

University at Buffalo

# Health Impact

From the University at Buffalo School of Public Health and Health Professions

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IPE

UB  
Interprofessional  
Education Elevates  
Collaboration  
p6



## FROM THE DEAN

I can't think of a better way to begin 2020 than by noting the way the past few years have laid the foundation for the ongoing growth of our School of Public Health and Health Professions.

For instance, one of the articles you'll read in this issue of Health Impact highlights the remarkable success of the Undergraduate Public Health program (see page 4). I recall that, as we considered the addition of this new program in 2015, we knew several things would contribute to its success:

- Public health is a burgeoning field for reasons we all recognize.
- When prospective students learn what public health is, their interest in it grows.
- The educational rigor and quality of the curriculum of the new program would equal that of our graduate programs.

What we didn't know then was just how popular this program would be. Today, hundreds of undergraduates at the University at Buffalo have chosen public health as a major or minor course of study, with the first crop of graduates moving up this past May.



That is indeed exciting! Happily, because the architects of the program planned so carefully, we're managing this growth without sacrificing the rigor of the education students are receiving.

Truly, "careful" and "intentional" are the key characteristics of the overall growth that we've seen at SPHHP during the past few years. With our strategic plan as a guiding document, our school has expanded and added programs not only in public health but in the health professions as well. We have brought on first-rate new faculty, increased interprofessional education activities (see page 6) and welcomed an ever-larger and more diverse student body—all in the service of, ultimately, improving the health of people and populations.

Welcome to 2020. I wish you success and good health.

**Jean Wactawski-Wende, PhD**

Dean, UB School of Public Health and Health Professions  
SUNY Distinguished Professor

### ON THE COVER

(bottom row, left to right) Jessica Kruger, Nicole Klem and Jan Tona; and (top row, left to right) Nicholas Fusco, Ryan Krzyzanowicz, Patricia Ohtake, Kim Krytrus and Catherine Mann. Missing from the photo: Donald Antonson, Diane Elze, Amy Gische Lyons, Lisa Jane Jacobsen, Isok Kim, Kirk Personius and Lawrence Zielinski



## Global Health Flourishes at SPHHP

**A DECADE AGO**, researchers in global health proposed a definition of the relatively new discipline: "Global health is an area for study, research and practice that places a priority on improving health and achieving equity in health for all people worldwide." ("Towards a common definition of global health," *TheLancet.com*, 2009)

That definition perfectly expresses the work of the Office of Global Health Initiatives (OGHI) in the School of Public Health and Health Professions. Issues prompting OGHI's creation mirror those that brought the practice of global health to prominence: Environmental conditions, global obesity, tuberculosis, poverty—all increasingly call for public-health approaches that take a global perspective.

"Public health is global health," said OGHI Director Lina Mu, MD.

A longtime interest in global health issues compelled Clinical Professor Arthur Goshin, MD '70, BS '66, to found OGHI. In 2011 he created the office to support a group of public health graduate students who had formed a collaboration around global health.

"OGHI's role," said Mu is to "identify, engage in and advance innovative and



LINA MU,  
OGI DIRECTOR

OGI projects span the globe.

sustainable solutions to significant global health problems and develop international research and learning collaborations.”

Today, OGIH arranges activities to promote global health research among faculty. Subjects for their research, numerous collaborations with partners like UB’s School of Architecture and Planning and international outreach include environmental exposure, nutrition in low-income countries, lifestyles and population health, child development and health, and more.

According to SPHHP Dean Jean Wactawski-Wende, PhD, “Global health

research allows our faculty and students to explore health outcomes and exposures from different perspectives and cultures.”

OGI also sponsors awareness-raising events including the annual Refugee Health Summit; a study abroad program; Global Health Day symposium; and the annual Richard V. Lee Lecture on Global Health.

As well, as befits a global health effort, OGIH supports several graduate students each year in their global health field experience.

Case in point: Jason Niu, MD, MS, a

graduate student in epidemiology. He’s working on a thesis project that tries to understand the role of air-pollution exposure and telomere biology in the development of cardiovascular diseases in later life. Telomeres are structures found at the ends of chromosomes, and many studies in adults have found that telomeres are shorter in people who die prematurely or suffer from aging-related diseases. The first part of Niu’s project is based on OGIH-funded research led by Mu, Niu’s primary advisor. Niu helped conduct a pilot cohort study that recruited 200 pregnant women in their early pregnancy from Beijing, China, to examine how air pollution exposure in the mother’s womb may affect the newborn’s telomere length.

Tellingly, Niu’s work has merited him a prestigious one-year predoctoral fellowship from the American Heart Association to continue his work on early-life exposures and how they affect later health.

“We hope to find out if intrauterine exposure to heavier air pollution could shorten the newborn’s telomere length at birth,” Niu explained. “Findings are promising to provide new clues to prompt population health.”

## ➔ New Faculty at Work on a Global Stage



Epidemiology and Environmental Health (EEH) Associate Professor **Tia Palermo, PhD**, looks at how social programs that address poverty and vulnerability can improve population health.

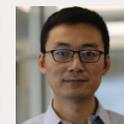
“Poverty is a key driver of poor health outcomes and limits access to services, exacerbating health inequalities,” Palermo said. Research can help us better understand how social policies can be developed and improved to reduce inequities in inputs to health (including education, nutrition, and information) and access to services.” She recently completed an impact evaluation—through three waves of quantitative and qualitative interviews with over 2,000 adolescents, household heads, 130 community leaders and 100 health facilities—of a Tanzanian government social-protection

program that offered cash payments to households combined with livelihood- and life-skills training to improve the lives of youth and facilitate safe and healthy transitions to adulthood. (<https://unc.live/2JuzZX6>)



EEH Assistant Professor **Laura E. Smith, PhD**, is a nutritional epidemiologist whose research focuses on measurement of dietary behaviors and assessment of the determinants and health effects of mycotoxin exposure on mothers and children. She continues her research at the Zvitambo Institute for Maternal and Child Health Research, Meyrick Park, Harare, Zimbabwe. Smith is conducting research in the context of the SHINE (Sanitation, Hygiene, Infant Nutrition Efficacy Project) trial in Zimbabwe, which is investigating the independent and combined effects of

improved infant and young-child feeding, and/or improved water, sanitation and hygiene on stunting and anemia. As part of the SHINE trial, she is leading the work investigating the effect of mycotoxin exposure on adverse birth outcomes and child stunting.



EEH Assistant Professor **Meng Wang, PhD**, focuses on advanced exposure modeling for air pollution and understanding the effects of air pollution on respiratory and cardiovascular disease. “Exposure to air pollution is ubiquitous,” he explains, “and typically beyond the control of the individual. The resulting health burden for the population can be very high—among the top five risk factors for deaths in the world—especially in susceptible populations.” His recent work has looked at the issue in China and several large U.S. cities.

# Undergraduate Public Health Program Grows—and Quickly

**WHEN THE SCHOOL OF PUBLIC HEALTH AND HEALTH PROFESSIONS** added an undergraduate degree in public health in 2016, it did so with care—building the curriculum deliberately, recruiting faculty strategically. All of that planning has paid off in a big way: the new program now enrolls an amazing 300+ students pursuing a BS in public health as their major and pursuing public health as their minor, and graduated its first class last May.

“This is a rapidly growing and successful program,” says Assistant Professor Sarahmona Przybyla, assistant dean and director of Undergraduate Public Health Programs. The rollout of the new curriculum was “very intentional. Also, the faculty are fantastic. We were thoughtful about recruiting and hiring individuals with enthusiasm for teaching, for teaching undergraduate students and for teaching undergraduate public health.” The program now has five full-time faculty, with plans to hire more soon.



Shauna Zorich, MD, MPH, clinical assistant professor in the Department of Epidemiology and Environmental Health teaches a number of courses in the program. In fact, she recently developed a program elective on the science of vaccination, vaccine-preventable illnesses and controversies surrounding vaccination.

“The faculty who teach our PUB courses are committed to student-centered learning, active learning and experiential learning,” Zorich says. “Our students are not just sitting in lecture halls passively; they are being actively engaged in a variety of ways, and this really enhances the experiences they are having in class.”

Another faculty member, Jessica Kruger, PhD, clinical assistant professor of the Department of Community Health and Health Behavior, recently won the Milton Plesur Excellence in Teaching Award from the undergraduate UB Student Association in recognition of her commitment



PUB101 proves a popular course with undergraduates

to students and the quality of their teaching. Known for innovative teaching methods, she had students in one of her undergraduate public health courses author their own textbook as an open educational resource and use it as reading material for the course.

The program’s first cohort of graduates have chosen various post-commencement paths. Four have entered SPHHP’s Master of Public Health program. Others have joined the workforce, and some are gaining experience before they return to study.

Christian Rossman ’19 reports that, just one month after graduation, “I was able to get a job in Buffalo, in my field. I work at Evergreen Health as a Transportation Coordinator, working with patients who have HIV/AIDS on getting access to transportation to medical and non-medical appointments.”

Juliana Dececca ’19 came back to UB in the Individualized Master of Public Health program. “I’m interested in maternal health and want to mold my own path,” she explains. Both alumni had started out in other health-related majors when they first arrived at UB but were drawn to public health when they discovered its emphasis on preventing illness.

Says Zorich, “I get the sense that the students really enjoy what they are learning, and many have come to love the field of public health.”

That attitude tracks with what Przybyla understands about SPHHP’s students in the BS in public health major. “Knowing who our students are and what they represent, UB is the place to be,” she says.

# Famed Researcher's Final Paper Points to Legacy

**THE FINAL PAPER** authored by renowned oral researcher the late **Robert Genco, PhD**, reveals his career-long focus. The work reflects a study that “integrated clinical periodontology and basic-science laboratory techniques within an epidemiological-study approach to understand risk factors for disease in the community,” said paper co-author Michael LaMonte, PhD, MPH,

SPHHP research professor of epidemiology.

The study looked at the composition and diversity of bacteria living in the mouth below the gum line and their relation to clinical periodontal disease measures in an under-studied population: postmenopausal women aged 53 to 81. Periodontal disease is associated with chronic diseases of aging

like heart disease and diabetes and is increasing in this population in general. It can also lead to tooth loss, which can seriously degrade quality of life. In fact, about 1 in 4 adults 60 and older have no natural teeth left.



DR. ROBERT GENCO

The study identified more than 250 oral bacteria. Interestingly, some of the bacteria identified were already well known with respect to periodontal disease status, but a number of the bacteria characterizing healthy and diseased mouths are far less understood.

Genco, a SUNY Distinguished Professor, and SPHHP Dean and SUNY Distinguished Professor Jean Wactawski-Wende, PhD, led the research team, which included experts in various fields—biochemistry, biostatistics, microbiology, genetics and more—who explored a complex problem.

“Bob was well known for his collaborative approach to research,” said Wactawski-Wende. “His success is a tribute to his many years of remarkable work with experts in a range of disciplines.”

Researchers on this study looked at the type and amount of bacteria and tried to understand the bacteria’s functions. As well, they examined strains of certain bacteria and found that, for a given bacterium, some of its strains (e.g., subtypes) are more likely to be culprits in disease.

“This is one of the first studies to show variation in bacteria strains in relation to periodontal disease severity in older adults, and that was Bob’s idea,” said LaMonte.

The decisive payoff of identifying the key bacteria involved in periodontal disease is in turn identifying ways to introduce good bacteria and kill off bad bacteria in the mouth. That, according to LaMonte “could be a population intervention that could affect every age and have a huge impact on public health.”

Read the paper at <https://bit.ly/2KNbuVI>

## Homish Is New CHHB Chair

**Gregory G. Homish, PhD**, a psychiatric epidemiologist with expertise in substance use and mental health, has been named chair of SPHHP’s Department of Community Health and Health Behavior following a national search. He had been serving as the department’s interim chair since February 2019.

Homish is a principal investigator (along with Jacobs School of Medicine and Biomedical Sciences Professor Linda Kahn) on a grant from the U.S. Centers for Disease Control and Prevention for a study that will evaluate the Opioid Intervention Court strategy and compare in various ways the outcomes of OIC participants with a group of participants enrolled in traditional drug treatment court. Last year, he received a \$2.7 million grant from the

National Institutes of Health to continue his study examining the health of soldiers who have never deployed and those who are separating from the military.

“I couldn’t be more delighted that Dr. Homish has chosen our school as his professional home,” said Dean Jean Wactawski-Wende, PhD. “His work dovetails perfectly with our goal of improving the health of communities and populations.”

Homish also studies disaster response in rural areas and the effect of emergency response on first responders, and is a member of the Scientific/Technical Advisory Committee of the World Trade Center Health Program.



GREGORY G. HOMISH



## UB Interprofessional Education Paves Future of Better Health

**R**eady for discharge from the emergency department after treatment for an overdose: Ginny, a 29-year-old mother of three with chronic pain, a history of domestic violence, depression, longstanding narcotics use, and other serious issues affecting her well being.

Ginny is not, in fact, a real person, but this past November, more than 900 University at Buffalo students collaborated to figure out the best way to care for her and help prevent another visit to the ED. The students, participants in UB's semi-annual Interprofessional Forum, broke up into small groups to confer on Ginny's case. Each group—made up of public health, medical, social work, nursing, dental, rehabilitation science and other health-sciences

students—added their discipline's perspective to create a comprehensive, interprofessional plan to care for their fictional patient.

In their efforts, they epitomized the aim of interprofessional education at the university: to develop practitioners who know how to collaborate with other professions to bring more informed, better care to people and communities.

The World Health Organization says that interprofessional education “occurs when two or more professions (students, residents and health workers) learn with, about and from each other to enable effective collaboration and improve health outcomes.” The ultimate goal of IPE at UB is to improve the health of people and communities by building a more collaborative and more effective healthcare system.

The value of interprofessional teams, according to experts at the National Academy of Medicine, is that they improve the quality of patient care and patient outcomes, lower healthcare costs, decrease patients' length of stays in

Program Director for Athletic Training Ryan Krzyzanowicz facilitates discussion among multi-disciplinary students during last fall's Interprofessional Forum.



hospitals and rehabilitation facilities and reduce medical errors. With recognition growing in the United States that interprofessional teams are good for patients and communities, the country's healthcare systems are looking for professionals trained to provide team-based care. That's driving the growing integration of IPE into health professions education nationwide.

At UB, as at many universities, "The education of health profession students was siloed," says Assistant Vice President for Interprofessional Education Patricia Ohtake, PT, PhD. Today, however, the university's IPE program is "breaking down those silos and preparing our health professions graduates to be productive team members."

### A Leader Emerges

SPHHP was one of the founding schools that created (2011), piloted (2012) and launched UB's IPE initiative for all health professions students (2016). Ohtake, who is also an associate professor of rehabilitation science, is one of the effort's original leaders. Occupational Therapy and Physical Therapy, along with Medicine, Nursing, Social Work, Pharmacy, and Dental Medicine, were the first programs to come on board. Public health students took part in IPE activities from the start, and in 2018, IPE became a required part of the Master of Public Health program curriculum. "Public health typically works at a population level, yet understanding

what's happening with individual patient care and how other professions work together is essential to promote a healthier nation," explains Ohtake.

UB was one of the first campuses in the State University of New York system to fully embrace the IPE concept. As the movement gained traction, SUNY created the Interprofessional Education Consortium, which Ohtake co-chairs.

"We're the only state system we're aware of that has a consortium," she notes. The members of the consortium aim to cultivate a collaborative community that elevates all SUNY health-professions education programs by injecting pioneering IPE strategies and policies into their curriculum.

Interestingly, the vision of UB's program—"to be recognized as a national leader in the development of caring healthcare professionals who transform healthcare delivery through high-quality interprofessional collaborative practice"—is already a reality: The Association of Schools Advancing Health Professions (ASAHP) named the university's IPE program a "Program of Merit." For details of the award, see the sidebar at right.

### The Power of Badges

The IPE program brings together 3,000 students majoring in athletic training, counseling psychology, dental medicine, dietetics, law, management, medicine, nursing, occupational therapy, pharmacy,

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## UB'S IPE PROGRAM HAS MERIT

Late last year, the Association of Schools Advancing Health Professions (ASAHP) named UB's Interprofessional Education program a "Program of Merit" for the ASAHP Award for Institutional Excellence and Innovation in Interprofessional Education and Collaborative Health Care.

Only three IPE programs across the country received a Program of Merit award. The other recipients were University of Texas Southwestern Medical Center and the University of Kansas Medical Center.

"We are proud of Dr. Patricia Ohtake, who leads a team of exceptional and innovative educators," says Michael Cain, UB's vice president for health sciences and dean of the Jacobs School of Medicine and Biomedical Sciences. "This team has worked to create a comprehensive and exciting program."



**“The IPE curriculum has given me the opportunity to work with students from other professions to solve problems that we will likely face in the workplace.”**

**HALLE SAUER, PUBLIC HEALTH GRADUATE STUDENT**

physical therapy, public health and social work. Each program infuses IPE directly into its existing curricula through interprofessional educational

experiences like simulated patient interactions, community-based service and clinical practice.

The Interprofessional Collaborative Practice (IPCP) Micro-credential program makes up today’s IPE curriculum. Students apply their skills in teams and receive micro-credentials in the form of “digital badges.”

“The microcredential program is the strategy we’ve chosen to develop graduates who have the knowledge and skills to work together,” says Ohtake. “It’s one of the first in the country, and we’ve already awarded 400 digital badges.” Though the IPE Office continues to refine

and grow the curriculum, the badges students currently can receive are:

- **IPCP Foundations**—Students learn about the importance of IPCP and the roles and responsibilities of other healthcare providers. Students participate in online learning activities and interprofessional forums.
- **IPCP Communication and Teamwork**—During simulated experiences, students engage with patients and/or community members while working as an interprofessional team.
- **IPCP Healthcare Practice**—Students take part in interprofessional activities in hospitals, clinics and community organizations.

The power of offering the IPE program as a micro-credential is that it “demonstrates to employers that students have verified skills in collaborative practice,” says Ohtake.

## IPE ON THE GROUND

THESE PAST, PRESENT AND FUTURE IPE EXPERIENCES DEMONSTRATE EXACTLY HOW IPE WORKS AT UB:

① **School of Pharmacy Clinical Assistant Professor Robert Wahler, PharmD, guided 16 pharmacy and physical therapy students in a program in 2016 to learn a holistic approach to preventing falls. The goal? To collaboratively assess a community member’s fall risk while learning to work together.**

To learn more about each other’s professions and the importance of collaboration, students assessed patients through the tools of their particular discipline. Pharmacy students watched as physical therapy students performed a balance and strength test on patients, while physical therapy students observed pharmacy students evaluate which medications patients might be taking, which can also be a factor in risk for a fall.



Students discussed their findings with each other, then gave patients recommendations, such as increasing or continuing their level of activity, that could lower their risk for a fall.

At program’s end, students took an assessment to find out if their experience had, indeed, made an impact on their education. The higher the score, the more positive the student felt the experience was. The average score after the program was higher for all students, with a notable increase in their understanding of the roles and responsibilities of fellow professions.

In addition to the value of working collaboratively, students gained experience in presenting the findings of their work at the American Society of Consulting Pharmacists Conference.

② **The nearly 20-year-old Lighthouse is a free drop-in clinic that provides health care to uninsured people on Buffalo’s East Side. There, UB students in medicine, dietetics, social work, dental medicine, law, and public health address unmet health needs in this medically underserved community. The clinic offers services including physicals, sick visits, nutrition counseling, dental exams, and more.**

Taking a holistic approach, students work as an interprofessional team that includes the local health department. Run by medical students, master’s level social work students and undergraduate public health students, the clinic is a collaborative environment.

## Progress in Evidence

Students are definitely seeing the advantages of IPE. Halle Sauer, a third-year student in SPHHP's Doctor of Physical Therapy and Master of Public Health Dual Degree program, agrees that UB's IPE curriculum is preparing her to collaborate.

"IPE has helped me to better understand my scope of practice, the scope of practice of other professions and how they fit together to best serve patients," Sauer says. "The IPE curriculum has given me the opportunity to work with students from other professions to solve problems that we will likely face in the workplace."

In fact, the most recent Buffalo Marathon was a site of UB student collaboration that actually saved a life. When a runner collapsed from exertional heat illness just 100 feet from the finish line, Tyler Farnell, a master's student in athletic training at UB

who was volunteering for the race, knew exactly what to do.

"IPE coursework and forums at UB played a significant role in my response to the runner that collapsed during the Buffalo Marathon," Farnell says. "The morning of the marathon, all of the providers discussed their roles and skill sets that they possessed to prepare for any emergency situations, and to ensure that our patients received the best care possible. When the runner collapsed, I understood my responsibilities clearly and seized the unique opportunity to serve my role in that moment."

## Leading by Example

Naturally, a program that transcends professions also needs leadership that does the same. IPE's Leadership Team oversees the program's ongoing development and comprises faculty committed to the ideals of IPE.

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Public health students teach medical students about insurance and food insecurity, then the tables turn, and they all learn from social work students the best ways to talk to people dealing with issues like depression or homelessness.

Accolades for the clinic include a recent honorable mention in the Excellence in Interprofessional Education Collaboration Award program from the United States Public Health Service/ Interprofessional Education Collaborative. IPE Leadership Team members Jessica Kruger and Danielle Pelfrey Duryea and co-collaborator Todd Sage, clinical assistant professor in the School of Social Work, received the award for their project "Lighthouse Clinic: An Interprofessional Initiative to Address Prominent Health Disparities in Western New York."

③ **The benefits of a healthy diet have plenty of proof. Soon, UB medical students can learn from the experts how better to encourage their patients' healthy cooking and eating.**

Next month, UB will pilot a course in culinary medicine, in which medical students literally cook side-by-side with dietetic internship students completing a graduate program to become registered

dietitian nutritionists. In this way, according to SPHHP's Dietetic Internship Program Director Nicole Klem, the medical students will gain core nutrition principles and basic culinary skills, and increase their "culinary confidence."

Though the program aims to improve patient health, it also gives medical students a better picture of what dietitians and nutritionists do and vice versa.

Says Klem, "They can then refer to each other knowledgeably."

Nutrition-informed strategies that medical students will learn about include ways to increase home cooking and to improve personal eating habits.

Ultimately, Klem notes, she envisions the program being rolled out to students in any health or health-related program. Indeed, a national movement in the nutrition and dietetics field is encouraging multiple professions to cook together. The goal is not to train other professions' students to be dietitians but to teach them how to promote good health through nutrition.



# UNIVERSITY AT BUFFALO IPE LEADERSHIP TEAM

## Health Sciences Library



**Amy Gische Lyons, MLS, EMBA,** associate librarian and liaison to the School of Nursing

## Jacobs School of Medicine and Biomedical Sciences



**Lisa Jane Jacobsen, MD, MPH, MSHPEd,** associate dean for medical curriculum and associate professor

## School of Dental Medicine



**Donald Antonson, DDS, MEd,** associate dean for academic affairs and professor, Department of Restorative Dentistry

## School of Management



**Lawrence Zielinski, MBA,** executive in residence, health care administration

## School of Nursing



**Catherine Mann, EdD, RN, CNS, CNE,** assistant dean for the undergraduate studies and clinical associate professor

## School of Pharmacy and Pharmaceutical Sciences



**Nicholas Fusco, PharmD,** clinical associate professor

## School of Public Health and Health Professions



**Nicole Klem, MS, RDN, CDN,** Dietetic Internship program director, Department of Exercise and Nutrition Sciences



**Jessica Kruger, PhD, CHES,** clinical assistant professor, Department of Community Health and Health Behavior



**Kim Krytus, MSW, MPH, CPH,** assistant dean and director of graduate public health programs



**Ryan Krzyzanowicz, DAT, LAT, ATC,** director, athletic training education and clinical associate professor, Department of Exercise and Nutrition Sciences



**Patricia Ohtake, PT, PhD,** assistant vice president for interprofessional education and associate professor, Department of Rehabilitation Science



**Kirk Personius, PT, PhD,** clinical assistant professor, Department of Rehabilitation Science



**Janice Tona, PhD, OTR,** Occupational Therapy program director and clinical associate professor, Department of Rehabilitation Science

## School of Social Work



**Diane Elze, PhD, MSSA,** associate professor



**Isok Kim,** associate professor and director, Master of Social Work program

**“We’re sharing what we’re learning so we can facilitate the growth of IPE nationally.”**

**PATRICIA OHTAKE**



“The team is where the meat of work gets done,” Ohtake explains. “Every profession has voice at the table, no matter how many students the associated program has.”

IPE Leadership Team members develop ways to bring students together. They also ensure that their programs include criteria related to collaborative practice and that students’ learning experiences meet or exceed each program’s interprofessional collaborative practice accreditation requirements. For instance, the Master of Public Health program requires its students to be evaluated by a faculty member who participates in IPE, so the IPE Leadership Committee extended that requirement to every program.

The IPE program features a well-developed academic component, and the Leadership Team is now growing the clinical side of the equation. “We’re putting incredibly high value on developing robust interprofessional clinical experiences,” says Ohtake, “and we’re scaling that aspect up for almost 1000 students per year.”

In addition to the Leadership Team, faculty IPE involvement includes sharing their understanding of IPE and UB’s experience with it through their scholarly pursuits. In a bit more than three years, IPE faculty have received five grants, published 10 manuscripts, and made more than 30 presentations at meetings like the American Public Health Association Conference, the National Center for Interprofessional Collaborations and Education Conference, the Nexus Summit of the National Center for Interprofessional Practice and Education, and Collaborating Across Borders, a Canada-United States conference on interprofessional education and practice.

“We’re sharing what we’re learning so we can facilitate the growth of IPE nationally,” Ohtake says.

### **The Goal Drives Everything**

IPE at UB strives for one result: graduating collaborative health professionals who know how to work—and realize the value of working—in teams. The UB students educated within the IPE curriculum will emerge as collaborative health professionals capable of improving many aspects of health care. They bring a culture of teamwork to health systems. They help reduce costs by avoiding patient care problems like mistakes in diagnosis. They recognize the disparate aspects of patient health and well-being for a better understanding of their patients’ needs. And they have a more meaningful impact on improving health at the population level.

“Public health is inherently collaborative—it looks at how things work together in order to affect health outcomes at a population level,” said IPE Leadership Team member Kim Krytus. “But we can’t do that in isolation; we have to work with all the other professions for the system as a whole to have an impact.”

In turn, the professionals who collaborate also reap benefits: “Collaboration and teamwork are shown to be preventive for burnout, which is a big issue in healthcare,” explains Ohtake.

Perhaps most important, when patients receive health care that they’re satisfied with, she notes, “they’re happier, and they do better.” Simply put, collaborative health care professionals improve the health of people and communities. Says Ohtake, the collaboration that emerges from IPE is “good for health systems, good for providers, and good for patient and population outcomes.”



## Experts Explore Questions at Annual Lectures



Marc Weisskopf offers his view on early-life exposure during the Richard V. Lee Lecture on Global Health.

### What's Behind the Rise in Developmental Disabilities Like Autism and ADHD?

**Marc Weisskopf**, the most recent speaker in the annual Richard V. Lee Lecture in Global Health, is convinced that exposures to pollution, chemicals and more early in life—even in the womb—are likely key factors. Weisskopf, PhD, ScD, Cecil K. and Philip Drinker Professor of Environmental Epidemiology and Physiology in Harvard TH Chan School of Public said he is “exploring the possibility that the growth of these disabilities is real” and not simply over diagnosis.

During his talk, Weisskopf discussed his interest in two particular ways environmental exposure can affect neurological processes vital to proper brain function: “critical windows” of brain development when the brain is forming pathways and processes necessary to optimal function; and transgenerational gene mutations caused by exposure that can be passed on for generations.

“With a girl fetus,” Weisskopf explained, “the eggs of potential children are in utero in the fetus’s body. That means the grandmother’s exposure might have an influence.”

No matter what the cause with autism, for instance, he believes that “Whatever is going on is happening very, very early.”

See the lecture at <http://bit.ly/LeeLecture2019>

2

**Can Exercise Be Medicine for Cancer Survivors?**

**Kathryn Schmitz** calls them “exercise snacks”—quick, easy bouts of exercise demonstrating the possibility of squeezing in physical activity, regardless of your location, footwear, schedule or ability.

Before diving into her talk as SPHHP’s 31st J. Warren Perry Lecture speaker, Schmitz led her audience in 10 squats. Schmitz gave them plenty more to snack on as she discussed why “exercise is medicine in oncology,” and why more needs to be done to change the way clinicians and other health professionals view physical activity for people who have been diagnosed with cancer and those in remission.

Schmitz, a professor of public health sciences at Pennsylvania State University’s College of Medicine, said that her professional mission is to answer the question of how to increase the awareness and effectiveness of exercise oncology.

“The body is meant to be in motion and will do better—we will do better—if we are in motion, even if we are very sick with cancer,” she said.

Watch the lecture at <http://bit.ly/PerryLecture2019>



**Above:** Kathryn Schmitz (right) chatting with Rehabilitation Science students. **Right:** Schmitz (center), SPHHP Associate Dean for Research R. Lorraine Collins (left) and SPHHP Dean Jean Wactawski-Wende.



3

**What’s the Future of Stroke Rehabilitation?**

Stroke rehabilitation today is “like nothing else in neurorehab.” After laying down that gauntlet, this year’s Glen E. Gresham Lecturer, **Robert Teasell, MD, FRCPC**, outlined the current and future states of an area of health care that touches thousands of patients and their families.

Teasell, professor in the Department of Physical Medicine and Rehabilitation at Western University, Canada, noted proliferating studies of stroke rehabilitation offer people who deal with stroke patients a growing body of evidence for effective treatment options. Importantly, a worldwide movement toward a consistent standard of care in treating stroke patients has transformed the results of stroke rehabilitation.

“It sounds mundane, but it’s a pretty big deal,” Teasell emphasized. The future of stroke rehabilitation, he said, is related to individualized or personalized care. Emerging therapies include addressing more of the cognitive aspects of rehabilitation and focusing on a post-stroke period when the brain is “priming” itself to heal.

“This is the only way to move rehabilitation forward beyond standardization,” Teasell concluded.

See the full lecture at <http://bit.ly/10thGreshamLecture2019>



**Left, top:** The annual Glen E. Gresham Lecture focused on stroke rehab. **Left, bottom:** Sue Ann Sisto, chair of SPHHP’s Department of Rehabilitation Science, and Gresham lecturer Robert Teasell.

# When Teaching Means Service: Kimberley Persons

## SERVICE PERMEATES KIMBERLEY PERSONS' PROFESSIONAL LIFE, and it takes her all over the world.

A clinical assistant professor in the Department of Rehabilitation Science, Persons, DHS, OTR/L, has long had an affinity for international service learning. She characterizes it as a mutually beneficial relationship:

"Students have the opportunity to put their classroom skills into practice and apply their learning to real life. Those receiving the services benefit from interventions they may not otherwise be able to access and serve as an educator for the students," she said.



KIMBERLEY PERSONS

What makes service learning so particularly relevant for Persons is that she believes her field, occupational therapy, is essentially a service profession. She became an OT to "help people live their best life as independently as possible," she explained. For her, service learning connects naturally with occupational therapy education.

Persons came to SPHHP in 2011 after 10 years of experience working with adults with intellectual and developmental disabilities in home- and community-based settings. Her service-learning experiences began during her college years and simply kept going.

Her first trip took her to Ukraine. As a doctoral student and later a mentor, Persons volunteered for service there, going back several times over eight years. She traveled with therapists and students for two-week periods working in the community and people's homes. While she and her colleagues offered occupational therapy to many, they also promoted their profession in the developing country.

"We presented to local and regional governments, the military, hospitals, medical schools and the local media to share the goals of our profession." Ultimately, "through the efforts of many," said Persons, "Ukraine joined the World Federation of Occupational Therapists this year."

In 2011, she volunteered with the Special Olympics World Games in Greece. With a clinical background focused on adults with developmental disabilities, she "was excited about the opportunity to mentor occupational and physical therapy students in volunteering with this population." She also saw first-hand "the power of sports to bring people together to learn from and about each other."

Persons' most recent service-learning journey was to Haiti, where she began working with a New York-based organization, Helping Hands and Beyond, and a Haiti university to provide occupational and physical therapy training in a country that's severely lacking it.

"There are zero occupational therapists in Haiti and one or two physical therapists...the PT is actually working as a massage therapist because he can make more money," she said.

The goal for the trip was to build relationships and explore options for students. Persons and her colleagues established a relationship with a well-established clinic where they will help meet the community's physical therapy needs and develop a sustainable program.

"We also visited the first physical and occupational therapy educational program in the country," she adds, "and we plan to partner with them during future trips."

To that end, Persons is working with UB's Office of International Education to schedule a possible service learning trip over spring break. "Helping Hands and Beyond opened its rehabilitation clinic in July," Persons said. "Their next endeavor is to open an orphanage for girls." If past experience is a predictor of what the future holds, Persons will be certain her students (and she) are on the front lines of those efforts.

Kimberley Persons in Haiti with a tiny patient of the Helping Hands and Beyond clinic.



## Exploring the Motivators of Ingestion

### ASSOCIATE PROFESSOR JENNIFER TEMPLE,

PhD, is no stranger to working across disciplines. A trained neuroscientist, her multi-disciplinary bent is evident in her appointments in the departments of Community Health and Health Behavior and of Exercise and Nutrition Sciences. She recently wrapped up work with a psychology colleague studying saliva's role in taste and caffeine preference, funded by a UB award recognizing "projects that foster unique collaborations." She's also been active with researchers in various disciplines looking at diet selection and factors in

people's decisions about what they ingest, including food, drink, alcohol and drugs of abuse.

**"We're trying to understand what motivates people to eat unhealthy foods."**

**JENNIFER TEMPLE**

Now, Temple and those researchers are part of the recently launched Center for Ingestive Behavior Research (CIBR). Combining the expertise of scholars in SPHHP, the College of Arts and Sciences, Jacobs School of Medicine and Biomedical

Sciences, the School of Nursing and the Graduate School of Education, the center coordinates, promotes and fosters research in an area critical to maintaining proper health.

"We're doing great collaborative work," said Temple, who is on the center's steering committee. The creation of the center shows that "UB views the work as something worth investing in."

Labs studying questions related to ingestive behavior—from substance use to thirst to eating—have long operated at UB. CIBR's roots are in a 2015 new-faculty orientation meeting between the center's now associate directors, Jacobs School Assistant Professor Stephanie Anzman-Frasca, and Assistant Professor of Psychology Ann-Marie Torregrossa (Temple's co-investigator on the saliva study). They came up with idea of formalizing UB's collective work in ingestive behavior and formed the UB Ingestive Behavior community.

"We started out with an all-day workshop, with posters, local speakers, and activities around bringing people together to talk about our work," Temple says. The next



year's event featured outside speakers and was the impetus for regular group meetings.

"Now we have 18 investigators spread across seven departments," Temple added. Other SPHHP faculty involved in the center include Assistant Professor Elizabeth Mietlicki-Baase, PhD, Department of Exercise and Nutrition Sciences; Clinical Assistant Professor Katherine Belantekin, PhD, RD, Department of Exercise and Nutrition Sciences; and Assistant Professor Lucia Leone, PhD, Department of Community Health and Health Behavior.

Submitting proposals for a program-project grant (which would support a multidisciplinary, long-term research program like the center) and a post-doctoral training grant are among the group's priorities. Temple will be the principal investigator on the training grant. With the program project grant, all center researchers work on a specific problem.

"We're trying to understand what motivates people to eat unhealthy foods," said Temple. Motivation, she explains, "is defined in terms of weight change and obesity." Center researchers look at motivation and what regulates it. They also try to identify options to shift motivation away from unhealthy food to healthier food or other activities.

Temple believes that CIBR's key opportunity is to train young investigators in translational science, in which observations in labs, clinics and communities evolve into real-world interventions that improve the health of people and populations. Simply put, she concludes, "That's something that we do well instead of just talking about it."

Find out more: [buffalo.edu/cibr.html](http://buffalo.edu/cibr.html)

# Q&A:

## Zeinab Farhat Builds Foundation for Cancer Epidemiology Path

### How did you choose epidemiology as a discipline?

During my undergraduate natural science program at Fordham University, I was doing basic lab science. But I wanted to do research where I had interactions with the participants in person. I wanted to see my work carried out further and applied to humans.

While receiving my MPH from Long Island University, I had an internship with Dr. Paolo Boffetta at the Institute for Translational Epidemiology at Mount Sinai, where my research focused on the effects of race and ethnicity, and neighborhood on cancer incidence. Working in a community where health disparities continued to exist helped fuel my passion towards a career in epidemiology. I also began to appreciate how epidemiologists could further understand the drivers of diseases in populations and how we can bridge basic-science research and epidemiology to deal with health issues.



Zeinab Farhat studies the epidemiological roots of cancer.

## Why UB?

I decided on UB because I knew I wanted to focus on cancer research. The School of Public Health and Health Professions' strong connection to Roswell Park Comprehensive Cancer Center helped solidify my choice. Specifically, I liked the cancer epidemiology-focused track; I knew I could take classes at Roswell Park that would help me understand the biology of cancer. Once I saw that there was a multidisciplinary training program funded by the National Cancer Institute, I was immediately drawn to the opportunities that I could gain from being here.

## How has your work evolved at UB?

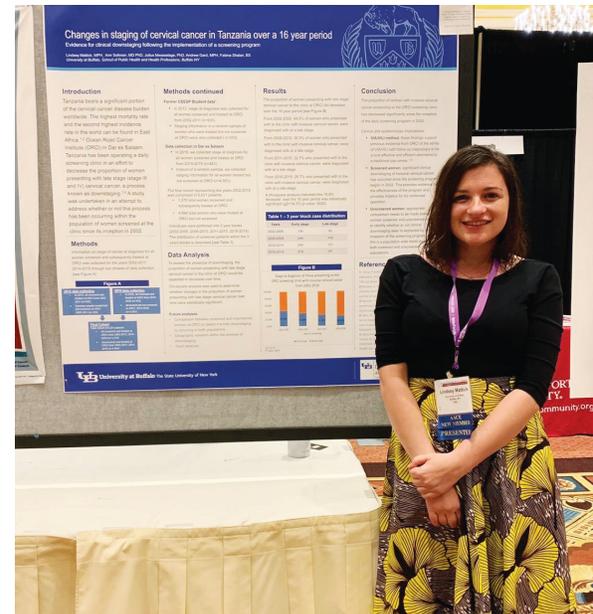
I started with core epidemiology classes, but my professors knew I wanted to focus on cancer, and I started working with [SPHHP's Office of Global Health Initiatives Director] Lina Mu. She was just beginning a Beijing-based birth cohort study on air pollution and pregnancy outcomes. I helped to write the study protocol and questionnaires. After I received the Global Health Initiative Award from the Office of Global Health Initiatives, I went to China in the summer of 2016 to implement the study, recruit participants and gain experience in primary data collection—all during my first year.

I've also been a trainee on an NCI T32 [National Cancer Institute National Research Service Award] grant, which has given me not only a solid foundation in epidemiological methods and analyses but also an integration of basic science and cancer biology courses. I have taken a variety of courses at Roswell Park Comprehensive Cancer Center including oncology for scientists and cancer pathology.

My collective experience in epidemiological research has led me to my current focus on dietary factors and antioxidant biomarkers for cancer, concentrating on dietary garlic intake, garlic supplement use, and cancer prevention for my dissertation studies. Courses that I took at Roswell Park along with my epidemiology courses helped me to develop my dissertation project, which surprisingly involves both lab and clinical research.

## What's next for you?

I should be graduating this May. I want to pursue a career as a cancer epidemiologist, and my UB degree will provide me with strong academic and research training in the field. I've been able to participate in projects with collaborators from different cities and countries, which has expanded my network and opened doors for a post-doc position in cancer epidemiology after I graduate.



## PhD Candidate Poster Wins People's Choice Award

A poster by **Lindsey Mattick**, Presidential Fellow, graduate research assistant and PhD candidate in the Department of Epidemiology and Environmental Health, won the "People's Choice Poster Award" at The 2019 International Cancer Education Conference (ICEC) in Salt Lake City last year. Mattick's poster, "Changes in staging of cervical cancer in Tanzania over a 16 year period," received the most votes from ICEC attendees after the conference's poster presentation sessions. ICEC is co-organized by the American Association for Cancer Education, the Cancer Patient Education Network and the European Association for Cancer Education. The fellowship for her work on the research project was supported by an R25 grant from the National Institutes of Health to the Cancer Epidemiology Education in Special Populations program at the CUNY School of Medicine.

## Where Statistics Has Taken Her: Cindy Walawander

**ASKED WHAT GUIDANCE** she would give to someone starting out in a career, **Cindy Walawander '86, MA '88**, said, "Find what you like to do and always go for it."

Tellingly, no one can say that Walawander doesn't follow her own advice. The year before she graduated from University at Buffalo with a master's degree in statistics, she met in a consulting lab the person who would become her partner in founding the groundbreaking drug-development strategy firm Cognigen. His background was in pharmacy, and they "found a way to complement their strengths and work together; which led to business opportunities and the start of a company," Walawander recalled.

Cognigen uses statistical modeling and simulations to choose and justify the doses selected for new medicines. When Walawander and her partner began the firm 32 years ago, no one did that kind of research. Recommended dosages were, in essence, hit or miss. Cognigen developed a quantitative way to determine if a dose will work in the general population. That's no small feat even now given the kinds of individualized, complex drugs being developed and complicated diseases patients face.

Cognigen looks at "many different populations," she said, "from elders to babies, and individualizes the dose to the population. The research helps get safer and more effective drugs to patients and streamlines the drug development process."

Walawander said that professors and colleagues as she pursued her master's degree in statistics were instrumental in shaping her career—and her life.

One professor "called me at home to convince me to pursue a statistics graduate degree at UB—a life changing call," she remembered. Other faculty were "always in the hallways answering questions and sharing their research ideas." Still another faculty member started the statistical consulting lab where Walawander met her business partner and established her entrepreneurial spirit.



"My fellow colleagues studied together and learned statistics from each other, but more importantly we were supportive of each other, learned each other's cultures, and we had fun," she added.

Walawander urges today's students to observe, ask questions, take risks, experience as much as they can during their program, and network with different types of people.

"You can go in so many directions with a statistical background," she said. "I started my career by talking with a pharmacist who needed statistical help, initially developing regression-type models that looked at the epidemiology of adverse drug events and then transitioned to modeling and simulation of doses of new medicines as the industry was changing. Over time I realized that I preferred the entrepreneurial and management role, but my statistics background helps me to this day."

Now, after 32 years with her firm, most recently as vice president of operations, Walawander is "thinking through life and starting to look at new opportunities." She gave Cognigen a year's notice, during which time she helped the company hire people to replace her. "The organization now has new opportunities opened as a result," she explained.

With experience in a number of different areas, she's looking for a place to "re-ignite my passion, hopefully to help people in the world. That's what we did at Cognigen, and I'd like to recreate that in another industry or other philanthropic endeavor. I have no idea what that might be," she said with a smile, "but I'm going to explore."

# Award Remembers Alumnus's Passion, Empathy

## **CARING, ALTRUISTIC, MOTIVATED, DEDICATED:**

**Brady Russell Gaulke, DPT '18**, was all of those and more. As a student, he chose physical therapy as his major so he "could make a difference in people's lives," said his father, Brian Gaulke. As a practicing physical therapist in Tennessee, he logged more community-service credits in just 10 months than any of his employer's more than 500 employees ever had.

Before he died in a tragic accident in May 2019, Brady had already mapped out a professional future that included practicing physical therapy with his brother, Dakota, a current student in SPHHP's DPT program.

His father, brother and mother, Heidi, want to support students like Brady with an award named in memory of their son and sibling. The Brady Gaulke Award offers financial support to DPT students for their last year of study. The criteria for the award reflect the

qualities that Brady brought to his studies and work, including strong academic performance, commitment to community service and a desire to succeed at the highest professional level.

"We want to insure that people get the support for what their vision of physical therapy is," Brian explained.

"All of us in the Department of Rehabilitation Science mourn the Gaulke family's loss," said Associate Professor Kirk Personius, PT, PhD, director of the Doctor of Physical Therapy program. "We're honored, however, that they have chosen to memorialize Brady in such a special way. Their award will encourage the progress of other Physical Therapy program students who exemplify Brady's strengths."

"We really appreciate the support that UB has given us. Anyone who got to know Brady became a lifelong friend," said Brian Gaulke. "He was a very special young man."



BRADY RUSSELL GAULKE

"We really appreciate the support that UB has given us. Anyone who got to know Brady became a lifelong friend. He was a very special young man."

BRIAN GAULKE

#UBSPHHP ON SOCIAL MEDIA



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