katz said it may take years to build up an infrastructure that adequately protects communities from epidemics, food-borne illnesses and other risks because the public health system has lacked this funding for so long.

TOBACCO

In one of the biggest wins for public health, lawmakers raised the age for use of tobacco products from 18 to 21, potentially rescuing tens of thousands of teens from beginning a habit that could shorten their lives. Washington joins 17 other states and Washington, D.C., in restricting tobacco use to age 21 and over. The law takes effect Jan. 1.

While a huge win for public health, State Rep. Gerry Pollet, D-Seattle, and an instructor for SPH, warned that vaping and use of e-cigarettes are continuing health risks. He successfully sponsored a bill – approved in the final hours of the session – to create a tax on vapor products.

The measure is expected to raise more than \$19 million over two years, with half the money going to cancer research and half to a new fund for foundational public health services. Five percent of the latter account will be earmarked for the School to train public health professionals.

VACCINE EXEMPTION

The state made it more difficult for parents to claim exemptions from the recommended MMR (measles, mumps and rubella) vaccination, which is required of children before entering public school. A national epidemic of measles cases, including an outbreak in southwestern Washington state, gave urgency to this bill. Parents can no longer claim a “philosophical/personal belief” reason for skipping the MMR vaccination, but must have a medical or religious reason.

MATERNITY, VITAL DATA, PUBLIC OPTION

The health of new mothers and pregnant women got a boost from the establishment of a monitoring function to track deaths, according to Bekemeier. Deaths during pregnancy, during delivery of babies and postpartum for up to a year will be tracked. The bill establishes a formal review process for maternal deaths, which have been on the rise, and mandates a report to the legislature every three years.

Two other issues won changes

based on requests directly from the Washington State Department of Health. These were new rules on how records are kept on births and deaths, known as Vital Records, and changes that create and fund a medical marijuana database.

One of the most talked-about legislative changes was creation of a “public option” for insurance to pay for health care. Available in 2021, the option is expected to offer lower premiums by having the state contract with private insurers to bundle coverage efficiently. Consumers would use the Health Benefit Exchange, the state’s insurance marketplace, to buy the plans.

GUN VIOLENCE

Washington state awarded \$1 million to the University of Washington for the formation of the Firearm Injury & Policy Research Program, based at the Harborview Injury Prevention & Research Center. Experienced firearms researchers at UW Medicine and SPH will lead the program. Washington joins two other states – New Jersey and California – that have funded firearms

research. Additionally, Washington voters last fall overwhelmingly approved an initiative that sets new gun storage provisions while expanding background checks and raising the minimum age to 21 for buying semiautomatic assault rifles.

PESTICIDES, DISPARITY

The legislature also created a working group to look at pesticides and pesticide safety, according to Marty Cohen, assistant chair of stakeholder engagement for the School’s Department of Environmental & Occupational Health Sciences (DEOHS). And lawmakers created a Health Energy Worker group, which Cohen will lead, aimed at benefiting workers at the Hanford nuclear reservation.

Finally, the state created an environmental health disparities map with help from DEOHS and other entities. The map provides policymakers and others a tool to shape investments to reduce environmental health impacts on Washington communities.



Sara Mackenzie has been shepherding School of Public Health undergrads to the historic dome of the Capitol in Olympia for many years. It’s part of an annual trek on Legislative Education Day, sponsored by the Washington Public Health Association, each winter. Students meet with legislators and return with a better grasp of how policy gets made. This past season, students talked with lawmakers about vaccines, gun violence,

opioids and other hot topics.

“We try to help them understand being an advocate,” said Mackenzie, who directs the Public Health–Global Health major. That means helping students find stories from their lives – such as losing friends from high school to overdoses – to illustrate policy issues. “When one individual walks into a legislator’s office and tells some story from their life, that’s powerful,” Mackenzie said.

Dams on the Mekong

UW studies hydropower impacts on diet of Cambodians



“Where there’s water, there’s fish,” goes a Cambodian saying.

And with abundant supplies of freshwater, Cambodia has plenty of fish – for now. But more than 135 new dams planned along the Mekong River Basin could alter the flood patterns of the country’s massive Tonle Sap Lake, which feeds the river during the annual monsoon. Fish migration could be affected too.

With support from a National Science Foundation grant, the UW’s School of Public Health, College of Environment and College of Engineering are assessing how hydropower demands may affect the diet of the Cambodian people. “Tonle Sap Lake is the major source of freshwater fish and high-quality protein for that area,” said Adam Drewnowski, professor of epidemiology and director of the School’s Center for Public Health Nutrition. “If the upper stem of the Mekong River is dammed, there may be

nutritional consequences downstream.” Yields of rice and fish could be severely compromised.

To determine which varieties of fish can best sustain the country if this happens, Drewnowski is evaluating the nutrient profile of this staple food using his Nutrient Rich Foods Index. It’s a pioneering methodology for assessing the caloric density of both good and bad nutrients in foods. The metric is adjustable to contaminants of concern in the region.

Scientists from the UW also are assessing soil conditions to recommend optimal rice-planting dates and locations, while engineers use algorithms to balance power generation against the dams’ ecosystem impact. Findings, including recommendations for sustainable dam operations, will be shared with local partners and governments across the region.

“Rice and fish have made up a complete diet for hundreds of years,”

Drewnowski said, and with adequate research, the Cambodian people will be able to continue to seek sources of fish that sustain their dietary needs.



The annual floodwaters reverse the direction of the Tonle Sap River, and water fills Tonle Sap Lake.



The Mekong region is home to about 850 species of freshwater fish. The small trey riel make up most of these fishermen's catch. During peak season, workers empty nets every half-hour, day and night.



Rice fields in Kampong Thom province.

UW graduate student Yasmine Farhat (above left) and local master's student E-Nieng Muth (above right). Below: A typical fishery platform on the Tonle Sap River.





tapping into TOPMed

UW biostatisticians teach scientists how to mine massive genetic data for precision medicine

WRITTEN BY
ASHLIE
CHANDLER

ILLUSTRATED BY
GABRIEL
LOPEZ

Hundreds of geneticists and statisticians converge at the University of Washington every summer. Some travel from as far away as Japan and New Zealand, while others are based in one of Seattle’s world-renowned research institutes. All are on the hunt for the hottest data science tools that will open new frontiers in biological research.

Preeti Lakshman Kumar, a bioinformatician from the University of Alabama at Birmingham, came to the UW seeking solutions to challenges in her work to investigate the underlying genetic risk for a group of deadly lung diseases. She needed a more effective way to analyze her large data set to better visualize the true genetic patterns.

Lakshman Kumar found such an approach – and colleagues to network with – at the Summer Institute in Statistical Genetics, where UW School of Public Health instructors teach scientists how to analyze colossal and complex genomic data to unearth the roots of disease and pave the way for precision medicine.

She was among 67 researchers at a July workshop

who dug into whole-genome sequencing data, which contain the entire genomes of study participants. The group tested analytical techniques and got their hands on one-of-a-kind computer programs that can be adapted to their specific research needs.

“The workshop will enhance my ability to analyze and visualize data in a more significant way,” Kumar said. “I got practical experience using the UW’s package of computer programs. These are tools that work easily and efficiently with our data, showing us the outcomes we are looking for.”

The short course is part of a suite of resources provided by the School’s Department of Biostatistics, which hosts the national Data Coordinating Center for the Trans-Omics for Precision Medicine (TOPMed) program, the largest whole-genome sequencing project in the world. The center supports more than 1,000 investigators tapping into TOPMed’s treasure trove of rich and diverse data. Lakshman Kumar is among these investigators, working on the COPDGene Study.

Over five years, the TOPMed project has grown to



“TOPMed has billions of bits of information so far. It’s mindboggling.”

- BRUCE WEIR

Co-leader, TOPMed Data Coordinating Center

include the genomic data of 150,000 participants from more than 80 studies, including the Framingham Heart Study and the Women’s Health Initiative.

TOPMed is run by the National Heart, Lung and Blood Institute and is part of the Precision Medicine Initiative, which aims to provide disease treatments – and ultimately cures – tailored to an individual’s unique genes and environment. TOPMed contributes to the initiative by generating scientific resources that improve the understanding of genetic risk for heart, lung, blood and sleep disorders.

“We’re at the heart of this huge project,” said Professor Bruce Weir, who co-leads the TOPMed Data Coordinating Center with Professors Kenneth Rice and Bruce Psaty and Associate Professor Timothy Thornton. Cathy Laurie is the center’s director of operations.

“I remember the days when I was excited to find four traits associated with disease,” Weir said. “TOPMed has billions of bits of information so far. It’s mindboggling.”

The UW center works closely with TOPMed’s Informatics Research Center, based at the University of Michigan School of Public Health, to match genomic data with other biological and clinical data – allowing investigators to make insights on

key population health issues. Scientists at the Broad Institute of MIT and Harvard, for instance, have found a genetic mutation that may have a strong impact on heart health. Researchers at the Fred Hutchinson Cancer Research Center in Seattle have linked genetic variants in African Americans to lower levels of vitamin B₁₂.

“These studies inform us about new biology, bringing us closer to predicting an individual’s risk for diseases,” said Rice, the project’s principal investigator. “No one has done this before at this scale. To make these data work together and turn it into knowledge is incredibly challenging, but we’re uniquely equipped to do the job.”

One challenge is that every study collects data on phenotypes, or clinical traits, differently. UW biostatisticians developed a process to “harmonize” phenotypes, ensuring that all the data are in the same units so they can be analyzed together.

For researchers who work with data at the scale of TOPMed, the task can be cumbersome, costly and time consuming. Plans are underway to facilitate the wider availability of TOPMed data and to support scientific research using the data set. A cloud-based ecosystem called DataSTAGE gives each user access to very specific human subject data they can use to do statistical analyses without the need for their own high-performing computers. DataSTAGE also supports the broad availability of other data – without revealing a person’s name or racial or ethnic origin – to train students and researchers.

The cloud environment not only democratizes the data, but also catalyzes meaningful research, according to Laurie, the operations director. “There’s a lot of useful information in there to mine, so the more people mining it, the more will come out of it in the end.”





**TOGETHER, we
make ourselves
STRONGER**

- VILMA CARVER

Pearl of a Program

Encouraging active, rewarding lives among older adults with depressive symptoms

CDC funds expansion to reach underserved communities

WRITTEN BY
RACHEL ANNE
SEYMOUR

PHOTOS BY
ELIZAR
MERCADO

Vilma Carver lost her husband, both parents and her only daughter within a few years of one another.

“I was drowning ... I was frozen,” said the 69-year-old Seattle woman, recalling struggles from a decade ago.

Carver connected with Filipino Senior & Family Services’ International Drop-In Center, where she participated in late-life depression care through the Program to Encourage Active and Rewarding Lives (PEARLS).

With the help of PEARLS and the drop-in center, Carver has been able to take key steps to improve her well-being and connect with her community. She has become a certified caregiver for seniors and volunteers at numerous agencies, including the drop-in center.

Carver is one of an estimated 7 million older Americans who experience some form of late-life depression, according to the U.S. Centers for Disease Control and Prevention (CDC). Research shows that minor or chronic depression can have just as severe an impact on the lives of older adults as severe depression.

HOW PEARLS WORKS

Local, community-based organizations provide the program through staff who are trained as PEARLS counselors by University of Washington researchers and partners. Specialty mental health professionals provide clinical supervision for the counselors, helping expand the reach of mental health services as the field faces a shortage in professionals to meet the needs and demands of

depression care.

PEARLS combines education about what depression is and is not, coordination with primary care providers, and skill building for better self-sufficiency. It is an alternative to specialty mental health programs that may be difficult to access or not preferred as a first line of care by many older adults. Counselors provide the program over six to eight one-on-one sessions that can be done at home.

PEARLS also supports older adults in planning regular activities that improve their well-being and reduce their depressive symptoms. “When we are depressed, we often stop doing what we enjoy, become less physically active or spend less time with other people, all of which can help reduce depression,” said Lesley Steinman, PEARLS research scientist.

BACKED BY EVIDENCE

The University of Washington’s Health Promotion Research Center, housed in the Department of Health Services in the School of Public Health, co-developed PEARLS during the late 1990s with Aging and Disability Services in Seattle and King County. The center is currently one of 25 CDC Prevention Research Centers across the country.

In 2004, the center’s researchers found PEARLS participants were three times more likely to reduce their depressive symptoms by 50% or no longer have symptoms of clinical depression. Since then, the center has continued studying impacts and methods related to PEARLS, improving and



Vilma Carver (left) knows all the members and staff of the International Drop-In Center, including Marivic Rigor, a data manager and counselor with the center. Carver often visits the center to see friends, have lunch and help as needed.

refining information about the program as it spreads across the country, where it is offered in 15 states. More than 6,000 older adults have participated in the program.

In 2017, the AARP Foundation funded a study to research the social impact of PEARLS, along with the economic impacts it could have on older adults using health services or transitioning to nursing homes. The study is expected to wrap up in the spring of 2021.

CONTINUED RESEARCH, EXPANDING PEARLS

This fall, researchers are focusing on expanding the adoption of PEARLS with underserved populations by using outreach to double the number of organizations providing the program. The CDC is funding the Health Promotion Research Center with \$3.75 million for a five-year study, which ultimately aims to help provide equitable access to depression care. Priority populations for the study are older adults who are experiencing poverty, are community members of color, have limited English proficiency or live in rural areas.

PEARLS researchers will partner with additional organizations already working with those communities. Within three years, researchers aim to have nearly 80 new agencies actively seeing PEARLS participants. More than 70 organizations – predominantly local social service agencies – currently offer the program.

“This will give us a chance to more directly work with

organizations serving people who are experiencing health inequity because of who they are, where they live and where they work,” said Principal Investigator Mark Snowden, a UW professor of psychiatry and behavioral sciences. “Partnering with these organizations will teach us a lot about how to overcome barriers in health equity.”

SHAPING FUTURE RESEARCH

As the new PEARLS study begins, Vilma Carver will be one of three PEARLS participants joining the Health Promotion Research Center’s Community Advisory Board. As a board member, she will help guide and shape studies done by the center, including the new PEARLS study.

“We invited PEARLS participants to grow our advisory board’s representation and perspectives of people we are serving,” said Peggy Hannon, director and principal investigator at the center. “Their voices are crucial as we expand the reach of PEARLS through new partnerships.”

In addition to Carver’s unique perspective on PEARLS, she brings her connections as a community member dedicated to giving back. She volunteers at the local Lions Club and the drop-in center that introduced her to PEARLS. She even carries PEARLS flyers in her bag, ready to help others.

“I’m Vilma. I cannot say no,” she said. “I learned I needed to be helping. Together, we make ourselves stronger.”



New Grants & Centers

Integrated food safety

The UW School of Public Health (SPH) and the Washington State Department of Health (DOH) will lead a regional effort to improve the prevention of and response to foodborne outbreaks, thanks to a five-year grant from the U.S. Centers for Disease Control and Prevention (CDC). The School and the DOH will run a new **Center of Excellence in Integrated Food Safety**, one of five national centers working to improve foodborne illness surveillance and investigation. Led by Associate Dean **Janet Baseman** and DOH's **Beth Melius**, the center will function as a resource hub for local, state and regional public health agencies in Alaska, California, Guam, Hawaii, Idaho, Nevada, Oregon and Washington.

Expanding injury prevention research

The CDC awarded a five-year, \$4.2 million grant in July to expand research at the Harborview Injury Prevention & Research Center at UW Medicine. Projects include prescription opioid abuse, older adult falls and pediatric concussions. **Ali Rowhani-Rahbar**, SPH associate professor of epidemiology, will lead work on the characterization and evaluation of health care professional training in suicide prevention. The UW joins the University of Iowa as **the only universities with all six CDC/HRSA-designated centers**: a CDC Prevention Research Center; a CDC Center for Public Health Preparedness; a CDC Injury Control Center; a CDC NIOSH Education and Research Center; a CDC NIOSH Agriculture, Forestry and Fishing Center; and an HRSA Public Health Training Center.

Monitoring drug safety

Several faculty and alumni from SPH biostatistics and epidemiology will help lead a new Sentinel Innovation Center that aims to assist the U.S. Food and Drug Administration in monitoring drugs and medical products to keep patients safe. The researchers – including **Jennifer Nelson, Patrick Heagerty, Andrea Cook, Xu Shi, Bruce Psaty, Susan Heckbert and James Floyd** – will develop new methods to conduct more comprehensive and rapid safety surveillance through electronic health records. The center is part of the Sentinel Initiative used to monitor FDA-regulated drugs, medical devices and other products, and will involve 60 organizations across the country. It will be led by Brigham and Women's Hospital in Boston under the auspices of Harvard Pilgrim Health Care Institute. Co-leaders include investigators from SPH, Kaiser Permanente Washington Health Research Institute, Duke University and Vanderbilt University.

Implementation and cancer control

To bridge the gap between cancer interventions and their implementation, the NIH's National Cancer Institute is funding the creation of six new research centers. One – the **Optimizing Implementation in Cancer Control Center** – will be based at SPH and led by Professors **Bryan Weiner** (global health and health services) and **Peggy Hannon** (health services). Funded by a five-year, \$4.78 million grant, the new center is a strategic collaboration with Kaiser Permanente and the Fred Hutchinson Cancer Research Center. The centers are part of NIH's Cancer Moonshot initiative to make more therapies available and improve prevention and detection.

SEAL TEAM TO THE RESCUE

Students provide on-demand support for health departments while gaining hands-on experience

WRITTEN BY ALLEGRA ABRAMO

ILLUSTRATED BY KELLY THOMPSON

One morning in October 2018, Professor of Epidemiology Janet Baseman received an urgent request from the Washington State Department of Health: They had detected an outbreak of hepatitis B. Could the Student Epidemic Action Leaders (SEAL) Team send one of its specially trained graduate students to help with the investigation?

By the next day, a SEAL was helping to assemble a mass of data into a coherent picture of the outbreak, enabling the department to target its vaccination campaign.

That kind of real-world experience and impact is why Baseman – who didn't have such opportunities as a student – created the SEAL Team.

Started in 2015, the program trains graduate students in field epidemiology skills such as outbreak investigation and interviewing, then deploys them to provide critical, short-term assistance to state and local health departments. Undergraduates can assist with projects under the supervision of graduate-level SEALs.

“I would have died for something like this when I was in public health school, a chance to actually work in a real setting,” said Scott Lindquist, the Washington State Department of Health epidemiologist for communicable diseases. “And then it's good for Department of Health, because they're usually well trained, highly motivated students and good interviewers.”

TRACKING ZIKA, MEASLES AND FOODBORNE ILLNESSES

In their nearly 4,000 hours of service to date, SEALs have interviewed people sickened by foodborne illnesses, helped improve the state's disease reporting system and assisted with the local response to the Zika virus. The current cohort of SEALs includes students from every department in the School of Public Health. Beyond communicable disease projects, their work has expanded to support rural health departments, emergency preparedness, maternal and child health programs, and projects in refugee health and interpersonal violence. A half-dozen SEALs also have spent the last three summers in





Former SEAL Nick Graff (left) mentors current SEAL team members Stephanie Ruderman and Nam-Huy Leduc in his role as epidemiologist for the Washington State Department of Health.

Zimbabwe, collaborating on research with that country's field epidemiology training program.

In addition to backstopping perennially short-staffed public health departments, the SEAL Team is helping to train and recruit the next generation of public health workers, said Lindquist, who was an early champion of the program.

That's especially important as the current workforce ages and retires, said Baseman, who is also associate dean for public health practice. "If you want to get students interested in practice work," she said, "it's best to get them hooked while they're still in school, before they go off along another path."

OPENING VISTAS TO NEW CAREERS

Kate McConnell started her master's degree assuming she'd go into academic research. Then she sampled working with state and local health departments over the course of the yearlong SEAL program.

When an outbreak of mumps hit the UW campus, McConnell worked with the University's Environmental Health & Safety Department to manage and analyze data related to the cluster, serving as a primary contact with the local health department.

"I loved all the experiences that I had in the SEAL Team," McConnell said. "It was really one of the major highlights of my master's degree."

It also altered her career trajectory. Now a second-year doctoral student in applied epidemiology, McConnell plans to work for a health department when she graduates.

McConnell will join the growing cadre of SEALs whose

skills make them sought-after hires. Out of 51 SEAL Team alumni, at least a dozen have gone to work for public health practice agencies in temporary or permanent jobs.

Even before she graduated this spring, former SEAL Samantha Rice started in a temporary epidemiologist position with the state, where she supports surveillance for measles, mumps and other vaccine-preventable diseases.

"Having a job as an epidemiologist when I graduated is pretty amazing, and I don't think that would have been the case without participating in the SEAL Team," said Rice. "The networking opportunities from the SEAL team are invaluable."

BUILDING BRIDGES BETWEEN ACADEMIC AND PRACTICE COMMUNITIES

No matter where SEALs ultimately work, said Baseman, they are better positioned to build bridges between universities and the practice community.

Baseman envisions a more collaborative future in which communities' public health problems inform academic research, which in turn is used to improve practice. "So each system is feeding the other in ways that make public health better for everybody," she said.

"This generation of students will be the ones who can build these bridges," she said.

"That's why this is important."



SEALs to Zimbabwe

Whether interviewing diners in Seattle about an *E.coli* outbreak or nurses in Zimbabwe about malaria control, many of the same essential field epidemiology skills apply.

But in Zimbabwe the conversation is likely to start with a cup of tea and a friendly chat.

“You learn a lot from seeing different cultural approaches to health and health care,” said Samantha Rice, who spent the summer of 2018 researching barriers to malaria outbreak detection and control in rural Zimbabwe while completing her Master of Public Health in Epidemiology.

Before deploying to Africa, Rice received training in field epidemiology with the Student Epidemic Action Leaders (SEAL) Team and practiced those skills in assignments with state and local health departments.

Janet Baseman, who created the SEAL Team in 2015,

was inspired to expand to Zimbabwe after School of Nursing faculty invited her to visit their study-abroad program there to meet with faculty at the University of Zimbabwe and leadership of the Zimbabwean Ministry of Health.

Over the last three summers, a half-dozen SEALs have collaborated on projects with the Zimbabwe Ministry of Health and Field Epidemiology Training Program. The exchange has also brought Zimbabwean epidemiology trainees to Seattle.

Results of the SEALs’ malaria study appeared in the journal *Global Public Health* in July 2019. Co-authors include UW School of Public Health students and faculty, School of Nursing faculty, and their collaborators in Zimbabwe.





Improving Population Health “We can’t do it alone”

What happens when a university invites *everyone* to solve the world’s greatest health challenges?



WRITTEN BY
ASHLIE
CHANDLER

A dangerous killer preyed on dozens of people in a small village in the West African country of Guinea for three months before health officials identified it as the deadly Ebola virus. By that time, in early 2014, the virus was firmly entrenched. Ebola would later become a global health emergency.

Now, more than a year into yet another Ebola outbreak, this time in the Democratic Republic of Congo, a new University of Washington

collaborative is making it easier for countries to see how vulnerable they are to infectious disease threats – and where – and what they can do to save lives.

To help brace for the next epidemic, eight UW centers – collectively called the UW MetaCenter for Pandemic Preparedness and Global Health Security – are harnessing big data and forward-thinking strategies to devise more unified approaches to current and future health security risks, and preparing health systems to take a stand.

Pilot project in Peru takes off

Outbreaks of dengue fever and the Zika virus have plagued Peru in recent years, and UW experts say weather events induced by El Niño are making the problem worse.

To show exactly how changing weather patterns are leading to new vulnerabilities, the UW MetaCenter for Pandemic Preparedness and Global Health Security leveraged expertise at the UW and the Universidad Peruano Cayetano Heredia in Lima. The interdisciplinary team mapped the epidemic potential of dengue and other viruses transmitted by the *Aedes aegypti* mosquito down to the district level, while considering climate change, health care capacity and infrastructure.

The project team is now testing whether the tool improves Peru's ability to respond to dengue outbreak threats by helping focus and prioritize resources in the areas with greatest vulnerability. Future projects will focus on vaccine and diagnostics development.

"The Peru pilot project was catalytic," said Judith Wasserheit, chair of the Department of Global Health, which bridges the UW Schools of Public Health and Medicine and is home to the UW MetaCenter, which she co-directs with Rabinowitz. Learnings were integral in securing funding from the U.S. Centers for Disease Control and Prevention to lead a more ambitious project in Kenya to map vulnerability to Rift Valley fever and other pathogens.

These approaches will allow for development of diagnostics, therapeutics and vaccines, as well as on-the-ground implementation of effective detection, response and prevention. The bold undertaking connects leading experts in infectious disease, epidemiology and medicine to some of the foremost thinkers in climate change, data science, environmental health and geospatial data science, while engaging local and international partners.

"The UW can help make the world safer and more secure from infectious disease threats," said Peter Rabinowitz, co-director of the MetaCenter and professor in the Schools of Public Health and Medicine. "By leveraging unmatched expertise across the UW, we're creating something that is larger than its parts."

This kind of collaboration is exactly what the UW had in mind when, in 2016, President Ana Mari Cauce put population health at the center of an initiative to weave together seemingly disparate fields of study and focus the collective energy to make a greater impact on the world.

The University-wide Population Health Initiative invites all schools and colleges, as well as community partners, to collaborate to improve the health and well-being of populations, from rural communities in Washington state to vulnerable groups in sub-Saharan Africa. The UW MetaCenter is part of the initiative's network of population health research. It is just getting off the ground. Thanks to a pilot grant through the initiative, it has already developed a mapping tool local health officials in Peru can use to track hot spots for dengue outbreaks (see sidebar).

Though the initiative demands a level of cross-disciplinary collaboration, it also recognizes the key role of the School

"I wouldn't be surprised if pandemic diseases were the next HIV – in terms of the global focus on a major health challenge. There aren't a lot of places like the UW with the breadth and depth of skills and knowledge to make a difference now before it is too late."

-Judith Wasserheit
Chair, Department of Global Health



of Public Health and its shared vision of healthy people in sustainable communities.

“This is one of the things I love about the UW and that drew me here – the opportunity to be at an institution whose signature initiative is aligned with public health,” said Dean Hilary Godwin, who joined the UW in July 2018. “It’s amazing to know that the people at the top echelon of the University hold the same values of social justice and equity. It makes me happy to come to work each day.”

Having leaders with shared values also means the central administration is dedicated to amplifying work already being done to tackle the world’s greatest population health issues.

The UW is uniquely positioned to improve human health, environmental resilience, and social and economic equity – what the University sees as three major pillars of population health. It has world-class programs in every school and college, including the top-ranked subjects of oceanography, microbiology and oral health sciences. Additionally, the University’s location in Seattle’s thriving global health and high-tech ecosystem attracts eminent talent and provides a strong platform for partnerships. It also doesn’t hurt to have health sciences schools all ranked in the nation’s top 10 and a \$4.5 billion University-based health system, UW Medicine, considered best in the region.

“My goal is to present the Population Health Initiative as an opportunity to bring a broader group of stakeholders from across campus together to work on the problems we care deeply about in public health,” Godwin said. “Some challenges – such as the opioid crisis – are inherently public health problems, but we aren’t going to solve them on our own. I see this as a win-win.”

To maximize impact, the UW is directing its attention toward three “grand challenges”: strengthening community resilience and capacity; bolstering healthy starts for children, adolescents and families; and nurturing brain, behavior and capability development. This approach strengthens the initiative’s ability to galvanize cross-disciplinary problem-solving, support pioneering research projects with communities, and train the next generation of change-makers.

So far, nearly \$2 million in funding has been awarded for three new faculty positions that will focus on developing innovative solutions to the grand challenges. These four-year awards required new faculty to be joint hires between two or more academic departments. In addition to the MetaCenter, the initiative has helped to kick-start 22 other projects with pilot research grants that catalyze collaboration and community engagement. Ten projects have had representation from the School of Public Health.

KICK-STARTING RESEARCH

Faculty-led teams are working to fill gaps in epilepsy care, helping neighborhoods to build back stronger after disasters, and improving the health of a floating community in the Peruvian Amazon. One project is grappling with a leading cause of death in the United States: suicide.

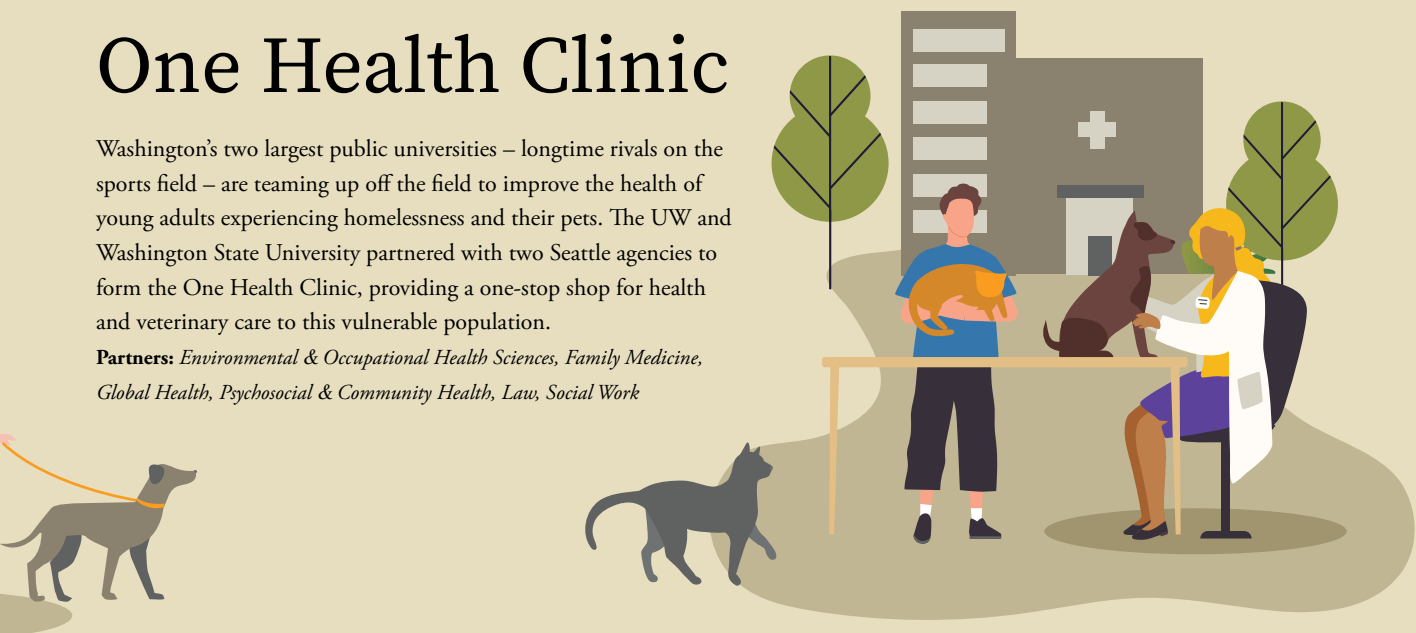
“I felt that much of what we do in public health fit within the initiative’s vision, including my own work on injury and violence prevention,” said Ali Rowhani-Rahbar, an associate professor of epidemiology and the Bartley Dobb Professor for the Study and Prevention of Violence.

At the time, Rowhani-Rahbar and others at the Harborview Injury Prevention & Research Center were

One Health Clinic

Washington’s two largest public universities – longtime rivals on the sports field – are teaming up off the field to improve the health of young adults experiencing homelessness and their pets. The UW and Washington State University partnered with two Seattle agencies to form the One Health Clinic, providing a one-stop shop for health and veterinary care to this vulnerable population.

Partners: *Environmental & Occupational Health Sciences, Family Medicine, Global Health, Psychosocial & Community Health, Law, Social Work*





The Population Health Initiative's Applied Research Fellows (L-R): Michelle Shin, Jane Kim (School of Nursing); Matt Driver, Claire Branley (School of Public Health). Not pictured: Hilary Wething (Evans School of Public Policy and Governance); Kiana Rahni (College of Arts and Sciences).

interested in learning how to more effectively prevent suicide. They applied for, and received, a population health grant to evaluate how psychiatric service providers at Harborview Medical Center in Seattle were documenting suicide risk and access to lethal means, including guns and medication.

Rowhani-Rahbar and Paul Borghesani, associate professor of psychiatry and behavioral sciences, led the team of experts in public health, medicine and social work. In 2017, Washington state passed the first law in the U.S. to require all health care providers to undergo suicide prevention training. This presented an opportunity for the UW research team to gather baseline data, looking back at records of patients who visited the center before the law was passed. The project led to new findings on the quality of suicide risk documentation and will inform clinical practice at one of the busiest emergency departments in the Pacific Northwest.

Data from the project was integral in securing funding from the U.S. Centers for Disease Control and Prevention for a larger effort to better understand suicide prevention in Washington state. The multidisciplinary nature of the team generated new partnerships in statewide suicide prevention outreach efforts. Additionally, the project provided a platform to train graduate student Anne Massey, who used the study for her master's thesis.

"It was a rich experience that enhanced my studies," said Massey, now a UW doctoral student in epidemiology. "I feel like I walked away with a totally different degree as a result."

BOOSTING STUDENT OPPORTUNITIES

Students are hungry for unique opportunities to grapple

with complex problems such as climate change and gun violence, according to Massey. Acting as a front porch to potential local, national and international partnerships, the Population Health Initiative finds ways for students to apply what they learn in the classroom to real-world population health issues.

The initiative uses a resource directory to play matchmaker, connecting partners with UW students and faculty based on needs and shared interests. Last spring, the UW formalized an agreement with Aga Khan University, based in Pakistan, to further expand research, service and education in low- and middle-income countries with the ultimate goal of advancing health and well-being. The UW is also committed to communities in its own backyard.

Several Applied Research Fellows recently sat down with leaders from Public Health – Seattle & King County to discuss ways to further reduce racial disparities in birth outcomes. The team – including graduate and undergraduate students from public health, nursing, public policy and economics – evaluated a prenatal care program for low-income parents to see how it affected local birth outcomes. Their work will help inform the county's plans for refining its delivery of prevention-based services.

"We're grateful for the energy and focus the students brought to us in exploring an important public health issue," said Eva Wong, an epidemiologist at Public Health – Seattle & King County and UW clinical assistant professor of epidemiology. "By digging in deep with this dedicated team, we are hoping to answer questions that will help our health department to improve what we do and how we work."

Surplus Fish

A doctoral student in fisheries sciences and a food systems expert have partnered to map West Coast hot spots where surplus fish could help meet nutrition needs in vulnerable populations. The study found that millions of servings of fish a year are left in the ocean, presenting an affordable source of nutrition for coastal communities.

Partners: *Environmental & Occupational Health Sciences, Marine & Environmental Affairs, Aquatic & Fishery Sciences, Nutrition*



On campus, the initiative worked with the Undergraduate Research Program to design an undergraduate course, “Research Exposed!,” that puts population health topics on view through faculty lectures. In collaboration with Undergraduate Academic Affairs, the concept of population health is introduced to about 3,000 incoming freshmen and transfer students each year who join a peer-guided cluster of courses called First-year Interest Groups. Students engage in research projects to analyze the aspects of a Seattle neighborhood that contribute to residents’ overall health.

“Undergrads get to meet other students from various parts of campus and see that population health research looks like a lot of different things,” said India Ornelas, associate professor in health services at the School of Public Health, who helped to develop and has lectured in the Research Exposed! course. These courses also connect students with faculty who are doing research of interest to the students. For graduate students, the initiative recently launched a Certificate in International Humanitarian Response.

Additionally, the Population Health Initiative supports students through conference travel awards. Forty-five graduate students have received up to \$1,500 each, with 71% of the awards going to students in the School of Public Health. Twelve undergraduates have won travel awards of up to \$700 each and 40 others have been recognized for their innovative population health research. Students have presented at national and international conferences focused on policy, statistics, refugee health, HIV/AIDS, economics, nutrition and criminology.

“The Population Health Initiative galvanizes the multitude of disciplines at the University affecting health to help reshape the way society addresses the health of populations here in Washington and around the world.”

- Ana Mari Cauce
President, University of Washington



It has not been easy to develop the Population Health Initiative and its 25-year vision to create a world where all people can live healthy and more fulfilling lives, according to Ali Mokdad, the University's chief strategy officer for population health.

Initiative leadership has had to navigate faculty frustration that the UW may be co-opting efforts traditionally within the public health purview and forming new relationships with long-standing public health partners. They've had to ensure departments recognize faculty involvement in the initiative when considering promotion and tenure. There's also the issue of fundraising, which has been largely powered by individual units. And the big question: How do you measure the impact of an initiative at this scale?

The initiative's 30-member executive council has developed

a two-pronged approach. Some metrics track the effect of direct investments by the initiative. This helps leaders learn which strategies work best and how to refine approaches that can be improved. Investigators on pilot projects use a framework provided by the initiative to set their own goals. This allows for innovation and project-specific variations, while ensuring that measures of success are consistently tracked.

"There are lots of challenges, but is it something that the University should do? Yes. It's something we should have done a long time ago," Mokdad said. "But we cannot do it alone. This involves collaboration and reaching out to the right partners. It involves opening new doors. We need to take big risks and try radically new things if we want to solve the biggest health problems of our time."

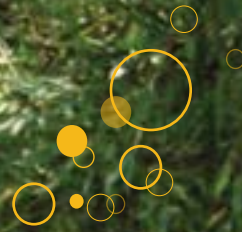
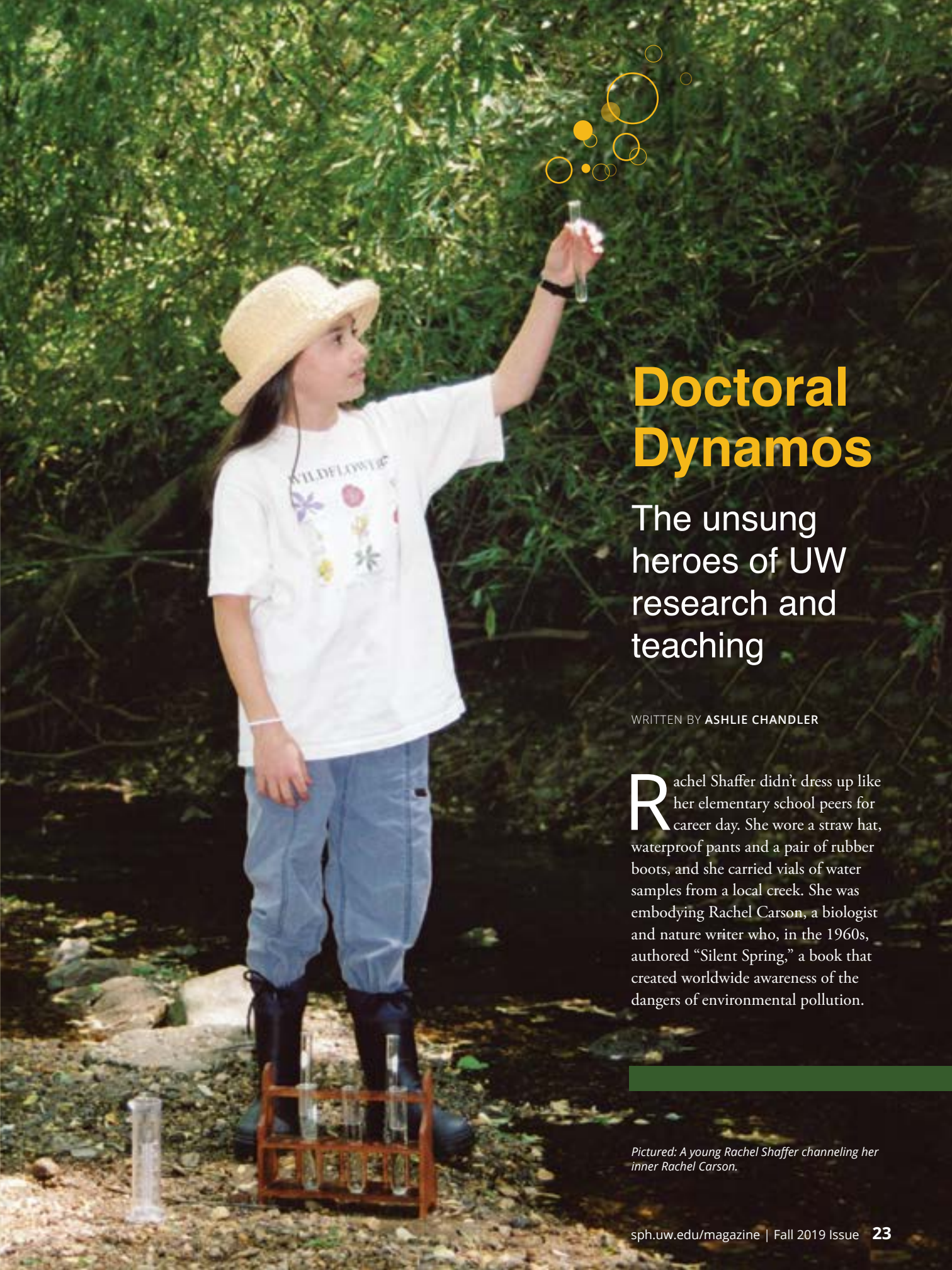
Hans Rosling Center for Population Health



The new Hans Rosling Center for Population Health is set to open in summer 2020, thanks to a transformative \$210 million gift from the Bill & Melinda Gates Foundation as well as funds earmarked by the Washington State Legislature. The space is designed to facilitate random encounters that spur conversations and creative sparks. It will house the Institute for Health Metrics and Evaluation and about half of the School of Public Health, consolidating the School from 20 locations to eight. It will also serve as a hub for faculty and student collaboration across a range of disciplines.

In October, the UW Board of Regents named the building after Rosling – a Swedish doctor, statistician and public health expert whose

evidence-based optimism has inspired world leaders. Rosling was a TED Talks sensation and author of the bestselling "Factfulness: Ten Reasons We're Wrong About the World and Why Things Are Better Than You Think." "With powerful data and beautiful charts, Hans taught the world that humanity was getting better," said Bill Gates, co-chair of the Gates Foundation. "He shone a spotlight on how far the world had come in taking care of its poorest." Added Melinda Gates: "Where others saw statistics, Hans saw the chance to tell an incredible human story about our progress against poverty and disease."



Doctoral Dynamos

The unsung
heroes of UW
research and
teaching

WRITTEN BY ASHLIE CHANDLER

Rachel Shaffer didn't dress up like her elementary school peers for career day. She wore a straw hat, waterproof pants and a pair of rubber boots, and she carried vials of water samples from a local creek. She was embodying Rachel Carson, a biologist and nature writer who, in the 1960s, authored "Silent Spring," a book that created worldwide awareness of the dangers of environmental pollution.

Pictured: A young Rachel Shaffer channeling her inner Rachel Carson.

A new initiative amplifies recruitment and support for top Ph.D. students

Nearly two decades later, Shaffer is wading into some of the most heated environmental health issues of her time, while pursuing a doctorate in environmental toxicology at the University of Washington School of Public Health.

Shaffer is among about 200 doctoral students at the School who are positively impacting communities at home and around the world. Her research has uncovered evidence linking the most widely used herbicide to certain cancers and has exposed flaws in federal regulations meant to protect child health. She has also pushed for better policies to prevent occupational lead poisoning in Washington state and helped teach other UW students how to predict the impact of such exposure on people's health.

Doctoral students like Shaffer are the backbone of research, teaching and community service at the UW. They often deal with the nitty-gritty of analyses, peer review processes and project coordination. They are also vitally important to the UW's educational enterprise. As teaching assistants, these students might design and teach their own course, construct

and grade tests, staff laboratories or study centers, and keep thorough records of each student's performance.

To better support and recruit these unsung heroes, a new initiative launched in May 2019 by Mark Richards, the UW's provost and executive vice president for academic affairs, provides critical funding for Ph.D. fellowships, stipends, training, relocation costs and more.

"Ph.D. students are crucial to the UW's excellence," Richards wrote in a statement. "They propel innovation and new knowledge, and push the boundaries of what is possible as students, as great teachers and role models for our undergraduates, and as invaluable research assistants and colleagues for our faculty. Additional funding will help attract and retain outstanding students from around the world to continue this important work at the UW."

Richards set aside \$3 million in institutional funds to be distributed to academic units, including the School of Public Health. He also established a \$2 million matching fund to catalyze private philanthropy and support these high-caliber students through either endowed or three-year term fellowships.

For Shaffer, a fellowship from the Seattle chapter of the Achievement Rewards for College Scientists, or ARCS, Foundation "made a huge difference," she said. "Especially as someone who had to move across the country and begin again in a new city where I knew no one and the cost of living was high." The Atlanta native completed her undergraduate studies at Yale University in Connecticut and worked for a time in Washington, D.C.

Shaffer has since received some financial support from the School of Public Health and from National Institutes of Health training grants. She also recently received an individual research award to support her dissertation, in which she is probing the connection between air pollution and dementia. Some of her work on fine particulate matter, known as PM_{2.5}, has linked short- and long-term exposure to the microscopic particles (smaller than 2.5 micrometers in diameter) to certain biomarkers of vascular damage in adults whose brains were aging normally. Prior research has shown vascular injury contributes to dementia risk.

This funding has also allowed Shaffer to dig her teeth into several high-profile projects with UW faculty. With Sheela Sathyanarayana, a UW Medicine pediatrician and School of Public Health environmental health scientist, Shaffer



Rachel Shaffer teaching young museum visitors at Seattle's Pacific Science Center how pollutants in Puget Sound enter and move through the food chain.



Department of Environmental & Occupational Health Sciences doctoral student Rachel Shaffer represents the type of students a new UW initiative aims to support.

co-authored a report and policy statement released by the American Academy of Pediatrics. Over three years, the pair showed that the U.S. food additives regulatory process does not adequately protect children from potentially harmful chemicals in food colorings, preservatives and packaging. They worked closely with New York University's Leonardo Trasande.

Another study found that groups highly exposed to glyphosate, the primary ingredient in the weed-killer Roundup, may increase the risk of non-Hodgkin lymphoma by as much as 41%. The research was a collaboration with UW Professor Lianne Sheppard, Shaffer's doctoral adviser, and researchers from the University of California, Berkeley and the Icahn School of Medicine at Mount Sinai.

"We had to be very careful with all of our work because we knew that it would be highly scrutinized when it was published," Shaffer said. And scrutinized it was. Chemical manufacturers tried to discredit the results and poke holes in the methodology. To combat misinformation, Shaffer penned a piece for her blog, Rachel Talks Tox, which also informed articles by PBS NewsHour, Mother Jones and NBC News. She hopes the study will inform whether countries decide to continue to allow the herbicide to be used.

Shaffer is passionate about science communication and is excited about finding ways to apply her knowledge to make real-world impact. As a member of the UW's Public Comment Project, she promotes evidence-based policy by engaging in and facilitating public comments on federal regulations that could have a large impact on people's lives. She also completed a Science Communication Fellowship with the Pacific Science Center in Seattle and developed an interactive activity to teach young museum visitors how pollutants in the Puget Sound enter and move through the food chain.

"I want to help translate information to the public and to policymakers so that the results of environmental health research can actually be used to improve health outcomes," Shaffer said. "At the science center, I wanted young girls to see what a female graduate student looks like and inspire them to maybe be a scientist one day too, just as Rachel Carson did for me."

For more information about the Ph.D. Fellowship Initiative and the philanthropic gift matching program, please contact Megan Ingram, Assistant Dean for Advancement at the UW School of Public Health, at mkingram@uw.edu or 206-616-7197.

Smartphones may help predict relapses in people with schizophrenia

Smartphone data may be useful for detecting the shifts in social behavior that can indicate an impending schizophrenia relapse, according to a study led by Benjamin Buck, senior fellow in the UW Department of Health Services. In a clinical trial, researchers gave smartphones to 61 adults with schizophrenia to monitor their digital social behavior – phone call counts and duration and texting frequency at different times of day – for a year.

“People with schizophrenia were less likely to send or receive text messages or spend time on outgoing calls in the 30-day period that preceded a psychiatric relapse,” said Buck. He is hopeful this type of monitoring could someday be used by patients and providers to recognize warning signs of social isolation before a relapse happens.

Depo-Provera does not raise HIV risk

Intramuscular hormone injections offer a discrete alternative for African women who don't want to disclose they're using birth control, and a major new study contradicts rising apprehension that this form of birth control increases the risk of contracting HIV.

The study compared infection rates over 18 months among more than 7,800 women in four African countries and found no substantial difference in HIV infection among women who used the injectable birth control compared to those who used a hormone implant or copper intrauterine device.

The study, published as part of the Evidence for Contraceptive Options and HIV Outcomes (ECHO) Trial Consortium, should help empower women to practice safe family planning. Still, said co-author Jared Baeten, UW professor of global health, medicine and epidemiology, the almost 4% yearly rate of HIV infection among each group is “a stark reminder that we're not done with HIV.”



Air pollution can accelerate lung disease as much as a pack a day of cigarettes

Air pollution – especially ozone air pollution – accelerates the progression of emphysema of the lung, according to a new study led by the UW School of Public Health, Columbia University and the University of Buffalo. In emphysema, destruction of lung tissue by irritants leads to sometimes life-threatening wheezing, coughing and shortness of breath.

“We were surprised to see how strong air pollution’s impact was on the progression of emphysema on lung scans, in the same league as the effects of cigarette smoking, which is by far the best-known cause of emphysema,” said the study’s senior co-author, Dr. Joel Kaufman, professor of environmental and occupational health sciences, epidemiology and internal medicine.

All major forms of air pollution – small particulate matter, nitrogen oxides, black carbon and, especially, ozone – increased emphysema risk in the study. In fact, the researchers found, if the ambient ozone level was 3 parts per billion

higher where you live compared to another location over 10 years, that was associated with an increase in emphysema roughly the equivalent of smoking a pack of cigarettes a day for 29 years.

And, the study determined, ozone levels in some major U.S. cities are increasing by that amount, partly as a result of climate change. Other airborne pollutants are declining due to stricter emissions regulations, but rising temperatures contribute to ground-level ozone, which is produced when ultraviolet light reacts with pollutants from fossil fuels.

The results come from an extensive 18-year study of the air pollution encountered by more than 7,000 participants in six cities, based on regional measurements and a novel in-home assessment. Participants were drawn from the Multi-Ethnic Study of Atherosclerosis (MESA) Air and Lung studies with cases of emphysema diagnosed based on lung function tests and approximately 15,000 CT scans.



Christine Hurley

2020 Distinguished Alumni
Award Winner



A trailblazing health care leader and advocate for vulnerable communities

Over the last four decades, Christine Hurley (MHA '77) has worked tirelessly to reduce barriers to health care, safe and stable housing, and other social services for the elderly, the homeless and LGBTQ individuals, including those with AIDS. She is a dedicated teacher and mentor, and her efforts have informed national models for equitable health services.

For her outstanding service and achievement in public health, Hurley will receive the University of Washington School of Public Health's 2020 Distinguished Alumni Award, the School's highest honor.

"Chris took her training and the privilege and power it created for her, and used it to advance the health and well-being of people struggling to survive in tough circumstances," said Amy Hagopian, professor of health services and global health and director of the Community-Oriented Public Health Practice (COPHP) program. "She's served people experiencing poverty, homelessness and despair in ways designed to bring them dignity and agency. She brings the right values, the right attitudes and real heart to her work."

Hurley was a leading figure in Seattle's community health

center movement of the late 1970s. In 1977, the year she earned her Master of Health Administration, she founded the Pike Market Medical Clinic, a grass-roots community health center serving low-income residents in downtown Seattle. The clinic developed a national reputation for its geriatric services, "offering specialized services rarely seen in other primary care settings," said Hurley, "including community nursing outreach, foot care, housing advocacy, social work and internal medicine providers."

Hurley also co-founded the Pike Place Market Foundation, which has since raised \$30 million for a web of social service organizations in Pike Place Market. In 1991, Hurley founded Seattle's Bailey-Boushay House, the nation's first nursing home serving people with AIDS at the end of life. "I learned more about what it means to be a human being while at Bailey-Boushay than any other place," Hurley said.

Hurley has served as a clinical assistant professor in the Department of Health Services at the UW School of Public Health since 1996. She is also a core faculty member of the COPHP program, where she has taught a leadership and management course for Master of Public Health students.

A moderated conversation with Hurley will take place Jan. 16, 7:30 to 9 pm, in the UW's Kane Hall 210.

New Leadership



Our newest leaders have hit the ground running. They join a vibrant team leading school-wide initiatives on strategic planning, a new MPH core curriculum and exploration of new research partnerships.



Jared Baeten, Vice Dean for Strategy, Faculty Affairs and New Initiatives

Baeten is no stranger to developing and implementing a strategic plan, having led the Department of Global Health through this process as vice chair. He is director of the UW/Fred Hutch Center for AIDS Research and co-director of the UW's International Clinical Research Center. Baeten's research prowess has led to novel HIV-prevention interventions through the Partners PrEP study and clinical trials.



Carey Farquhar, Vice Dean for Education

Farquhar's impact as a researcher and mentor reaches far and wide. She is director of the Kenya Research and Training Center; is a renowned expert in HIV prevention, testing and care in sub-Saharan Africa; and directs the NIH/FIC International AIDS Research and Training Program, which has graduated more than 65 Kenyans with degrees from the UW. Farquhar was instrumental in bringing people together to create a new, core curriculum as chair of the School's MPH Re-envisioning Steering Committee.



Lisa Manhart, Associate Dean for Research

Manhart has been tasked with pursuing new and strategic collaborative research opportunities for the School, which is second only to the School of Medicine in terms of research funding received at the UW in 2019. She has served as director of research for the Department of Epidemiology, has a long track record as an NIH-funded investigator, and serves as a standing member on the NIH Clinical Research and Field Studies of Infectious Diseases study section.



Lurdes Inoue, Chair of Biostatistics

Inoue has been appointed chair of the Department of Biostatistics. She is a third-generation Japanese, born and raised in São Paulo, Brazil, where she grew up with a mix of cultures, and pursued an early love of math. Now she becomes the first woman to chair the department.

Inoue has served as associate chair of the department and director of its graduate program, and led the School's Curriculum and Education Policy Committee. She is renowned in the field of Bayesian statistical research, and her work has led to a better understanding of the risks of certain cancers.

New MPH Core Courses

Dual focus on research and practice

When Snohomish County faced a whooping cough outbreak in 2010, the public health department mounted an all-out, cross-disciplinary response. Epidemiologists collaborated with environmental health experts, social marketing gurus, schools and health care providers to contain the spread of this highly contagious disease.

“Virtually every success in public health demands teamwork,” said Gary Goldbaum, who was King County’s health officer at the time and who recently served on a committee of practitioners to re-envision the School’s Master of Public Health.

Preparing graduates for such interdisciplinary teamwork is one of the central goals of the re-envisioning effort. Starting in fall 2020, students will complete six core classes that require them to work together to tackle real-world case studies. Each class will be team taught by at least two faculty members from different specializations.

Students will continue to receive specialized training in one of the School’s concentrations, but all will graduate with both research and practice-based skills.

“We envision a future where practitioners and researchers are part of one big network,” said Dean Hilary Godwin. “This integrated approach will also feature rigorous quantitative coursework, which has long been a hallmark of the UW School of Public Health.”

Said Carey Farquhar, the School’s vice dean for education who chaired the MPH redesign steering committee, “The public health practice and research communities are looking for students who are able to integrate many different aspects of public health and

apply those skills to problems that are more complex than they’ve ever been.”

To solve problems, graduates also need a variety of soft skills. The curriculum infuses training in leadership, collaboration and ethical decision-making. Students will learn not only how to present at a scientific conference, but also how to talk with the local health board, lawmakers and citizens.

The new curriculum represents “a huge shift,” said Janet Baseman, associate dean for public health practice.

Getting to this point hasn’t been easy, acknowledged Baseman, who served on the steering committee. Faculty, staff, students, alumni and practice partners have worked for nearly two years to build the new curriculum. The leadership of Dean Godwin has been a key to the effort’s success, Baseman said.

“It’s hard, but it’s worth it,” Baseman advises other schools embarking on a similar overhaul. “When you feel like it’s impossible, think about what students need to be successful, and it will be clear that it should be prioritized.”

The work isn’t over. Committee members now will determine how to implement and evaluate the re-envisioned MPH, adjust second-year curricula and the required practicum, and explore centralizing admissions and other student services, among other tasks.

“I’m excited to help develop a talented cohort of 12 new core instructors,” said MPH Core Director India Ornelas. “It’s a great opportunity for them – and other interested faculty – to learn how to incorporate active learning and evidence-based teaching into the curriculum.”

It's a great opportunity for our new cohort of instructors to incorporate active learning and evidence-based teaching into the curriculum.

-INDIA ORNELAS
MPH CORE DIRECTOR

Analytic methods and reasoning are critical to the practice of public health. We are building on our robust foundation of epidemiologic and biostatistical methods training to develop rigorous mixed methods expertise that students will apply across scenarios, from research to applied practice and program implementation and monitoring.

-BRANDON GUTHRIE
MPH CORE INSTRUCTOR



The new MPH curriculum will put students at the cutting edge of public health research and practice. They will be able to learn principles of analytical research and apply those to their fieldwork. Upon graduation, they will be competitive in the workforce.

-SHADAE PAUL
MPH GLOBAL HEALTH 2019

COMMON CORE

- Foundations of Public Health
- Analytic Skills for Public Health I
- Analytic Skills for Public Health II
- Determinants of Health
- Implementing Public Health Interventions
- Public Health Practice

CROSS-CUTTING THEMES

ETHICS & EQUITY

EVIDENCE TO ACTION

**SYSTEMS THINKING:
GLOBALLY & LOCALLY**

**LEADERSHIP,
COMMUNICATION &
COLLABORATION**

23
Credits

6 Open houses

+40

Committee and working group members

70

Phase 1 & 2 emails of feedback

12

New core instructors

Awards & Honors



Maria Blancas (MPH, 2017), staff member of environmental and occupational health sciences, has won the 2019 Bullitt Environmental Prize for her advocacy work with immigrant farmworkers. The first family member to graduate from college, Blancas will use the resources to complete her Ph.D. in the UW School of Environmental and Forest Services, creating a digital platform for storytelling about farmworker experiences.



Elaine Faustman, professor of environmental and occupational health sciences, received the 2019 Merit Award at the 15th International Congress of Toxicology. The award is the highest honor conferred by the International Union of Toxicology. Faustman was recognized for her intellectual contributions to the field and a career dedicated to mentoring scientists around the world. Additionally, Faustman was elected to the 2019 Washington State Academy of Sciences for her work on risk assessment of chemical hazards and her contributions in neurodevelopmental toxicology.



Elizabeth "Betz" Halloran, professor of biostatistics and epidemiology, was elected to the National Academy of Medicine for her pioneering work in designing and analyzing vaccine studies. She also received the 2019 Nathan Mantel Lifetime Achievement Award. Halloran is director of the Center for Inference and Dynamics of Infectious Disease at the Fred Hutchinson Cancer Research Center.



Sara Lindström, assistant professor of epidemiology, received the 2019 Presidential Early Career Award for Scientists and Engineers. The award is the highest honor given by the U.S. government to early career scientists and engineers. Lindström was nominated by the U.S. Department of Health & Human Services for her work to investigate the shared genetic origin of different types of cancer, using genetic data on more than 500,000 individuals.



Eteni Longondo (MPH, 2005) has been appointed head of the Ministry of Public Health in the Democratic Republic of Congo (DRC). Prior to receiving an MPH from the UW, Longondo studied medicine at the University of Kinshasa. He has been a doctor for the DRC's national soccer team, served as a general practitioner in Switzerland, and worked with World Vision and the U.S. Agency for International Development.

Join Our Faculty

The University of Washington School of Public Health plans to open approximately 20 new hires during the 2019-2020 academic year. These hires will span across all five departments – Biostatistics, Environmental & Occupational Health Sciences, Epidemiology, Global Health and Health Services – as well as the Nutritional Sciences Program.

Located in Seattle, a high-tech, global health hub, the School is one of the nation's premier schools of public health. The School

was established in 1970, enrolls 1,700 students, employs about 250 primary and joint faculty members, and is recognized worldwide for its strength in public health research. In fiscal year 2019, the SPH faculty was awarded more than \$180 million in external funding for research and training from federal, state, and local governmental agencies, as well as private foundations.

To learn more, visit: <https://sph.washington.edu/careers/faculty>



SPH, State Health Department Hold First ‘Partnership Summit’

In September, the UW School of Public Health and Washington State Department of Health joined forces for a daylong workshop on the UW campus. Participants shared examples of successful collaborations – such as a “Working with Tribes Toolkit” – and discussed ways to sustain them. They also identified new opportunities. The Partnership Summit drew so much interest that Associate Dean Janet Baseman hopes to hold more workshops.

“The better aligned we are in academic public health and practice-based public health, the more likely we will be able to tackle population health problems,” Baseman said.

The School and DOH have a long-standing relationship. Last year, they created a joint Academic Health Department, one of about 50 such collaborations across the country. (UW Schools of Public Health and Nursing have also formed an academic health department with Public Health – Seattle & King County.)

“Through this formalized partnership, we can better leverage the expertise, knowledge and experience of both academia and the practice community,” said Secretary of Health John Wiesman. “As public health practitioners, we succeed when we use evidence-based approaches and practice-based evidence in our decision-making to improve health outcomes for all Washingtonians.”

Among its many goals, DOH aims to provide a minimum of 10 guest lectures per calendar year, at least five internship or practicum opportunities for students, and data-sharing for classes and research. The School and its Northwest Center for Public Health Practice will provide faculty expertise and collaborate on grant opportunities.

“It’s an honor to partner with the Washington State DOH leadership team, who have been so progressive and have taken a leading role locally and nationally,” said Dean Hilary Godwin. “We have so much to learn from each other.”

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