

HISTORY LESSON



A look at the legacy of the health professions at UB

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How battling cigarettes connects SPHHP and Roswell Park Cancer Institute

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From protecting the safety of the water supply to monitoring communicable diseases to policy-making, public health practice has dozens of career paths. SPHHP's **Don Rowe** wants MPH students to know about them all.

Photo: Douglas Levere

Preaching practice

The Office of Public Health Practice is a key interface between the School of Public Health and Health Professions and the community, connecting the community with school resources and students to public health practice.

What do public health practitioners actually do? Don Rowe knows. He has been an aquatic toxicologist with Erie County; he was the principal public health microbiologist and chief biologist in the Erie County Public Health Laboratory; and he was, for 17 years, the public health director for Genesee County where he

oversaw a workforce of public health practitioners.

Rowe describes himself as “passionate” about public health. And in the school’s new Office of Public Health Practice, which he directs, he has a platform for summoning MPH students to public health work.

In that role, Rowe moderated a panel discussion for incoming MPH students in which career public health professionals—the public health commissioner of Wyoming County, an assistant regional director from the New York State Department of Health, and others—talked about

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What's in a name?

As I leave yet another meeting where our school was routinely referred to as “the School of Public Health,” I’d like to remind Impact readers of an important point—that we are a single School of Public Health and Health Professions made up of two distinct, yet vitally connected parts.

Established in 1965 as the School of Health Related Professions and merged initially with the Department of Social and Preventive Medicine, the allied health professions have helped UB build a tradition of excellence in exercise and nutrition sciences and occupational therapy and physical therapy. The health professions are, collectively, a functional partner of the public health disciplines that now include epidemiology, health services administration, environmental health, health behavior and biostatistics.

The important connections across the school’s units are illustrated in the newly developed core curriculum. As outlined in our recently revised strategic plan, the core will help the school gain recognition as a model among U.S. research universities for “the advantages of its combination of related academic programs that promote the understanding, prevention, and treatment of disease and disability.”

The academic standards and evaluative guidelines set forth in the core will enhance the school’s goal to prepare its graduates to become successful public health professionals, educators, researchers—and practitioners in the health professions.

As a relatively young addition to UB’s Academic Health Center, we must correctly brand ourselves as a school of public health and health professions that brings multiple kinds of expertise to bear in studying, treating and preventing disease.

I urge you to read about the history of health professions at UB on page 3, and, at every opportunity, take the time to refer to us in the long form as the School of Public Health and Health Professions. Yes, it’s a mouthful, but we are proud to be SPHHP.

Sincerely,



Lynn Kozlowski, Ph.D.
Interim Dean



20th annual J. Warren Perry Lecture “Buffalo, the University and the Public’s Health”

Friday, October 31, 2008

1:30 p.m. – 3:30 p.m., 105 Harriman Hall

Faculty/student poster presentations Noon – 1:00 p.m.

The School of Public Health and Health Professions is proud to announce that the keynote speaker for the 20th annual **J. Warren Perry Lecture** will be Buffalo native and University at Buffalo alum **James S. Marks, MD ‘73, MPH**. Marks is senior vice president of the Robert Wood Johnson Foundation Health Group in Princeton, N.J. He also serves as vice



Marks

chair of the board of directors of C-Change—a national cancer coalition whose members are the nation’s key cancer leaders from government, business, and nonprofit sectors—and sits on the membership committee of the Institute of Medicine.

A national leader in public health and an advocate for strengthening public health systems and services, Marks previously served as U.S. assistant surgeon general after serving as director of the Centers for Disease Control and Prevention’s National Center for Chronic Disease Prevention and Health Promotion. He has published extensively in maternal and child health, health promotion and chronic disease prevention, and has served on many government and nonprofit committees devoted to improving public health.

Born in Buffalo, Marks received his medical degree from UB and trained as a pediatrician at the University of California—San Francisco. He was a Robert Wood Johnson Clinical Scholar at Yale University, where he received his MPH.

The J. Warren Perry Lecture is free and open to the public. For any questions, please call 829-6759.

Movers and shakers

Joan M. Dorn, associate professor of social and preventive medicine and director of the Western New York Wellness Works Program, in June was named interim **Dorn** chair of the Department of Exercise and Nutrition Sciences.



Brian McCarthy, JD, MPH ‘08, has been awarded a federal Presidential Management Fellowship from the Office of Personnel Management in the U.S. **McCarthy** Department of Veterans Affairs. The fellowship attracts candidates



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...and Health Professions

The “health professions” of the School of Public Health and Health Professions are embodied in two departments: Exercise and Nutrition Sciences and Rehabilitation Science. They are the contribution of the former School of Health Related Professions to the school in its present form.

Some of the original DNA of HRP (as anyone ever connected with Health Related Professions called the school) has descended into the School of Public Health and Health Professions through Albert C. Rekate. A professor of rehabilitation medicine in UB’s medical school, he was named acting dean of HRP in 1965 when the school was created by the State University of New York. Today, he’s supporting the creation of a core curriculum for its successor school through a generous gift.

The school was the first of its kind in New York and one of the first in the nation.

J. Warren Perry was named the first full-time dean and the school was dedicated on May 1, 1967, in conjunction with a manpower conference on the health related professions that brought leaders from 14 national health associations to Buffalo.

Perry had been deputy commissioner for research and training in the Vocational Rehabilitation Administration in the Department of Health, Education and Welfare in Washington when he visited Buffalo to see professional friends. What he heard about plans for the school eventually led to his move to UB where he

spent the rest of his career.

These were good times for the health professions. Funds from the Allied Health Professions Training Act of 1966 helped get the school started along with grants from the Kellogg Foundation and the Robert Wood Johnson Foundation. (One local grant provided \$400 for liquor to be served following faculty meetings.)

HRP was founded with three departments that had been in the medical school: medical technology, physical therapy and occupational therapy.

When Dale Fish, who was for many years the associate dean of HRP and is now one of the associate deans of its successor school, started in the Department of Physical Therapy in 1974, it was located in a house on Winspear Ave. He remembers teaching a course on the effects of physical agents in the basement where the ceiling was so low that his tallest students had to stoop.

In 1975, HRP added a program in nuclear medicine technology and a year later picked up the Department of Physical Education from UB’s School of Education. In the mid-1980s, physical education merged with physical therapy to form the

Department of Physical Therapy and Exercise Science. During that decade, the school also started a graduate program in nutrition and Health Sciences Education became Health Behavioral Sciences and then disappeared.

By the mid-1990s, HRP had started doctoral programs in rehabilitation science and exercise science.

The last dean of HRP was Maurizio Trevisan. He was chair of the Department of Social and Preventive Medicine when he was appointed on an interim basis in 2001. Far from simply keeping the dean’s seat warm for a permanent successor, Trevisan advocated vigorously for his long-standing vision of a school of public health.

HRP ceased to exist as an allied health school and became the health professions of the School of Public Health and Health Professions in January 2003. The departments of Clinical Laboratory Sciences and Nuclear Medicine had found



Occupational therapy was a freestanding department from the earliest days of the School of Health Related Professions.

new homes in the medical school. The direct descendants of HRP are the programs in physical therapy and occupational therapy, now both located in the new Department of Rehabilitation Science and the Department of Exercise and Nutrition Sciences.

Both departments work at the very heart of some of the most important public health issues of our time: rehabilitation science and its clinical professions are central contributors to the needs of an aging population and both exercise and nutrition are key to good health for all generations.

—Judson Mead

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ground-level public health practice. Rowe wants MPH students to think about public health careers from Day One.

The Office of Public Health Practice is a year old. It has a small staff—at the moment, just Rowe and Elisa Rodriguez (see box, this page) who also has an appointment in the Department of Health Behavior.

The office is a gateway between the school and the public health and health care communities, connecting such agencies as health departments, managed care organizations, and community-based organizations to resources in the school, and connecting students, primarily in the MPH program, with the world of practice in those agencies.

Rowe, who earned a doctorate in organic chemistry from UB and did postdoctoral work in pharmacology and environmental biochemistry, joined the faculty of the School of Public Health and Health Professions in 2002 as its public health liaison, the primary contact between the school and the practicing public health community.

Public health is the work of many disciplines—epidemiology, biology, toxicology, management, medicine, and education among others. UB has expertise in the disciplines and the Office of Public Health Practice is establishing itself as the route to that expertise.

One of Rowe's immediate goals for the office is to establish the school as a member of the public health community. "We live here, we work here and we want to be seen as co-partners in helping to solve problems," he says. And he wants expertise in the community to flow into the school. For the school, community engagement is a key element in the case for accreditation.

In Rowe, the office has a ready-made presence on the regional public health scene. He

was a co-founder of the Western New York Public Health Coalition, which has now evolved into the very successful Western New York Public Health Alliance in which he represents the school.

He is involved with New York's federally funded Area Health Education Centers (AHEC) and sits on the board of the Rural-AHEC, headquartered in Wyoming County. He is a governor's appointee on the New York State Rural Health Council—he notes that 44 of New York's 64 counties are rural—and he represents the school as a board member of the New York State Association for Rural Health. The office also participates actively in the American Public Health Association.

On the school's side of the gate, the office opens onto the world of public health practice to students who are its future workforce. Rowe and Rodriguez are developing high-quality internship placements and connections with community projects for MPH students. They are also planning visits to places where public health practitioners work—from wastewater treatment plants to boards of health.

To get students ready to find good jobs, the office has started practical career workshops that include coaching in résumé writing and interviewing.

Rowe has instituted weekly brown bag lunch discussions with faculty and other graduate students of the CDC's Morbidity and Mortality Weekly Report and he wants to start regular conversations at the school with public health practitioners—from sanitary workers to public health nurses to public health commissioners.

He says he'd like to call these "fireside chats," but he can't find a fireplace in Kimball Tower.

—Judson Mead

Networking in the city

Elisa Rodriguez has two jobs: outreach coordinator in the Office of Public Health Practice and assistant research professor in the Department of Health Behavior.

Her training as a researcher in an urban setting—she studies health disparities—complements Don Rowe's deep experience with rural public health issues.

Rodriguez interned at the Erie County Health Department and earned a master's degree at Roswell Park Cancer Institute.

She went on to doctoral studies at Johns Hopkins Bloomberg School of Public Health where she developed an expertise in community-based participatory research. CBPR, as its practitioners call it, extends the selection of research questions into the community and community members are research "participants" rather than "subjects."

"Because of my training in CBPR, I couldn't be in a more ideal situation in this office," Rodriguez says. "My research is truly informed by the community." She says the establishment of the office is a "huge testament" to the school's involvement in the community.

And that's where Rodriguez is spending her time, networking her way into the Buffalo-area public health community.

She sits on committees for the P2 Collaborative, a not-for-profit organization dedicated to improving the health of people in Western New York and she serves on the education committee for the Buffalo affiliate of the Susan G. Komen Foundation, which addresses breast cancer awareness and treatment.

Watch for her around town.

A global sanitation crisis

Feces, fluids, fields, fingers and food. Combine these with a susceptible host, and what you get are easily spread, yet easily preventable, diarrhea-related diseases.

The image isn't pleasant, but neither is the reality, says Pavani K. Ram, assistant professor in the Department of Social and Preventive Medicine.

Before Ram joined the faculty in 2005, she was an epidemiologist studying disease outbreaks at the Centers for Disease Control and Prevention. At UB, she focuses on prevention of high-burden diseases, such as diarrheal disease and acute respiratory infections, which are prevalent in low-income countries in Africa and Asia.

About 2.5 billion people worldwide do not have access to "improved" bathroom facilities, which are defined as private—not public or shared—toilet facilities that remove or treat human waste. Ninety percent of the raw sewage produced in low-income countries is released untreated into the environment, where it pollutes food and water sources used for agriculture, washing and drinking.



Pavani K. Ram

The downstream impact of this pollution on low-income countries is two-fold. Diarrheal diseases are the second leading cause of death in children living in low-income countries, and cause 2.5 million deaths among adults and children annually.

Poor sanitation also affects social development. For example, women are the primary water collectors in many developing countries and are therefore exposed to unclean water supplies. Women and girls who are menstruating also tend to avoid public toilets, risking their personal safety and education by using isolated facilities at night or staying home from school.

The complicated situation has prompted the United Nations and UNICEF to designate 2008 as the International Year of Sanitation, a campaign to encourage better sanitation system development. This could be as simple as installing composting toilets or pit latrines in every town and educating residents in how to use them, or constructing more complex "biogas" systems where methane, a byproduct of human waste, is collected from public latrines and then converted into electricity. Composting toilets can contain waste until it is ready to be treated for use as an agricultural fertilizer.

Although sanitation development has been undervalued as a public health policy issue, Ram says, governments of poor nations are beginning to take notice because of its proven economic and social benefits.

"The United Nations estimates that \$9 is generated for each \$1 spent on improved sanitation, so the economic impact is huge," she says.

"Not to mention the lives saved through the simplest and cheapest of daily habits."

In an ongoing study funded by the Water and Sanitation Program of the World Bank, Ram and an international team of researchers are evaluating the effectiveness of promoting hand-washing with soap at large scale. This project has the potential to demonstrate improved hand-washing behavior as well as hand-washing's impact on diarrhea morbidity and other child development metrics.

Data on hand-washing has been traditionally collected by observational studies, but now Ram and her colleagues are using a high-tech soap developed by a global consumer products corporation. Inside each bar is a small motion-sensor device, which can help pinpoint when and how often people use the time-tested method of soap and water for washing hands. The data coming out of these studies is much more accurate, Ram says.

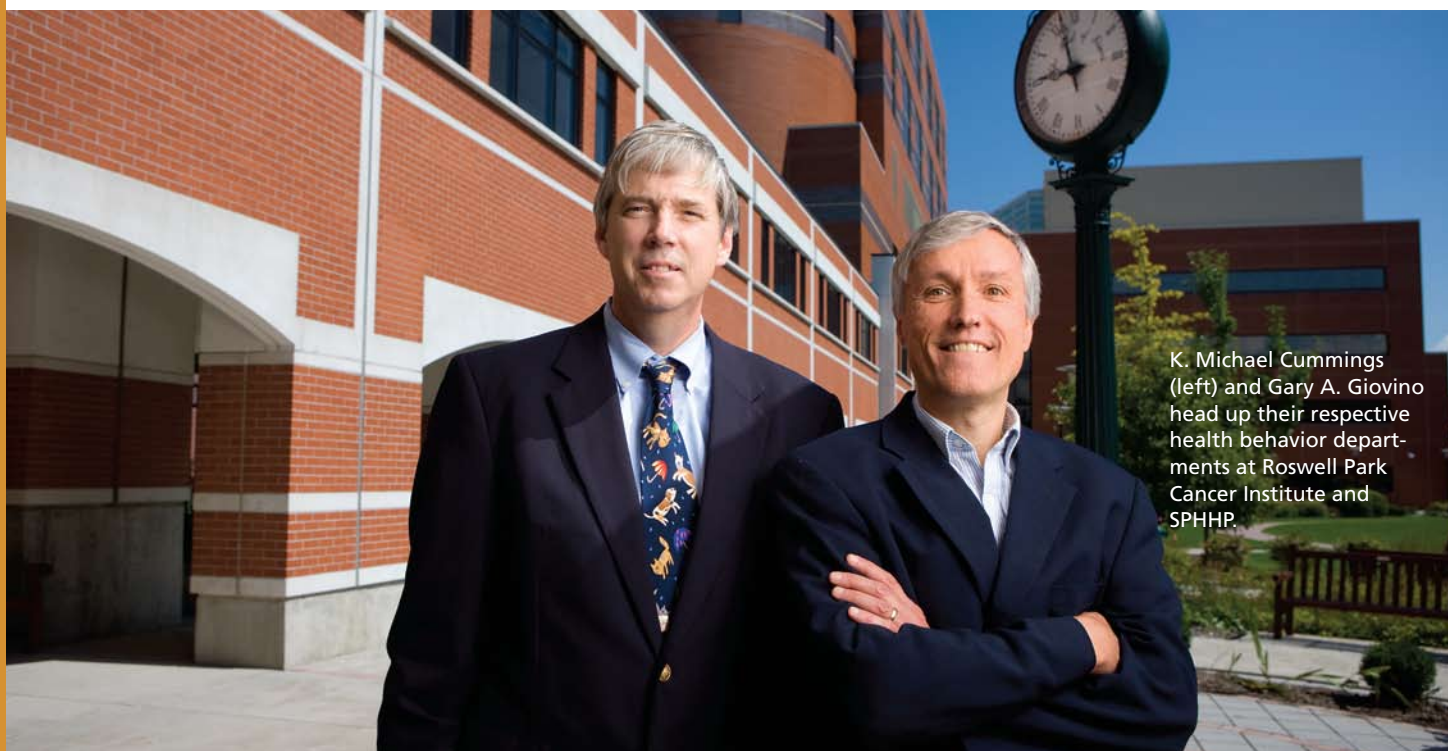
In another study, Ram is looking at why antimicrobial agents are preferred by caregivers of children and health workers over simple oral rehydration therapy for diarrhea management. Despite their popularity, these agents are not effective in half or more of diarrhea episodes, and unnecessary use promotes the spread of drug-resistant pathogens.

Ram's goal is to improve public health by using this improved data on hand washing to develop effective health promotion campaigns, both abroad and here in the United States. In Erie County, her group will evaluate a hand hygiene promotion program, which includes the use of waterless hand sanitizers, in order to examine its impact on hand cleansing practices and absenteeism in public schools.

—Lauren Newkirk Maynard



A 2005-06 survey of 35 developing countries found that women make up 64 percent of the population responsible for collecting water—a time-consuming and often hazardous task.



K. Michael Cummings (left) and Gary A. Giovino head up their respective health behavior departments at Roswell Park Cancer Institute and SPHHP.

Photo: Douglas Levere

Teaming up against tobacco

Through a network of mentors, research collaborations and shared teaching responsibilities, the School of Public Health and Health Professions and Roswell Park Cancer Institute are working together to study tobacco and its attendant addiction.

Standing on a platform in 2006 with New York Governor George Pataki, senators Charles Schumer and Hillary Clinton, UB president John B. Simpson and many other dignitaries, David C. Hohn, president emeritus and executive director of health policy of Roswell Park Cancer Institute, observed that Roswell Park and UB are inextricably linked.

“At the turn of the last century, Dr. Roswell Park, founder of

Roswell Park Cancer Institute and chair of surgery at UB, was one man with a vision—if cancer was to be understood and successfully treated, researchers and clinicians had to collaborate,” said Hohn at the opening of UB’s New York State Center of Excellence in Bioinformatics and Life Sciences.

The event—itself a collaboration—drew attention to the long-standing partnerships between UB and Roswell.

Today, as the School of Public Health and Health Professions’ new health behavior department grows, faculty working at both UB and RPCI say those bonds remain strong. Tobacco research is a perfect example of this shared expertise.

According to the National Cancer Institute, American Cancer Society and Centers for Disease Control and Prevention, cigarette smoking causes at least 30 percent of all cancer

deaths, making tobacco research an important focus of RPCI’s Population Science and Cancer Prevention Program.

Under the umbrella of its cancer prevention program, RPCI’s tobacco control and prevention research groups investigate just about everything related to tobacco products and cancer, including the genetic and environmental determinants of nicotine dependence, smoking cessation and harm reduction therapies, smokers’ behaviors, the tobacco industry’s marketing campaigns over the years and the impact of national and international tobacco control policies on smoking behavior.

A growing cadre of health behavior and public health researchers at SPHHP work in this field and have close ties to the institute.

“A unique thing about the UB-RPCI partnership is that

the epidemiology and health behavior faculty members hold joint appointments,” says Arthur Michalek, professor of social and preventive medicine and dean of the RPCI Graduate Division.

K. Michael Cummings, an internationally recognized expert on cancer and smoking who has contributed to several reports of the Surgeon General on smoking and testified before Congress against national tobacco corporations, chairs RPCI’s health behavior department—part of its Department of Cancer Prevention and Population Sciences. He also is a professor of social and preventive medicine and an adjunct professor of health behavior at SPHHP.

In 2007, Lynn Kozlowski, a leading tobacco researcher, joined UB to chair SPHHP’s newly created health behavior department. He now serves as interim dean of the school and is a co-investigator on a federally funded RPCI study.

Mentoring is an important aspect of the UB-RPCI tobacco connections. Roswell scientists help train SPHHP graduate students and postdocs and provide hands-on opportunities to build a career in public health.

Gary A. Giovino, professor and acting chair of the new Department of Health Behavior at SPHHP, is one of several UB faculty who have trained under Cummings at RPCI. For several years at the Centers for Disease Control and Prevention and now at UB, Giovino has been

studying patterns, determinants, consequences and control of tobacco use. His interests are the complex variables involved in tobacco-related behaviors, from adolescent and adult use of flavored cigarettes to smoking tendencies in children living in dysfunctional households. Among his current research interests are “hard-core” smoking and the link between sub-optimal nutrition and nicotine addiction.

Like Giovino, other UB graduates have gone on to become research scientists at RPCI, including Andrew Hyland, Martin H. Mahoney, Maansi Bansal-Travers and Mark Travers.

“Students learn research by living the research.”

—Arthur Michalek, professor of social and preventive medicine at UB and dean of the RPCI Graduate Division

“Students learn research by living the research,” says Michalek. “It’s an intense experience because they’re immersed in the cutting-edge technology and expertise at RPCI. We have so many committed scientists here.”

One of them, Richard O’Connor, joined Roswell as a postdoctoral fellow in 2004 and now directs its Tobacco Research Laboratory. He is the principal investigator, with co-investigators Giovino and Kozlowski, on a study of tobacco products from around the world that is a key component of Cummings’ Transdisciplinary

Tobacco Use Research Center (TTURC).

Funded by the National Cancer Institute (NCI), the Roswell TTURC investigates and compares the impact of national tobacco control policies in countries throughout the world, conducting research on tobacco products on the international market. As coordinator of the International Tobacco Product Repository, O’Connor surveys the use of these products around the world and archives novel Potential Reduced Exposure Products (PREPs), as tobacco products promising, but not necessarily delivering, reduced health risks are called.

With an NCI grant, O’Connor is also examining, with Giovino and other colleagues, the laws, design and smoking behaviors related to “fire-safer” cigarettes—PREPs designed to self-extinguish and pose a lower risk of fire than regular cigarettes.

“The TTURC analyzes which policies best reduce smoking behavior. It also searches out noteworthy differences in cigarettes around the world,” says Giovino.

Tobacco studies are an important part of the RPCI Graduate Division’s cancer pathology and prevention curriculum. The tobacco module of a class called

Cancer Control and Prevention, for example, discusses health education strategies, social change and health policy more broadly, and tobacco product labeling, quitlines and community interventions in particular.

RPCI’s tobacco cessation campaigns and wellness education programs are some of world’s most recognizable and authoritative. Graduate students are often at the heart of that work, says Cummings.

In addition to overseeing tobacco research at RPCI, Cummings runs the New York state Smokers’ Quitline, which has distributed more than 150,000 nicotine replacement “Quit Kits” statewide since it was established in 2000. The Quitline is based at RPCI and enlists students in everything from taking calls to evaluating its free smoking cessation coaching and health care referral programs. Its director is Paula Celestino, an MPH student at SPHHP specializing in health behavior.

Public outreach came home to UB in September, when it partnered with RPCI, the Smokers’ Quitline, the Erie-Niagara Tobacco Free Coalition and the New York State Department of Health to launch a smoking cessation program called UBreathe Free Week to encourage a smoke-free campus. Roswell set the example in 2006 by becoming the first health care facility in Western New York to go smoke-free.

—Lauren Newkirk Maynard

Creative philanthropy



Barbara Marchelos, a former physical education teacher, is supporting the school through planned giving. Photo: Nancy J. Parisi

In sports lingo, Barbara Marchelos, BS '75, was a walk-on at UB. Before Marchelos began an undergraduate degree in physical education, in what was then the School of Health Related Professions, she had been taking a few classes through Millard Fillmore College, but hadn't found her calling.

Then, one day while walking to Clark Hall for a class, she happened upon an athletic event held by the physical education department.

That moment piqued her interest in PE, already bolstered by her lifelong love of sports. Marchelos realized that the spark she needed was right there in Clark Hall's main gymnasium.

After graduating with her class in that very gym, Marchelos immediately went to work as a PE instructor at Harry F. Abate Elementary School in Niagara Falls, N.Y., her hometown.

Twenty-two years later, Marchelos is retiring from a career she loves, and looks back fondly on its beginnings at UB. She says she owes the university for training her how to teach students her philosophies on physical activity, good sportsmanship and self-discipline.

"Physical education teachers have to be mentally strong and devoted to what

they're doing," Marchelos says. "UB gave me a foundation to build on, and a sense of direction." She eventually went on to become certified in K-12 phys ed, earning a masters degree from SUNY-Brockport.

Marchelos says she had been considering a donation to UB for a long time, but was uncertain if she could afford it on her teacher's salary. However, spurred on by civic-minded friends who were involved with the Buffalo Philharmonic Orchestra, she contacted her bank and the UB Planned Giving office to see what her options were, and found many.

She eventually used life insurance to make a gift to UB that will benefit students in the Department of Exercise and Nutrition Sciences. "It's just so equitable, being able to put some money away so that it works for my budget," Marchelos says. "I never thought I could do this, but there I was, retirement fast approaching and I needed to get something set up. UB has been great through the entire process."

During a recent visit to her former South Campus stomping grounds—her first time back in more than 20 years—Marchelos met Joan Dorn, interim chair of UB's exer-

cise and nutrition sciences department. "It's our mission to provide students with public health training," Dorn said. "We're directed, as you are, by our responsibility to community health, and now more than ever we appreciate support like yours to help students start out on the right foot."

"I want to help programs like this, so if there's a bright young man or woman who wants to enter the exercise science field, but can't afford college, they can make it happen," Marchelos said. "The door is there, you just have to walk through it."

—Lauren N. Maynard

Remember the School of Public Health and Health Professions in your will

Did you know that you can make a major impact on the future of the School of Public Health and Health Professions by including us in your estate plans? Call UB's Office of Gift Planning toll-free at 877-825-3422 to learn more about how you can support student scholarships, faculty development—or something that is near and dear to you.

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interested in leading and managing public policies and programs, from a variety of academic disciplines.

Lina Mu in June joined the Department of Social and Preventive



Medicine as an assistant professor. Mu previously held a faculty position in epidemiology at Fudan University School of Public Health in Shanghai, China, and has studied cancer epidemiology in Lyons, France and more recently at the Department of Epidemiology and Public Health in the Yale University School of Medicine. Mu's research focuses on the molecular epidemiology of malignancies in China, and environmental exposures in relation to cancer, primarily cancers of the respiratory tract.

Heather Orom has been named assistant professor of health behavior. Orom was trained as a social psychologist at the University of Illinois—Chicago and completed a postdoctoral fellowship in Communication and Behavioral Oncology at Wayne State University. Her research interests include family and community influences on health behavior, especially cancer screening and prevention, and the psychosocial consequences of technological disasters.

Laura Sucheston, assistant professor of biostatistics, has been selected for the editorial board of the journal *Immunogenetics*.

Jennifer L. Temple in August joined SPHP as an assistant professor of exercise and nutrition scienc-

es. Temple formerly was a research assistant professor of health sciences at UB in the Division of Behavioral Medicine, where she studied ingestive behavior and obesity.

Ruqaiyah A. Yearby has joined UB as a visiting associate professor for



the Law School and has a joint appointment with the Department of Social and Preventive Medicine. Yearby previously held joint appointments at the Stritch School of Medicine and the Neiswanger Institute for Bioethics and Health Policy at Loyola University Chicago.

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*A selection from the past six months. Submissions in press will be printed upon publication.

Ready for the boomers?

What should we be doing to prepare for the aging of the huge baby boom generation? The oldest boomers are 62 today, the youngest, 42. Now add 30 years. Will we be ready?

Joseph P. Lane, Center for Assistive Technology

The demographic shift is changing the assumptions underlying our socioeconomic framework. Our service and support systems are geared toward a small population of seniors either living within their extended family or within nursing homes. Instead, we are now seeing greatly expanded numbers with a higher proportion living independently.

The field of assistive technology provides the devices, environments and services people need to maintain or regain their maximum functional abilities, regardless of age, diagnosis or impairments. The independent living philosophy established by baby boomers with disabilities back in the 1960s, is now becoming important to all seniors as they acquire various sensory, mobility and/or cognitive impairments as they age.

Unfortunately, with the dramatic reduction in our nation's middle class, the loss of pensions and reduced discretionary wealth, we will see two groups of seniors: a small percentage who are financially able to support their independence, and a large percentage of the baby boom generation living on Social Security and other

forms of public support. The envisioned innovations in the biological, informational and nanotechnology sciences will only benefit more than the small number of wealthy seniors if current reimbursement levels are raised to permit manufacturers to incorporate them in new products and services.

Marc Kiviniemi, Health Behavior

As the baby boomer generation ages, our goal should be to help people enjoy a happy, healthy older adulthood. From the perspective of health behavior, there are three key things that would help us achieve this goal:

Focus on quality of life. Most people, especially in older adulthood, make decisions based on quality of life—how will this choice affect how much I enjoy who I am and what I'm doing? We don't know nearly enough about how to weigh quality of life in health-related decisions and we don't tend to focus enough on overall happiness as a criterion in approaching behavioral choices.

Increase health literacy. We need to encourage people to increase their health literacy—the ability to understand health information and reason about health-related issues. Navigating

complex health decisions successfully requires that people have the ability to successfully think about and make decisions about their health, and the time to acquire those skills is not when one has just been diagnosed with a serious illness.

Build a healthy foundation. Finally, we need to make sure that people take appropriate preventive measures to give them the best possible foundation for a long, productive older adulthood. Illness screening (e.g., cardiovascular tests, cancer screening) and behavioral choices (e.g., regular physical activity) that enable them to lead healthy, active lives are two examples.

Luc E. Gosselin, Exercise and Nutrition Sciences

There are a number of public health issues facing the aging population, including increased incidence of obesity and obesity-related diseases, as well as the loss of muscle mass with old age. A link exists between physical inactivity and obesity, and one of the major challenges is to change the behavior of Americans toward physical activity. Evidence suggests that citizens who live in neighborhoods designed for pedestrians rather than automobiles weigh significantly less. We should



encourage local governments to restructure existing communities and to design new housing developments with physical activity in mind. As educators, we should also provide our health care practitioners with a solid background on aging physiology and psychology so that these practitioners will be ready to deal with the health issues faced by this population.

Elisa M. Rodriguez, Office of Public Health Practice

It is important that as the baby boomers age we are able to provide appropriate and relevant health promoting programs and services that meet their needs, as well as provide opportunities for other segments of the population. All too often we focus on or target a group of individuals and lose sight of the “bigger picture”—and in an attempt to prepare, we must do so in a way that provides a better quality of life and health for all and not just some.

In Western New York, there is tremendous need for preparation due to the significant proportion of the population that is aging and the constant and continued migration of younger

segments of the population to other areas of the state or out of the state. These changes in demographics impact our community and state in many ways and will certainly influence our ability to respond to the needs of an increasing aging population.

Nadine Fisher, Rehabilitation Science

There are strong public health reasons for increasing physical activity and exercise for the entire population, not just the baby boomers. Implementing such a program is difficult from many perspectives. Changing behavior to both value physical activity and exercise and to participate in it will usually result in better health. But while general programs are good for the healthy or well elderly, the disabled, who have low or no reserve and are closer to losing their independence, need specialized exercise and/or rehabilitation programs that can maximize their functional abilities. Rehabilitation specialists, including physical and occupational therapists and exercise scientists, are able to develop these exercise and rehabilitation programs—and they will be in much greater

demand as our elderly population increases.

Bill Scheider, Social and Preventive Medicine

We must accept that the carrying capacity of our social and economic systems, as well as the environment, has limits. The size of the baby boom generation and longer life expectancy could strain beyond the breaking point the health care system and the governmental and financial systems. Lifestyle change can help us increase our disability-free years and also to live more simply and do with less. We also must rethink our priorities. Difficult questions, such as which medical procedures will be covered and for whom, will have to be addressed.

Successfully adapting to the limits we face requires us to do something Americans often fail to do well: act in the spirit of community. We prize our individualism, but we also have to remember that everything we do affects someone else. To be sure everyone is taken care of, we will sometimes have to set aside individual agendas and work together.



Alphonso O'Neil-White

President and CEO, HealthNow



Q: How prepared is WNY to address the health care challenges now and in the future?

A: We know many of these challenges: aging demographics, higher-than-average rates of heart disease, diabetes, obesity and some cancers, facility overcapacity and poverty. However, we're not where we need to be. We need to do a better job of providing preventive care to all Western New Yorkers, educating people to take responsibility to improve their health and that of their children, and addressing the needs of the elderly and chronically ill to optimize quality of life without financially incapacitating our health care system. By better addressing public health issues today and preparing for tomorrow, we'll see just about everything else improve, too.

Q: How can the UB School of Public Health and Health Professions help with this dialogue?

A: UB's School of Public Health and Health Professions can play a tremendous role in bringing together health care providers, insurers, educators and social services professionals. While unhealthy habits are hard to change and broader access to preventive care is needed, we must start somewhere, because the cost of health care will continue to rise and people are going to shoulder more responsibility for getting and keeping themselves well. Given this, it would be great to see the school take a more active role in the larger community.

Q: Do health care leaders have the data they need for effective analysis and design of public health policy?

A: Insurers are learning how to better use data and technology to identify and address potential health issues before they become full-blown, and are working to ensure better outcomes for patients. For example, BlueCross BlueShield knows when a diabetic has missed follow-up doctor visits or isn't taking medications, based on claims history. At that point, we can provide patient and physician with the information they need to ensure compliance with recommendations. Using data to bridge gaps in care is just the beginning of how it can be used to improve individual and public health. To maximize data's potential, though, will require ongoing collection and analysis.

Q: How important is health science research in evaluating the efficacy and cost-effectiveness of various health interventions?

A: Because so many diagnostic and treatment options are new, and because the technology behind them changes so rapidly, clinical results one day seem to be contradicted the next. However, without research to help us better understand efficacy in terms of outcomes and cost, we've got little more than anecdotes, ideas, preferences and luck. Given this, I think the question is not whether health science research is important—it is—but how to best balance the research and results with the hopes and expectations of modern medicine.

Improving health for populations and individuals

impact

The University at Buffalo is a premier research-intensive public university, the largest and most comprehensive campus in the State University of New York system. The School of Public Health and Health Professions is one of 12 schools that make UB New York's leading public center for graduate and professional education and one of five schools that constitute UB's Academic Health Center.

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Stress in the line of duty

Several weeks after the 9/11 terrorist attacks, I visited the Port Authority police force in New York City—a department that lost 37 officers when one of the World Trade Center towers came down. My team conducted post-trauma debriefings and encountered first responders who were deeply disturbed by the search-and-rescue operation.

I am a 23-year police veteran, and very familiar with the daily stressors that are part of a police officer's job and lifestyle. We are trained to view every situation in terms of the worst-case scenario—that the car we've pulled over might have a gun pointing back at us, or that the towers will come down and kill thousands. Despite this training, however, nothing can prepare you for the shock of a crime scene, nor can it shield you from the ill effects of chronic exposure to trauma. This state of hyper-vigilance affects not only police officers, but emergency room doctors, firefighters, EMTs and other emergency professionals.

Science is beginning to clarify the evidence that chronic stress hurts us both psychologically and physiologically. My research

hypothesis is that stress increases our risk for developing cardiovascular disease, while other studies have suggested that it also erodes the delicate balance of our immune, nervous and psychological systems—as well as the circadian 24-hour wake-sleep cycle.

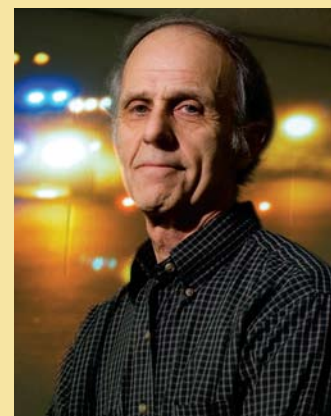
Within the next year I will near completion of a five-year study funded by the National Institute for Occupational Safety and Health (NIOSH) to evaluate the relationship between work stress, lifestyle factors (smoking, diet, exercise), physiological stress biomarkers and metabolic and vascular consequences in police officers—a group exposed to high levels of physical and emotional stress.

We have explored many associations of stress, measured in officers' levels of cortisol (the "stress hormone"), elasticity and plaque build-up in the carotid and brachial arteries, distribution of body fat, bone density and various blood parameters. So far, we've seen correlations between the amount of job stress officers report and their propensity to have elevated cortisol, possible future cardiovascular complications, high blood pressure, cholesterol and abdominal fat.

The NIOSH study—one of the first large-scale scientific studies to gather physiological data on police officers—has the potential to serve as a model for future epidemiological investigations. We hope to secure additional funding over the next five years to collect longitudinal data and examine any changes in stress and health over time. Data from the few existing longitudinal studies of the effects of stress on health suggest a continued negative outcome.

Through this and future research studies, I hope to further explore how stress and disease affect society-at-large. Stress is a part of everyone's lives, but now we hope to find new evidence that disease is linked to how well we deal with it.

John Violanti is an associate professor of social and preventive medicine in the School of Public Health and Health Professions.



John Violanti

Photo: Douglas Levere