SANCTUARY FROM STRESS
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I am thrilled to join the University of Washington as the new Dean for the School of Public Health (SPH) and look forward to meeting each of you. One of the things that drew me to the UW and SPH is our deep dedication to public service, training and engagement. Our commitment to public health practice and translating evidence into action is ingrained in everything that we do.

In the last year, we formalized a new academic health department with Public Health – Seattle & King County and the UW School of Nursing, and a separate one with the Washington State Department of Health. These agreements formalize longstanding relationships and further encourage and institutionalize resource sharing and collaboration. Importantly, these initiatives are not just about the UW working with individual agencies; they are designed to provide a framework that all of us can leverage as we work together to improve health in our region.

Another part of our renewed commitment to translating evidence into practice is our recent appointment of Professor Janet Baseman (PhD ’05, Epidemiology) as acting associate dean for public health practice. Read more about the exciting work Janet is doing on page 10.

This commitment is also visible in our efforts to revamp our MPH curriculum. One of the primary goals of this project is to ensure that we are preparing both public health practitioners who understand research and the value of evidence, as well as researchers who appreciate practice.

Finally, I’m thrilled about three recent collaborations that highlight our School’s obligations to help fill the needs of underserved communities, including rural and tribal populations:

- The Latino Center for Health is the first research center in Washington to focus on advancing Latino health and is housed in UW SPH; Professor Maggie Ramirez is an industrial engineer and health services researcher who has just joined our faculty there.
- The new Solutions in Health Analytics for Rural Equity program is led by NWCPHP Director Betty Bekemeier in the SPH.
- And the SPH’s new Center of Anti-Racism and Community Health is concluding a search for a founding director.

These efforts are critical to our collective mission to reduce disparities and achieve better health for all.

The opportunity to work with folks in local health departments and other public health practitioners was one of the greatest pleasures in my previous position. As Dean of the UW SPH, I look forward to learning more about our partnerships with you and hearing about how we can work together to build upon them!
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After the economic recession of 2008, I took part in research efforts to better understand how public health leaders made decisions about the allocation of their organizational resources.

The financial crisis hit local public health agencies hard, forcing some administrators to make quick, draconian cuts to programs and staff. The many leaders I talked to lamented that they wished they were using more data and evidence to drive their decision-making, but such resources were not easily accessible. Various forces in their cities and counties were strong and swift — sometimes forcing their hands in ways that were counterproductive to supporting health and equity.

Being part of that research gave me a deeper understanding of the challenges health leaders face when deciding how best to protect the public’s health with fluctuating funding. It also strengthened my resolve to help them gain greater access to data and evidence to support their strategic planning.

The Northwest Center for Public Health Practice (NWCPHP) and the School of Public Health (SPH) are proud to bring you the 2018 issue of Northwest Public Health, which offers many examples of academic and practice-based public health professionals moving the field forward. With my research in mind, we’ve placed particular emphasis on how these leaders are strategically using a variety of data for better decision-making, policy development and program planning at state and local levels. In these times of visible opposition toward scientific evidence and human rights on pivotal issues like immigration and the environment, we’ve also taken considerable effort to highlight how people are taking action in these areas.

In this issue, we feature the Amigas Latinas Motivando el Alma (ALMA), or the Latina Friends Motivating the Spirit project, led by faculty member India Ornelas. This research team is working closely with community partners to build an evidence base for future programs.
that will help decrease the symptoms of depression among Latina immigrants, who experience this condition at higher rates than other ethnic groups. ALMA’s mindfulness project is also building capacity among the participants to be more empowered in their communities today.

Our story on maternal mortality explores how stakeholders from across public health and health care systems are using data to investigate and prevent the inequitable deaths of mothers in Washington. Their efforts, which are now in the early stages, will inform future changes to clinical practices and legislation to address injustices like racism and poverty that contribute to health disparities. Their forthcoming guidelines for maternal death investigations could very well become a model for other states.

In a much-needed success story, we feature how Oregon’s public health advocates scored a big win in their battle to reduce youth tobacco use by raising the legal purchasing age to 21. These champions from across the political spectrum used data and stories to persuade decision-makers into supporting health through a targeted policy solution, proving it can be done.

We take a stand with our opinion piece by calling for better regional data and collaboration among researchers, practitioners and community members to address the growing threat of severe wildfires and prolonged smoke events. This article stresses the importance of effective communication strategies for hard-to-reach populations in our region’s rural areas, which are the hardest hit by these devastating events.

In addition to exploring evidence-driven community solutions for health, we get up close and personal with several leaders from the field. We profile SPH alumna Beth Mizushima as she discusses the pleasures of living and working closely with her community in rural Washington to tackle urgent health issues. We introduce Janet Baseman, an ardent public health practice champion and our School’s new acting associate dean for public health practice, and the importance of collaborations between students, faculty and the practice community. We also feature a physician in our Online Executive MPH program and his efforts to gain more public health skills to bring prevention and healing to communities.

Public health in action, whether it is addressing opioid misuse or responding to wildfire smoke threatening a community, happens largely at the local level. In the best of times, we work in concert with strong, supportive federal systems. When those larger systems are less responsive, we must think even more creatively about how to get things done close to home. I hope the articles in this issue inspire you to use data and stories to make better decisions and create more equitable public health systems in your communities.
Before she facilitates a big workshop, Silvia Gonzalez finds a quiet space, takes four deep breaths and shakes off her worries. “Then I feel that everything is going to be fine,” says Gonzalez, an organizer with Casa Latina in Seattle.

Gonzalez learned those self-soothing techniques as part of a mindfulness program that helps Latina immigrant women build coping skills to combat depression and anxiety, which they face at higher rates than other ethnic groups. Called Amigas Latinas Motivando el Alma (ALMA), or Latina Friends Motivating the Spirit, the program was developed by India Ornelas, associate professor in the Department of Health Services at the School of Public Health and research director for the Latino Center for Health and a team of investigators at the University of North Carolina at Chapel Hill and Duke University.

After three successful pilots of ALMA, Ornelas received a five-year, $3 million grant from the National Institutes of Health to refine and rigorously evaluate the program at multiple sites in western Washington. ALMA is one of a growing roster of community-engaged research projects housed in the Latino Center for Health, which moved to the Department of Health Services in 2017.

“Ever since we did the first pilot, the women have been asking for ALMA to come back,” Ornelas says. “They just kept saying, ‘More, we want more.’”

For the women who participated in the ALMA pilots, held in collaboration with Casa Latina, the five Friday evening sessions were a sanctuary from the stresses and worries that plague many Latina immigrants. For two hours each week, they could come together, talk, share food and learn and practice exercises in mindfulness, self-compassion and yoga.

“The majority of us women think a lot about others, but we never think about giving compassion to ourselves,” says Gonzalez, speaking through a translator. “We learned that in order to help others,
we have to have self-compassion first. That was one of the biggest things I learned from ALMA."

The program encourages women to use coping strategies they have already found helpful, such as dancing, praying or listening to music. Meditation and yoga are newer to many of the women, but something they want the chance to learn, Ornelas says.

The 20 women in the most recent group, held in 2016, reported reductions in depression, anxiety and perceived stress. Ornelas emphasizes that ALMA is not intended to treat chronic major depression, but rather to reduce symptoms and prevent them from worsening.

Surveys show that between 33 percent and 43 percent of Latina women experience depression, rates significantly higher than women of other ethnic groups and Latino men. "And there is some evidence that this gets worse with more time in the U.S.," Ornelas says.

The stresses of immigration likely explain some of these disparities among Latinas. Many arrive in the U.S. after fleeing poverty, natural disasters or violence in their home countries. The migration process itself often exposes women to trauma, including physical and sexual violence. Once here, social isolation, language barriers, discrimination and fear of deportation — which has only worsened in the current political climate — also increase the risk for depression and anxiety.

At the same time, Latinas are less likely to receive mental health care, due in part to a shortage of affordable, culturally competent providers who speak Spanish. That continues to be true in Washington, even though the Latino population has almost doubled since the 1990s, to nearly 13 percent in 2016. "So the idea," Ornelas says, "is to help build the capacity of women to help themselves in their own community." ALMA also connects women to professional mental health services when needed.

When the next iteration of ALMA rolls out in the fall, the program will reach a total of 200 women in eight different groups. The randomized control design will allow Ornelas and her colleagues to test whether ALMA improves symptoms of depression and anxiety, and how those are affected by factors such as social support, coping skills and stress.

Long-term, trusting relationships with Casa Latina — and also with El Centro de la Raza for the second wave of ALMA — are essential to being able to accomplish a program like this, says Ornelas. They are also key to accomplishing the mission of the Latino Center for Health, she adds, which includes engaging communities in doing research that’s relevant to and benefits them.

At Casa Latina, Gonzalez and other women who have already participated in ALMA are looking forward to joining again. They’re also talking it up among their friends. "I’m just so excited for ALMA to start already," she says.

ALMA co-investigators include Gary Chan, associate professor of biostatistics and of health services; Deepa Rao, associate professor of global health and of psychiatry and behavioral sciences; Cynthia Price, research associate professor in the School of Nursing; and Eugene Aisenberg, co-director of the Latino Center for Health, all from the University of Washington. ■
More pregnant women and new moms are dying in America today than in recent decades, but the reasons for this tragic trend — and the solutions — aren’t always clear.

In Washington, that has sparked a renewed effort to closely examine every maternal death and find ways to prevent future ones.

Thanks to advocacy by Washington’s medical and public health communities, the state legislature in 2016 created and funded a new maternal mortality review panel to study each death and recommend steps to reduce fatalities. The panel’s first report, released last year, is spurring policy and practice changes to improve care for women who are most at risk and reduce disparities across race, income and geography.

In 2014 and 2015, a total of 69 Washington women died in pregnancy or within a year of pregnancy. Of those, 16 women died from causes directly related to pregnancy, such as excessive bleeding and complications with high blood pressure, the panel found. The remaining 53 women died from causes not directly related to pregnancy, including car accidents, drug overdoses and suicides.
Those numbers indicate that Washington is actually doing quite well with maternal mortality, says Dr. Sarah Prager, an obstetrician-gynecologist on the maternal mortality review panel and an adjunct associate professor in the Department of Health Services at the School of Public Health. The state’s rate of pregnancy-related deaths, at 9 per 100,000 live births, remains below the national average, which climbed from 7.2 per 100,000 in 1987 to 17.3 in 2013.

“But when you tease the data apart, you see these huge disparities by race and ethnicity,” Prager says. “There was maybe some sense of that before we had these data, but I don’t think it came across quite that starkly.”

American Indian and Alaska Native mothers in Washington are eight times as likely as white women to die from accidents and other causes not directly related to pregnancy. For non-Hispanic black women, the death rate is three times that of white women. The number of pregnancy-related deaths was too low to make such comparisons.

Women with lower incomes and those living in rural areas, where access to care can be more challenging, are also at higher risk of dying during and after pregnancy.

One startling fact found by the review panel was that all 16 women who died of pregnancy-related causes in 2014–2015 had health insurance coverage. “Closing these disparity gaps will require the long-term, difficult work of addressing social determinants of health,” says Lacy Fehrenbach, director of the Office of Family and Community Health Improvement at the Washington State Department of Health. That could include policies that support living wages and family leave, and that reduce education and income inequality. It will also require looking at women’s experiences of racism, and how the resulting chronic stress affects women’s health, Fehrenbach added. “That’s what will really bring the numbers down.”

The maternal mortality review panel’s wide-ranging recommendations also include addressing the unrecognized biases and prejudice that can affect the quality of health care, improving access to mental health and substance use treatment for women who are pregnant or parenting, and expanding access to Medicaid through the first year after pregnancy.

Review panel members and perinatal health care experts have begun to tackle the panel’s recommendations. One work group, for example, is developing guidelines to care for women with very high body-mass index, since obesity was found to be a contributing factor for maternal deaths.

Another group, which includes medical examiners and pathologists, is working to improve maternal death investigations. Currently, not all maternal deaths are autopsied, in large part due to funding shortages. As a result, the factors that contributed to those deaths can remain hidden. The group recommends that all women who die within 42 days of giving birth receive autopsies, if the legislature will fund the work. They are also developing first-in-the-nation guidelines for maternal death investigations, which could become a model for other states.

Developing such targeted interventions is now possible because, under the new law, the maternal mortality review panel gained access to important context that helps them understand the underlying causes of each woman’s life and death.

When you tease the data apart, you see these huge disparities by race and ethnicity. There was maybe some sense of that before we had these data, but I don’t think it came across quite that starkly.

In the past, the state completed sporadic reviews using only the limited information available on death certificates, and those efforts ended in 2012 due to resource constraints. Now the review panel may also access women’s medical records and, where available, death investigations. That allows them to gather details of each woman’s health and medical care before, during and after pregnancy, as well as her family life, education, employment and other factors that may have played a role in her death — and then assess what might have prevented it.

Aggregated across all women, that information illuminates the root causes of maternal deaths and informs system-level changes, Fehrenbach says. Those changes, in turn, can improve the health status of all women.

Maternal deaths “are the tip of the iceberg,” Fehrenbach explains. For each death, an estimated 100 women experience severe health conditions or complications related to pregnancy or childbirth that can have lifelong effects. “So we do this intense work on the small number of deaths to really transform the system of health for women.”
She often heard freshmen arranging purchases with seniors during basketball games and witnessed groups of all ages vaping in cars or bathrooms between classes. The convenience store just a few blocks from school provided a steady supply for anyone 18 or older.

Emma didn't think it was fair that kids were exposed to such a harmful addiction that could hook them for life. To take a stand, she joined the Providence Rebels for a Cause, a teen-led group in her school that encourages students to explore health issues and career paths while gaining leadership skills like public speaking. Their primary passion involved preventing tobacco use among younger students, and they spread their message by tabling at health fairs and speaking to middle school classes. Their name is a play on the idea that it is more rebellious to resist the tobacco industry than to smoke.

In February 2017, Emma and two other Rebels donned matching blue shirts with their message of “#21ForOregon” on the front and put their speech training into action by testifying before the state's Senate Committee on Health Care. “I am here to defend the rights of my little brothers. I ask you to take a stand and protect a very vulnerable population of people who oftentimes do not have a voice of their own,” said Emma as she spoke in favor of raising Oregon's tobacco purchasing age.

They celebrated with the governor and other advocates later that summer when the bill, nicknamed “T21,” passed and was signed into law.
Public health advocates are proud to have helped Oregon become the fifth state to adopt such a law, especially given that the state’s yearly tobacco prevention program budget is about $8 million compared to the tobacco industry’s marketing expenditures of $108 million. They attribute their success, in part, to broad-based support from youth advocates like Emma, from doctors and from politicians on both sides of the political spectrum. Endorsement from a champion legislator was also critical. Senator Elizabeth Steiner Hayward, a family doctor in the Portland area, testified in support of the bill and served on the health care committee that held public hearings, asking probing questions and clarifying scientific evidence against anecdote.

Timing was also important. Advocates took advantage of existing momentum among key legislators around establishing a statewide retail licensing system. They were able to engage those legislators in supporting T21 by assuring them that passing the new law would be a quick win that would bolster the licensing efforts. Prevention specialists were also aware of the power of messaging. By listening carefully to local conversations around the state, they developed effective messaging to mitigate concerns about individual and business rights, enforcement and the potential loss of tax revenue.

The Tobacco Prevention and Education Program at the Oregon Health Authority marshalled scientific evidence into fact sheets and talking points advocates used to make their case in community meetings and public hearings across the state. They also answered technical questions from legislative aides about the economic and health impacts of changing the law. “We saw a lot of energy in communities around T21 as another option to address tobacco use and access by youth. It really made sense to people,” said Luci Longoria, MPH, Manager of Community Mobilization for Policy, Systems and Environmental Change.

Emma knew first-hand what is evidenced in many scientific reports — that most people who start smoking and become addicted do so before they are 18 years old. And that young brains are uniquely susceptible to both manipulative marketing and the effects of nicotine, which can impair decision-making. Raising the legal purchasing age can significantly decrease the primary driver of teen smoking — legal sales to people just over 18 who become “social sources” to younger teens. According to the Oregon Health Authority, raising the purchasing age to 21 could reduce the number of 15- to 17-year olds who start smoking by 25 percent and save 700 lives each year.

The new law, which took effect on January 1, 2018, and includes inhalant delivery systems like e-cigarettes, was part of the state’s larger strategy for reducing tobacco use that began in earnest in the late 1990s. Over the past 20 years, high-impact policies supporting clean indoor air and tobacco-free schools and workplaces have helped cut use in half, but the fight for healthy youth continues. “Despite our successes in tobacco prevention over decades, it still remains the leading cause of preventable death and disability in Oregon,” Longoria explains.

While advocates are celebrating their big win, they also acknowledge how much more there is to do. Vulnerable populations like the youth Emma mentioned, and others dealing with addiction, mental illness, disabilities and poverty are still at greater risk of addiction and poor health. “Our work is far from done, but it’s the right thing to do,” says Longoria.
Janet Baseman, the UW School of Public Health’s acting associate dean for public health practice, helps agencies and scholars collaborate.

PRACTICE and research
MAKE PERFECT

JANET BASEMAN
Public health practice is our front line of defense against community health threats. When teaching and research are connected to that front line, we can make a bigger difference in protecting the public.

Public health agencies, researchers and teachers are all working to solve the same problems, but they go about it in different ways. For example, some apply research methods while others develop and implement public health programs, but they are related. The work of researchers should inform the work of practitioners, and vice versa. The better integrated we are as students, researchers and practitioners, the better we will be at solving real public health problems.

The Northwest Center for Public Health Practice, which has been around since 1990, has a strong reputation for working with the practice community on research, evaluation and workforce development. Examples of other units and faculty across the School working with the community include a project led by the Department of Health Services faculty member Jessie Jones-Smith to evaluate Seattle’s sugary beverage tax in collaboration with Public Health – Seattle & King County.

Our Department of Environmental & Occupational Health Sciences has a long history of close collaboration with state and local government agencies and community partners to study and mitigate health impacts of air and water quality problems and to improve worker safety across Washington.

I recently began creating an inventory of all the practice-engaged activities happening across the School so that we can grow these collaborations and ensure that our research and teaching feed directly into public health improvements.

Strong engagement with the practice community helps academia identify local needs, and informs the kinds of research problems that we should be addressing to make the most impact. In addition, opportunities for students to gain real-world experience happen through these networks and can provide students with a more complete picture of what public health work really looks like.

The practice partners can benefit from capacity support through students working on practicums, field training opportunities and filling jobs. At the faculty engagement level, we could provide domain expertise in areas such as environmental health, epidemiology, design and implementation of health promotion programs. Faculty could also help evaluate these programs and services to make them better, and provide capacity support during emergencies when our public health systems are overloaded.

The Department of Epidemiology’s Student Epidemic Action Leaders (SEAL) team, a field epidemiology program created a few years ago that deploys students to public health agencies to both learn and provide service. As a PhD student in epidemiology at the School, I received great training in statistical and epidemiological methods, but it felt like the translational piece was missing. I had a desire to connect my research in ways that could really benefit people and not just end up in publications.

As a faculty member, with seed money from the School, I started the applied epidemiology program that I wish had been available when I was a student. Any graduate student in the School is invited to apply to the SEAL team during fall quarter.

We are on our third cohort and have SEAL students from epidemiology, health services, environmental and occupational health sciences and global health. Students in the SEAL program work on teams with practitioners and apply what they learn in class to the real-time needs of these agencies. SEAL team students have assisted our practice partners in managing recent Zika and mumps outbreak investigations, helped identify potential sources of lead exposure among pediatric refugees in Washington, and supported the state in transitioning to a new electronic disease reporting system, among many other terrific projects. It’s very rewarding to know that our students are providing surge capacity for partner agencies on time-sensitive issues while also gaining valuable professional skills.
When it’s time to harvest the hay ripening on her 30-acre farm in southwestern Washington, Beth Mizushima, SPH ’10, strikes a deal with her neighbors.

In exchange for a portion of the hay, they bring their equipment to cut and bale it. She rises at 4 a.m. to help her husband stack hay in the barn before heading to the office and leaves work early to continue the job. In the evenings, neighbors often stop by to help or just chat.

“We actually have a real good time,” Mizushima says.

The same spirit of resourcefulness and collaboration drives Mizushima’s passion for rural public health as deputy director of Grays Harbor Public Health & Social Services. With the skills she honed in the School of Public Health’s Community-Oriented Public Health Practice program (COPHP), Mizushima has championed efforts to strengthen both her own agency and the community’s resilience and well-being. Much like farming, the work requires harnessing the strengths and resources of the community to accomplish big things. These have included initiatives to promote family-friendly workplace policies, prevent suicides and opioid abuse, empower youth and much more.

Now Mizushima wants to encourage other graduate students to consider the creative and rewarding work of rural public health.

“In rural areas, you see the challenges that your community faces very acutely,” Mizushima says. “You also get to see the positive impact that your program, department or community partnership has each day, which is incredibly rewarding.”

Like many rural areas in the U.S., Grays Harbor struggles with poorer health outcomes, including lower life expectancy and higher rates of drug- and alcohol-related deaths, combined with fewer economic resources and services. The county ranks 34 out of 39 Washington counties with respect to overall health outcomes.
With local youth reporting high rates of depression and suicidal thoughts, the county has embarked on an ambitious, multi-pronged effort to end youth suicide. The health department, one of three local health jurisdictions to receive a five-year suicide-prevention grant from the Washington State Department of Health, has engaged behavioral health providers and other key stakeholders in exploring how they can tackle the issue as a community.

One of the answers has included providers taking patients’ “mental health pulse” by screening for depression at each visit, much like they measure blood pressure as part of a standard checkup. “The risk is out there,” Mizushima explains, “but if you don’t ask, you can’t connect people with the right level of care at the right time for them.”

Based on the community’s desire to “go upstream,” the department also collaborated with the Hoquiam School District to establish a peer-to-peer suicide-prevention program called Hope Squad, which empowers youth leaders and fosters a school culture in which youth feel comfortable seeking help from trusted adults.

Mizushima says she sees the department as the coordinator or conductor in such efforts. That “allows partners to make decisions about what is best for them, and then we provide resources to support them,” she says. “But the partners are the ones doing all of this great work.”

Such opportunities to collaborate creatively are a big part of the reason why Mizushima loves working in rural public health. “The part of it that feels so great to me is that I get to work with people who bring so much heart, passion and resourcefulness to the work they do,” she says.

In a small health department, Mizushima also gets to wear many different hats. She has held four positions since joining Grays Harbor Public Health & Social Services in 2012. In her current role as deputy director, she writes grants, hires staff, nurtures professional development, spearheads organizational culture change and seeks creative ways to fund and staff initiatives. “That’s part of why it’s so fun,” Mizushima says.

Her boss, Director of Public Health & Social Services Karolyn Holden, says the skills Mizushima developed in COPHP helped her “rocket through the stratosphere to her current position.”

“She has a real set of skills that help translate big ideas into the steps people need to work through to get there,” Holden says.

After finishing her MPH, Mizushima knew she wanted to return to her rural roots. Both she and her husband grew up in Northern Colorado with farming and ranching families. “Frankly, I thought I’d be moving somewhere that had more sun, not liquid Vitamin D,” she says. Instead, she landed her first position, as a health educator, at Grays Harbor Public Health & Social Services, and she and her husband eventually bought property up a river valley “in the middle of nowhere.”

“It’s a wonderful, amazing community,” Mizushima says. “We were so lucky to have landed here.”

She hopes that more public health graduate students will give rural public health work a try.

“If you didn’t grow up in a rural community, you may not think about doing informational interviews with rural public health jurisdictions,” Mizushima said. “But graduates have really great opportunities to come into communities and do cool things with people that they live and work and play with. And that can be very satisfying.”

Right: Beth Mizushima (SPH ’10), Deputy Director, Grays Harbor Public Health & Social Services.
Transmission of Hepatitis C has increased in some rural areas of Alaska by 490 percent in just the last few years. In Homer, Alaska, the nearest syringe access program is 220 miles away. Increasing rates of Hepatitis C among intravenous drug users sparked a grassroots community effort to create a local syringe access program in June 2016 through an all-volunteer staff, small grants, and nationwide online resources.

To date, this effort has provided over 19,390 free sterile syringes and 85 Narcan kits, needle disposal, on-site HIV and Hepatitis C testing, education and connection to additional resources and services. Called “The Exchange,” this community collaboration helped create the Southern Kenai Peninsula Opioid Task Force that now includes communities outside of Homer and aims to find local solutions to a national epidemic.

Our partners in the Northwest region are dedicated to improving public health practice. Here is a snapshot of state, local and tribal activities from our six-state region of Alaska, Idaho, Montana, Oregon, Washington and Wyoming.

**REGIONAL ROUNDUP**

**ALASKA**

**GRASSROOTS SYRINGE ACCESS PROGRAM**

Transmission of Hepatitis C has increased in some rural areas of Alaska by 490 percent in just the last few years. In Homer, Alaska, the nearest syringe access program is 220 miles away. Increasing rates of Hepatitis C among intravenous drug users sparked a grassroots community effort to create a local syringe access program in June 2016 through an all-volunteer staff, small grants, and nationwide online resources.

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**IDAHO**

**EXPANDING HOME VISITING PROGRAMS**

The Idaho State Legislature has granted local public health districts $1.6 million to expand home visiting programs, accommodating additional families in multiple counties.

This unique regional shared-services approach lends itself to providing services statewide to low-income families in rural and underserved areas. These services provide training and resources that promote positive parenting practices, family economic self-sufficiency and school readiness.

Between October 2016 and October 2017, 628 households participated in a home visiting program, with 927 total adults served, and 704 total children served. Statewide, retention rates of families staying in the programs are improving.

**MONTANA**

**AN END TO ENDS**

With e-cigarettes growing in popularity, Missoula, Montana, has banned the use of Juul and other vape devices indoors in public places.

To protect the public’s health and recognize the rights of non-smokers to breathe clean air, the Missoula City-County Health Department drafted a change to the 1999 Missoula Smoking Ordinance to include regulations on Electronic Nicotine Delivery Systems (ENDS), also called e-cigarettes or personal vaporizers. The department worked with the Missoula City Council, the Health Board and county commissioners to create language and regulations prohibiting the use of e-cigarettes in all enclosed public places and places of employment.

The policy change was approved in March 2018 and regulations are now enforced under the same provisions as the Montana Clean Indoor Air Act.
The Native Children Always Ride Safe (Native CARS) project led a successful community-based participatory research study that increased the percentage of Native American children age 8 and younger riding in age and size appropriate restraints in Northwest tribes. Tribes collected their own qualitative and quantitative data, using it to design and implement community interventions. These successful interventions along with tools and processes developed from the study are now accessible in an online toolkit — the Native CARS Atlas. Demonstrating the translational potential of Native CARS interventions into other tribal communities is an essential step toward reducing the disparity in motor vehicle injuries and fatalities experienced by American Indian and Alaska Native children in the U.S.

Native CARS is based at the Northwest Portland Area Indian Health Board within the Northwest Tribal Epidemiology Center.

In Washington County, Oregon, one-third of households burn wood as a heat source. Many use older and uncertified wood stoves, which are inefficient and produce a high level of fine particle pollution that is dangerous for young children and people with existing respiratory conditions.

Washington County Public Health worked with city and county partners to adopt ordinances that prohibit burning wood on poor air quality days. Households using a wood stove as their sole source of heat are exempt. They also partnered with private businesses and local municipalities to offer rebates and grants to residents who replace their old wood stoves with new and cleaner-burning devices.

Since implementing the wood stove exchange program in August, 2016, 284 old wood stoves have been replaced, preventing the emission of 139 tons of particulate pollution, harmful gases, volatile organic compounds and hazardous air pollutants. In 2017, the agency received a NACCHO Model Practice award for this work.

In Wyoming, rates of sexually transmitted diseases (STD) are on the rise. To reverse this trend, the Wyoming Department of Health implemented a social marketing campaign, knowyo.org, to target and deliver messaging about the risk factors. The campaign integrates three STD prevention strategies into its messaging: partner services, testing and condom distribution. Partner services include treatment and testing, prevention messaging on risks and locating the elicted partners to recommend testing. Communications efforts promote the accessibility of STD, HIV, and viral hepatitis testing in all Wyoming counties, and how condom distribution occurs (via mail, and through testing sites and dispensers located in communities).

Between 2012 and 2016, the infection rate of Gonorrhea dramatically increased by six fold, but in 2018, the cases have decreased by 67 percent compared to the same time last year.
For the past two summers, the western part of the United States experienced extraordinary wildfire seasons. Dominated by longer burns, fires in locations not previously thought to be at risk, and significant smoke in dense urban areas, these events were a wake-up call to communities with little or no experience dealing with them. To improve our risk communication efforts and keep everyone healthy and safe from wildfire smoke, we must find more ways to collaborate with and draw from the valuable expertise and perspectives of practitioners, researchers and community members.

SMOKE IMPACTS IN WASHINGTON
In August 2018, there were few, if any, places to escape from unhealthy air in the entire state of Washington. In fact, the Puget Sound experienced its worst 24 hours of air quality on record, and central and eastern Washington were blanketed in smoke for several weeks.

Last year, fires also resulted in moderate to unhealthy air quality in the first two weeks of August and again in early September in western Washington. At the same time we also experienced higher than average summertime temperatures, presenting a unique challenge for our densely populated urban areas, where air conditioning is largely unavailable. In central and eastern Washington, residents experienced even worse air quality resulting from local wildfire events as well as those occurring in British Columbia and neighboring states.

WHAT DO WE KNOW ABOUT THE HEALTH IMPACTS OF WILDFIRE SMOKE?
There is a growing body of research contributing to our understanding of the health impacts from wildfire smoke. Associations between wildfire smoke exposure and respiratory health outcomes, including asthma and chronic obstructive pulmonary disease (COPD), have been consistently demonstrated in the literature. Yet there remains uncertainty. For example, consequences of long-term exposure and relationships between exposure and health endpoints, such as cardiovascular disease and mental health issues, are less well understood, and specific at-risk populations are not well defined.

Since most wildfire smoke-related health outcome studies look at impacts related to hospitalizations and mortality, the complete picture of wildfire smoke’s public health burden is elusive.
Furthermore, the use of the most severe health outcome data limits researchers' ability to detect statistically significant differences in health impacts of smoke exposure. Using data from rural communities that lack population density, where wildfire smoke exposure is the worst, adds to these statistical challenges. And as wildfires engulf homes, businesses and chemically-treated lands, what we know about the composition and health hazards of smoke is changing.

THE CHALLENGES OF WILDFIRE SMOKE RISK COMMUNICATION

Local health jurisdictions in rural communities, often strapped for resources on a good day, bear the burden of wildfire smoke health-risk communication. At the same time, staff and their families may be personally impacted by the wildfires.

Another complicating factor for health-risk communicators is their reliance on federal and state air monitoring systems that provide air quality information at a regional level. Because these systems often use a single monitor to assess the air quality of a large geographical area, they provide limited information that can be used to understand and communicate local risk. For example, information from these systems usually lacks sufficient resolution to determine if youth sporting events should be moved to a different location where there is better air.

Nonetheless, risk communication activities must seek to change behaviors in communities that have dealt with wildfire smoke for generations and reach hard-to-access populations such as tourists and seasonal workers. Common protective actions, such as staying indoors when smoke is visible or minimizing strenuous outdoor activities, may no longer be sufficient to protect health given prolonged exposures and increasing severity of air contamination. Without access to air conditioning, staying indoors during smoky, hot summer days is just not an option for many northwest residents.

These protective actions may also be in direct conflict with the economic interests of rural communities that rely on seasonal outdoor workers and outdoor recreation to sustain them year round. Yet the efficacy of emerging interventions, such as clean air shelters and distribution of N-95 masks to untrained community members, for improving health outcomes remains largely unknown.

WORKING TOGETHER TO IMPROVE OUR COMMUNITY’S RESILIENCE TO WILDFIRE SMOKE

The University of Washington’s CoLABorative on Extreme Event Resilience (CEER) is working with communities in the northwest to improve their preparedness for wildfire smoke. This summer, CEER students worked with the Methow Valley Clean Air Project and local health jurisdictions to assess wildfire smoke health information needs of organizations serving at-risk populations. CEER also planned an October 2018 Wildfire Smoke Stakeholder Synthesis Symposium to bring together public health practitioners to share ongoing practice-based needs, as well as identify opportunities to collaboratively address wildfire smoke, health and risk communication challenges.

As our climate continues to change and our communities at the wildland interface grow, we can expect that wildfires and the smoke that they produce will become an increasingly important public health hazard in the Pacific Northwest. By working together, academics, practitioners and communities will be ready to tackle wildfire smoke and other challenges that climate change throws our way.

About the Authors: Nicole Errett, PhD, MSPH, and Tania Busch Isaksen, PhD, MPH, are faculty members in the UW School of Public Health’s Department of Environmental & Occupational Health Sciences and direct the UW CoLABorative on Extreme Event Resilience (CEER).
Jenna Buchanan (BS, Environmental Health ’07) is on a mission to improve the culture of safety at Boeing. She seeks to learn lessons not only from accidents but also from close calls.

The University of Washington School of Public Health graduate recalls how a reporting system and quick action helped to protect an aircraft mechanic from a potentially fatal fall.

“He later told me, ‘what you did saved my life,’” said Buchanan, a senior manager of Environmental, Health and Safety (EHS) at Boeing’s Everett site. She is responsible for the health and safety of 40,000 employees and contract workers. “I know that the work I’m doing matters.”

As a Boeing intern more than a decade ago, Buchanan measured workplace exposure to hexavalent chromium, a cancer-causing chemical made famous by Erin Brockovich. An admirer of the legal crusader, Buchanan wanted to ensure that all people have access to safe and healthy places to live, work and play. She secured a full-time position at the company before graduating.

Now, a partnership with Boeing is bolstering the School’s academic programs and enhancing the company’s pipeline to talented students like Buchanan, who are passionate about protecting workers.

The bond was formalized in 2017 with a philanthropic gift and the School’s first “Focal,” a company leader who serves as a conduit between Boeing’s EHS teams and the Department of Environmental & Occupational Health Sciences (DEOHS). There are 61 other Boeing Focals across the UW.

“We are engaging with DEOHS to support students and the department, and to provide students with insight on career opportunities at Boeing,” said Susan Colligan (MS, Industrial Hygiene and Safety ’86), senior manager of Enterprise Workplace Safety at Boeing and the School’s Focal. She is one of more than 28 alumni from the School currently on Boeing EHS teams. “Our relationship building includes internships, financial support for students and research, mentoring and other engagement activities, such as factory tours and panel discussions.”

Boeing has contributed $45,000 over the past two years to support student research that aligns with the department’s mission to create safer workplaces and healthier communities. Some projects address issues relevant to Boeing and its workplace safety, but it is not a requirement. The Boeing Student Support Awards are available to all students in the department and other UW students who work with department faculty. So far, 10 students have received awards of up to $5,000 each.

“Our partnership with Boeing has provided a vital bridge of support to students who are entering careers in occupational and environmental health,” said Michael Yost, chair of the department. “In addition to helping attract strong students to our program, this partnership has allowed them to finish their studies more quickly and with greater focus on translating the work into professional practice.”

This year’s recipients include PhD student Trevor Peckham, who is focused on improving aspects of the employer-employee relationship that influence health, and MPH student Orly Stampfer, who plans to work with the Tulalip Tribe to design a health messaging system that alerts people about community air quality.

Many students who receive Boeing support are seeking careers in the private sector and are in the latter part of their degree studies or in an accelerated degree program, according to Yost. “They’re translating academic training into practical solutions for preventing injuries and illness.”
Hyoung-gon “Frank” Ryou, originally from Seoul, is using his award to investigate shocks and vibrations experienced by forklift drivers as they operate the machine and to explore strategies to reduce exposure. His research has shown that the amount of vibration depends on the type of operation (e.g., driving, loading/unloading) and road conditions. He plans to test three different tires to see which is best at limiting shock. Results from the study could improve safety conditions for operators and potentially change industry standards.

“The work setting is where people spend most of their day,” said Ryou, who is pursuing a PhD in environmental and occupational hygiene and works in the UW Ergonomics Lab, led by Professor Peter Johnson. “We can prevent common, avoidable injuries by applying ergonomics in the workplace.”

Whole-body vibration is a known risk factor for low back pain, which accounts for 40 percent of Washington state workers’ compensation claims. It is also the top cause of disability globally, and treatment for the pain may be fueling the opioid epidemic. In the U.S., over 60 percent of people with low back pain are prescribed opioids such as oxycodone.

For Buchanan, her real-world experience at Boeing was a major turning point. “I was a known commodity. People at Boeing knew who I was and what I was capable of doing,” she said. In addition, classes she took in exposure science and toxicology gave her a good foundation to get started.

Buchanan has since mentored dozens of UW interns. She puts them to work on projects meaningful to their studies and connects them to people and opportunities, such as trainings and site tours. In turn, the students channel their energy and perspective into positive change at the company and beyond.
Creating healthier communities is the aim of the research, teaching and service at the University of Washington School of Public Health. Here is a sampling of the School’s local, national and global impact. To view a comprehensive list of stories, visit the School’s website: http://sph.washington.edu/news/archive.asp

Modern humans intermixed with another species of ancient hominins, the Denisovans, not once but twice in history, according to a study by Susan Browning, professor in the Department of Biostatistics. The discovery suggests that Denisovans lived widely across Asia and co-existed with our ancestors. Denisovans were unknown until 2010, when scientists found a bone fragment and molars in a cave in Siberia. DNA sequencing revealed a new genome different from that of other known hominins, such as Neanderthals. Scientists already know that the genomes of certain populations, such as Papuans, contain about 5 percent Denisovian ancestry. Using a new technique to assess segments of ancient DNA in the genomes of 5,600 living humans, UW researchers found that East Asians — especially Han Chinese, Chinese Dai and Japanese — also carry Denisovan DNA.

SUPERFUND PROJECTS PROMOTE ENVIRONMENTAL JUSTICE

Juvenile chinook salmon migrating through contaminated Puget Sound estuaries pick up drugs that may affect their survival and growth when it matters most. This is a discovery made by the UW Superfund Research Program (SRP), where researchers work to illuminate important connections between environmental pollutants and human health. The SRP, led by Evan Gallagher and housed in the Department of Environmental & Occupational Health Sciences, was one of the first national university Superfund research centers in the country when it was founded in 1986. Superfund sites are highly contaminated properties designated for cleanup by the U.S. Environmental Protection Agency. Among the SRP’s other projects is a study led by Professor Zhengui Xia exploring the molecular and cellular effects of cadmium on olfaction and cognition, as well as an ongoing study of arsenic in shallow urban lakes. Investigator James Gawel and his students recently discovered that Lake Killarney in south King County has levels of arsenic more than six times the recommended amount.
GUN STORAGE STUDY MAKES IMPACT IN POLICY SPHERE

A UW study found that 63 percent of firearm-owning households in Washington state do not store their firearms locked and unloaded. Seattle Mayor Jenny Durkan highlighted the research in a legislative proposal to the Seattle City Council to require safe storage of guns. The study, led by Erin Morgan, a doctoral student in the Department of Epidemiology, was funded by Grandmothers Against Gun Violence. The mayor’s statement also cited gun violence research conducted at the Harborview Injury Prevention and Research Center. The council unanimously passed the law in July and several other Washington cities followed suit. The measure is scheduled to take effect in January 2019, pending a legal challenge.

Image by Annie Pellicciotti

TESTING INTERVENTIONS TO IMPROVE HEALTH IN THE AMAZON

An interdisciplinary team of researchers, including Joseph Zunt, professor in the Departments of Neurology and Global Health, is working to improve the health and living conditions of a floating community in the Peruvian Amazon. From cleaning contaminated water to improving food security, the researchers are implementing innovative interventions to enhance both the built and natural environments in the village, called Claverito. Home to about 280 residents — mostly indigenous people — the village is located on the banks of Iquitos, the region’s capital. People live in makeshift houses on the water, which contains high levels of E. coli. The informal settlement is not recognized by the government and lacks water and sewer services. The research team will measure success based on the “before and after” health of village members.

Photo by Rebecca Neumann and Leann Andrews

HOMELESSNESS AS A PUBLIC HEALTH CRISIS

The number of unsheltered homeless people in King County is on the rise, creating a range of health risks. In 2017, 169 homeless people died. SPH Associate Professor Emeritus Bill Daniell, one of three health professionals on the King County Board of Health, led an effort to declare unsheltered homelessness a ‘public health crisis.’ The board agreed. It also voted to issue guidelines and recommendations to local jurisdictions to provide temporary mass shelter before bad weather arrives. Daniell argued that would allow for more efficient delivery of health care, social support and navigation resources. Several UW faculty and students testified in favor of the declaration. While not a cure for homelessness, they said, emergency shelter is a necessary interim step. SPH Dean Hilary Godwin told the board the guidelines would “send a powerful message for all of us to do better.”
Shortly after the recession in 2008, Dr. Gib Morrow began noticing full-page ads in Bellingham-area newspapers touting the economic benefits of building a coal-export facility at nearby Cherry Point. The plan would send an additional 18 daily train loads of coal rolling across Washington state and up the coast, where it would be shipped to Asia.

As an internal medicine doctor, Morrow worried that no one seemed to be talking about the potential health consequences of the proposal. “Something seemed a little bit wrong,” he says.

As other local physicians in Whatcom County, Washington, began expressing similar concerns, Morrow joined them in an effort to broaden the debate. Calling themselves Whatcom Docs, the group released a statement detailing the likely health and safety impacts of the project, including lung disease from exposure to diesel particulates and coal dust, and cognitive impairment of children exposed to more train noise, and emergency transport delays at railroad crossings. More than 300 doctors and nurses eventually signed on to the statement.

“I think people pay attention to things when their doctor takes a stand on an issue,” Morrow says. Through editorials, presentations and conversations with public officials, Whatcom Docs helped sway the debate about the coal terminal, and concerted opposition by the Lummi Nation finally killed the project in 2016.

That experience helped galvanize Morrow’s desire to pursue a master’s degree in public health after more than 25 years of practicing medicine. Now in his second year in the Online Executive MPH program at the UW School of Public Health, Morrow is excited to relaunch his career with a new focus on tackling systemic issues that perpetuate social and health inequities. “The health care system is a fundamental way of reducing inequity in our society,” Morrow says. “And it is very much underutilized in that capacity.”

For Morrow, lessons about the interplay between health, public policy and social inequities started early.

He was born to American parents in Japan, where his endocrinologist father was studying the long-term effects of the atomic bomb on the citizens of Hiroshima. Later, growing up in Detroit through the riots of the late 1960s, conversations about racism and inequality were common at the family dinner table, infused by the perspective of his historian mother. Concern for social justice “is kind of in my blood,” Morrow says.

That concern has informed a career spanning continents and cultures. During his fourth year as a medical student at Duke University, Morrow worked at a public hospital in Zimbabwe and for the Indian Health Service in Alaska. He went on to practice medicine on the Navajo Nation in New Mexico for three years. Later, as the internal medicine department chair for the former Saint Joseph’s hospital in Bellingham, he helped start a hospitalist service to care for uninsured patients.
When Morrow began feeling “burned out and disillusioned,” a sabbatical with New Zealand’s national health service reinvigorated his passion for medicine. “I had a bit of an epiphany about the fact that the practice of medicine is really an amazing job even with all the unnecessary complexities that we have created in our American health care system.”

Morrow says that after returning to his job with Peach Health Medical Group, where he still sees patients today, “It gradually dawned on me that there’s more to life than seeing 20 patients a day and measuring your success by how much revenue you generate each month.”

With both of his daughters leaving home for work and college, Morrow was looking for a new intellectual and professional challenge. He’s found that in the Online Executive MPH program, geared toward professionals like himself. Through distance learning and six onsite sessions with what he calls a “phenomenal group of really impressive” students and faculty, Morrow has already been learning and applying skills in leadership, epidemiology and health program design and evaluation.

For the next chapter of his career, Morrow hopes to apply these skills to a health officer or director position at a public health agency or nonprofit. His ideal role, he says, would include improving affiliations between the health care system, social services and public health organizations.

“Having Gib come into public health, I couldn’t be happier about that,” says Dr. Frank James, clinical assistant professor of health services in the School of Public Health and one of the leaders of Whatcom Docs. A smart, dedicated doctor like Morrow, armed with strong public health skills, can save many lives, James says.

“This,” says James, “is a man who is trying to make a much bigger impact on the world than just what you can do seeing one patient at a time.”
Construction began this spring on the new UW Population Health Facility

Scheduled to open in 2020, the new building will house much of the School of Public Health, the Institute for Health Metrics and Evaluation, as well as the UW’s Population Health Initiative, a 25-year effort to advance the health of people around the world. The 290,000-square-foot building will stand at the western entrance to campus at the southeast corner of 15th Avenue NE and NE Grant Place. It was made possible with a transformative $210 million gift from the Bill & Melinda Gates Foundation, as well as $15 million in earmarked funding from the state Legislature.
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