

Vital Signs

Boonshoft
School of Medicine
WRIGHT STATE UNIVERSITY



A Meaningful Work

Facing a demanding profession, physicians come together to improve their resiliency and safeguard patient care.

14

Learn, lead, and serve

A Boonshoft School of Medicine professor sets an example of service while still making time for her family.

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Access to care

In Southern Africa, an alumnus tackles a lack of resources and treatment options in delivering pediatric cancer care.

From the Dean

The Boonshoft School of Medicine has always been a dynamic place, full of ingenuity, with a passion for service. We continue our pace of steady, meaningful advancement. And our remarkable students, faculty, staff, and alumni are tackling some of the world's toughest problems. You can see why I'm so excited for what the future may bring.

In more ways than one, we are charting new territory at the medical school. I hope you'll get a sense of our momentum as you read this edition of *Vital Signs*.

Our cover story is about physician resiliency, a topic that is sometimes difficult to broach within our community. The expectation for generations of physicians, reinforced by patients and often doctors themselves, has been to deliver care with quiet reserve. Thankfully, things are beginning to change — doctors and other health care professionals are realizing that a stiff upper lip may belie hidden struggles with burnout or compassion fatigue, issues far more common than traditionally thought.

Hard data and personal experience have led many physicians to come together to tackle the issues that are inextricably linked to the physician shortage and the quality of patient care. The Boonshoft School of Medicine's Remen Institute for the Study of Health and Illness is one entity leading the charge.

Elsewhere on the frontlines, our alumni are busy delivering medical care in disadvantaged third-world regions. They are at work battling the spread of diseases like ebola and cholera, and providing care to pediatric cancer patients in sub-Saharan Africa. One of our groundbreaking professors is also showing that women physicians can make time for family while maintaining their commitment to patient care.

As we continue to move forward, I want to thank you for your encouragement and support of the Boonshoft School of Medicine. Without the tireless work of the Wright State family and our alumni and friends, none of this would be possible.



Margaret Dunn, M.D., M.B.A., FACS
Dean



What's Inside



Medical care for law enforcement

The Division of Tactical Emergency Medicine provides life-saving care to special operations teams working in extreme situations.



Office of Naval Research grant

Wright State University researchers study precision medicine approaches to physical training and its impacts to force readiness.



CDC Disease Detective

A Boonshoft School of Medicine alumna works on the front lines of infectious disease outbreaks around the world.

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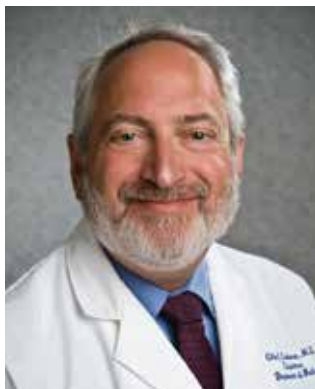
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Special thanks to Cindy Young, former director of marketing and communications of Boonshoft School of Medicine, and Robin Suits, former associate director of marketing and communications of Boonshoft School of Medicine, for their many years at Wright State University. Enjoy retirement.



Snapshots

Glen Solomon elected to the Association of Professors of Medicine Council



Glen Solomon, M.D., FACP, professor and chair of the Department of Internal Medicine and professor and interim chair of the Department of Neurology at the Wright State University Boonshoft School of Medicine, has been elected to the Association of Professors of Medicine (APM) Council as a member at-large. He began his three-year term on July 1, 2016.

APM is the organization of departments of internal medicine represented by chairs and appointed leaders at medical schools and affiliated teaching hospitals in the United States and Canada.

Solomon has been professor and chair of the Department of Internal Medicine at Wright State since June 2008 and was appointed interim chair of the Department of Neurology in April 2015.

From 2003 to 2008, Solomon was chair of the Department of Medicine and internal medicine residency program director at Advocate Lutheran General Hospital in Park Ridge, Illinois. During that time, he was also professor and vice chair of medicine at the Chicago Medical School of Rosalind Franklin University of Medicine and Science in North Chicago.

Solomon spent five years as senior medical director in Medical and Scientific Affairs at Merck and Co. Inc. From 1988 to 1997, he directed the headache clinic and headache medicine fellowship program at the Cleveland Clinic.

Solomon received his undergraduate education at Northwestern University in Evanston, Illinois. He earned his medical degree at Rush Medical College in Chicago, where he was elected to the Alpha Omega Alpha Honor Medical Society. Solomon completed his residency in internal medicine at Wright-Patterson Air Force Medical Center. In 1995, he completed the Executive Program in Practice Management at the Cleveland Clinic Foundation and Weatherhead School of Management at Case Western Reserve University in Cleveland. He is board certified in internal medicine and in headache medicine.

He is the coauthor of two textbooks on headache medicine, "Clinician's Manual on Migraine" and "Diamond and Dalessio's The Practicing Physician's Approach to Headache." He has also authored more than 100 peer-reviewed papers and 35 book chapters on the subject of headache and migraine.

Professional activities include fellowships in the American College of Physicians and the American Headache Society. He is also a member of the International Headache Society, Association of Professors of Medicine, Association of Chairs and Chiefs of Medicine (president 2010-11) and the Association of Program Directors in Internal Medicine.

Wright State associate professor receives Distinguished Health Educator Service Award



The Ohio Public Health Association recognized Marietta Orlowski, Ph.D., associate professor of population and public health at the Wright State University Boonshoft School of Medicine Center for Global Health, with its Distinguished Health Educator Service Award at its annual awards dinner on May 10, 2016, in Columbus.

Orlowski was recognized for her innovative and sustained contributions to community health education and health education research. She is the health promotion and education director for the Master of Public Health Program at Wright State. She teaches courses in social and behavioral determinants of health and health program planning and evaluation.

She began her career as a health educator in a multispecialty care practice in eastern Kentucky, teaching weight management and smoking cessation classes. She directed community health education for a health care system in southwest Ohio. At Wright State, Orlowski works with graduate students and prepares them to enter the public health field.

Orlowski serves as the project evaluator for OHIO Smarter Lunchrooms, an organization devoted to school nutrition. She and a graduate student developed a blog, OHIO Smarter Lunchrooms, promoting fruit and vegetable consumption. The Ohio Department of Education will present the blog at the 2016 Society for Nutrition Education and Behavior Conference as an example of social media in public health.

In addition to her peer-reviewed scholarship, Orlowski has published a textbook, "Introduction to Health Behaviors: A Guide for Educators, Practitioners and Managers" (2015, Delmar Cengage Learning). She is a master certified health education specialist and holds a Certified in Public Health designation. She is a member of the Ohio Society for Public Health Education, Ohio Public Health Association, Society of Public Health Education and American Public Health Association. She advises local public health departments, serves on the community benefit subcommittee of Premier Health and is president of the Gamma Alpha Chapter of the public health honor society, Delta Omega.



Boonshoft School of Medicine interdisciplinary team awarded grant to enhance curriculum, expand medical training program

A collaborative team from Wright State University has been awarded more than \$450,000 to train future clinicians to work in a multidisciplinary team environment in patient-centered medical homes.

The Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services awarded Wright State University a \$451,764 grant, renewable for five years, for primary care training and enhancement. The collaborative team includes Wright State University Boonshoft School of Medicine primary care residency programs in family medicine, internal medicine, and pediatrics in addition to the Wright State-Miami Valley College of Nursing and Health, Wright State School of Professional Psychology and the Kettering College Physician Assistant Program.

HRSA is funding more than \$149 million in new awards through 12 workforce programs to prepare the next generation of skilled, diverse primary care providers to serve communities in need nationwide.

The grant awarded to the Wright State team was part of the Primary Care Training and Enhancement Program. Under this program, HRSA funded 33 grants nationwide totaling \$14.5 million for primary care training and enhancement. The grants were awarded to hospitals, medical schools, academically affiliated physician assistant training programs, and other entities to improve the quality, quantity, distribution, and diversity of the primary care workforce through curriculum enhancement and training program expansion.

As health care evolves, a new approach to patient-centered care is emerging, one in which a physician works with a team of health care professionals, including behavioral health care providers, community health workers, pharmacists, and other health care professionals to provide the patient with the best physical and mental health care.

When a patient visits the Boonshoft School of Medicine residency clinics in family medicine, internal medicine, or pediatrics, he or she interacts with a team of health care professionals under the patient-centered medical home approach to health care. At one visit, a patient could see a doctor, meet with a counselor for depression, learn stress reduction techniques, and review medications with his or her pharmacist. They might also meet with a community health worker to learn more about respite care for an aging parent, to get a referral for inexpensive medications or obtain assistance with housing.

The HRSA grant will bring additional resources to the current efforts to train future clinicians to work in teams that can fully address the needs of patients, particularly in underserved communities.

The HRSA award also brings resources to launch a primary care transformation fellowship. This additional year of training after residency will be available to family medicine, internal medicine, and pediatrics residency graduates. Fellows will receive a salary and additional coursework, including health care leadership courses, and clinical and teaching opportunities to prepare them to be academic faculty or transformational leaders in local health care systems.

AAMC honors Boonshoft School of Medicine professor



A Wright State University Boonshoft School of Medicine professor and administrator was one of nine individuals and one institution honored for their outstanding contributions to academic medicine at an Association of American Medical Colleges (AAMC) awards presentation on Nov. 13, during the Learn Serve Lead 2016: The AAMC Annual Meeting in Seattle.

Dean X. Parmelee, M.D., professor of psychiatry and pediatrics and associate dean for medical education, was recognized with the Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Award.

Parmelee has been an early pioneer of team-based learning (TBL) and medical education innovation for more than three decades. In 2001, he joined the Boonshoft School of Medicine as associate dean for academic affairs, where he partnered with colleagues to transform the largely passive curriculum into one that engages medical learners.

He has been instrumental in the design and implementation of many TBL modules incorporated throughout the medical school's curriculum. He also has worked to develop curricula that underscore the healing and compassionate qualities of physicians. He helped implement and

continues to teach in the Healer's Art course, designed by Rachel Naomi Remen, M.D., an elective in which almost 75 percent of first-year medical students enroll.

Parmelee is a well-known champion for active learning techniques at the Boonshoft School of Medicine and beyond. He served as the inaugural president of the Team-Based Learning Collaborative, a national not-for-profit group that promotes TBL in higher education. He is a widely published scholar on active learning, authoring and coauthoring many book chapters and peer-reviewed articles. He also has edited two textbooks on TBL, including "Team-Based Learning in Health Professions Education," which has been translated into several languages.

With his expertise in active learning and academic administration, Parmelee also was instrumental in establishing a medical school in Saudi Arabia and has served as a consultant faculty developer to institutions in the Middle East, including Iran; Southeast Asia; Africa; and more than 30 states in the United States.

In addition to his support of students and active learning strategies, he is an equally committed advocate and mentor for his faculty peers.

"Dr. Parmelee has created a community of medical educators, which will be his ultimate legacy," said Margaret M. Dunn, M.D., M.B.A., FACS, dean of the Boonshoft School of Medicine.

He has received many honors for his contributions to medical education. The American Psychiatric Association awarded him the Roeske Certificate of Recognition for Excellence in

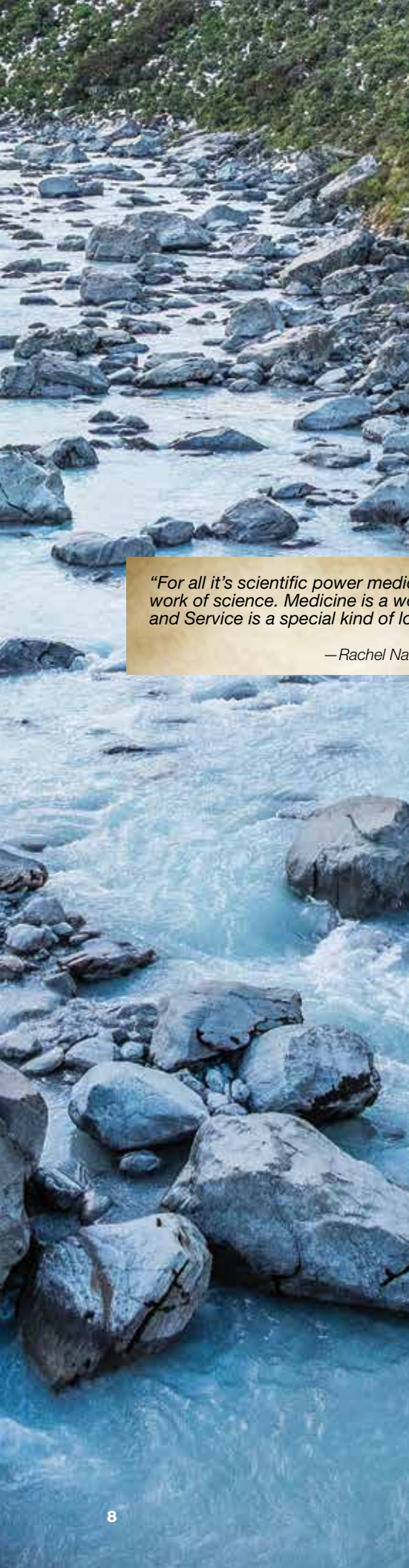
Medical Student Education in 2001 and appointed him a Distinguished Fellow in 2003. In 2012, he received the Faculty Excellence in Teaching Award from the Southwestern Ohio Council for Higher Education and was named the Kegerreis Distinguished Professor of Teaching, Wright State University's highest recognition for educators.

Parmelee earned his bachelor's degree at Antioch College and his M.D. at the University of Rochester School of Medicine. He trained in adult and child psychiatry as a resident and clinical fellow at Massachusetts General Hospital and Harvard Medical School. Before joining the Boonshoft School of Medicine, Parmelee was on the tenured faculty at the Virginia Commonwealth University School of Medicine, where he also served as director of the second-year curriculum and medical director of the Virginia Treatment Center for Children.

In addition to Parmelee, the AAMC recognized Elizabeth Armstrong, Ph.D., founder and director of the Harvard Macy Institute; Owen N. Witte, M.D., founding director of the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at the University of California, Los Angeles; and Philip Greenland, M.D., professor at Northwestern University Feinberg School of Medicine, among others. Michigan State University College of Human Medicine also was recognized for its outstanding community service.

A Meaningful Work

*Uniting in the face
of a trying profession,
physicians come
together to find
improved resilience
and meaning in
their work*



"For all it's scientific power medicine is not a work of science. Medicine is a work of Service and Service is a special kind of love."

—Rachel Naomi Remen, M.D.

Our drive to continue in the face of struggle and difficult times is a hallmark of what makes us human. For ourselves, and for those around us, this march forward through the fickle headwinds of life is a source of inspiration.

Our ability to work together, to hold others up, and to encourage each other is another one of our great strengths. But sometimes, we don't have to be so vocal — all we have to do is listen. Quietly supporting a friend or colleague can lift their spirits and help them weather the storm.

In the past few decades, physicians dealing with the difficulties of their profession have realized these truths.

They're coming together, both for themselves and the patients they treat.

"There's a deep river of meaning that runs through stories of physicians—it's untapped," said Evangeline Andarsio, M.D., '84, director of the Remen Institute for the Study of Health and Illness (RISHI) at the Boonshoft School of Medicine. "There's something about being with other doctors. It's a safe space."

Burnout and compassion fatigue

Numerous studies back up the fact that it's not easy being a doctor.

A 2012 study surveying more than 27,000 physicians, published in *Archives of Internal Medicine* and led by doctors at the Mayo Clinic, found that 45.8 percent of the respondents reported at least one symptom of burnout. Professional burnout is characterized by a loss of enthusiasm for work, feelings of cynicism, and a low sense of personal accomplishment.

Other studies have found higher percentages of physicians who reported

having at least one burnout symptom.

Those working at the front lines of care—family medicine, general internal medicine, and emergency medicine—reported the highest rates of burnout. The numbers held up when compared to differing education levels and other factors, leading authors to conclude that burnout is more common among doctors than other workers in the United States.

What that means for patients, unfortunately, is that the doctors treating them may be distracted when providing care. The data are unclear to the extent, as studies asking physicians to self-report errors yield low response rates and it is difficult to pinpoint a correlation between fatigue or distress and errors reported.

"Being a physician can be a soul-crushing experience. We have opened our hearts to care for people. We use all our knowledge and talent. We are the kind of folk that want to get it right every time," said Thaddene Triplett, M.D., '91. "Yet, we can get overwhelmed with it all. We are human."

Suicide risk

The numbers on suicide risk are exceptionally stark.

Compared with other professions, the study reports that a male physician's proportionate mortality ratio from suicide is 1.5 to 3.8 times higher. For female physicians, the difference is more: 3.7 to 4.5 times more risk.

"Unfortunately, the culture of medicine usually accords a low priority to physician mental health despite evidence of a high rate of untreated mood disorders and an

increased burden of suicide,” study authors wrote. “Too often, depression remains unrecognized or untreated until a physician’s personal distress compromises his or her capacity to care for patients.”

It may also be that doctors hide their problems for fear of losing their licenses, hospital privileges, or pathways to advancement. And so physicians may pass on care even though they have more access to it than others.

Presenters from the 2016 International Conference on Physician Health shared story after story depicting suicidal struggles that impact physicians and their families. The anecdotes are haunting.

One tells how a doctor killed himself with scotch and pills that he prescribed himself. Another came from a mother lamenting a lack of communication between a psychiatrist and therapist treating her physician son who would later die from suicide.

“Not much of a relationship despite the awesome responsibility. It’s his therapist who really knew him,” she said. “I think our boy fell through the cracks of psychiatric practice of the 21st century.”

And another comes from a physician’s son struggling with the changes that he saw in his father before the worst.

“My dad was kind, funny, smart, and sweet. He was a radiologist. He was 42 when he killed himself. I was 16. The summer before he died, he lost his sparkle, he became more and more a shadow of himself,” he said. “I remember sitting with him one evening and he wasn’t making any sense. He was seeing a psychiatrist and he was prescribed medication, but I don’t know if he was taking it. He hung himself in the basement of his office.”

Physician shortage

Despite horrific data sets and news articles depicting the inner troubles that doctors face, it’s difficult for the average person to sympathize. Medicine is viewed as a field of privilege after all, and doctors reap tremendous rewards for their efforts.

Because of that, people working in other professions wonder why burned out doctors don’t just retire early. Many could do so comfortably.

“If that was true, we’d have only one half our physicians. What it comes down to is patient care and safety,” Andarsio said. As director of RISHI, as well as its national Healer’s Art program for medical students, she helps support many methods that aid in the prevention — not treatment — of burnout. “To ignore that and say that everyone should quit — physicians just can’t.

Physicians are needed in the health care workforce for the care of patients. Now more than ever, physician burnout needs to be addressed.”

This is especially true because of the looming physician shortage predicted to occur in the next decade. The doctors of today need strategies to help prevent burnout to ensure continued quality care for their patients. In the future, the methods can help to buffer the shortage.

There are more than just a few factors feeding the physician shortage. Great financial promise of the IT world is pulling bright, young people away from the medical profession. In addition, more than 50 percent of medical students in America over the past decade have been young women whose life goals and professional goals are different than in the past. This percentage continues to grow.

“Now more than ever, physician burnout needs to be addressed.”

Rachel Naomi Remen, M.D.



Remen is a nationally recognized medical reformer and educator who considers the practice of medicine to be a spiritual path and a path of service. She is internationally

acclaimed as one of the earliest pioneers in the Integrative Health movement, and among the first to practice and teach a medicine of the whole person. As a doctor with a 63-year personal history of Crohn's disease, she brings the perspective of both physician and patient to her pioneering work and her approach to medical education.

She is founder and director of the Remen Institute for the Study of Health and Illness, professor of family medicine at the Wright State University Boonshoft School of Medicine, clinical professor of family and community medicine at the University of California San Francisco (UCSF) School of Medicine, and cofounder of the Commonweal Cancer Help Program that was featured in the highly acclaimed Bill Moyers PBS series, *Healing and the Mind*. Her many groundbreaking curricula enable physicians and other health professionals worldwide to recognize their work as spirit in action, strengthen their calling to heal, and renew their commitment to compassionate service.

Remen is the author of many professional papers and book chapters. A wise and masterful storyteller, her bestselling books, *Kitchen Table Wisdom: Stories that Heal* and *My Grandfather's Blessings: Stories of Strength, Refuge and Belonging*, have touched millions of lives and have been translated and published in 20 languages. She speaks nationwide to tens of thousands of people every year, in professional and public settings, reminding them of the power of their humanity to heal themselves and others, and their ability to use their lives to make a difference.

Other factors, highlighted in a study commissioned by the American Association of Medical Colleges, include an aging United States population, changes to the insurance marketplace, and rising retirements among doctors older than 55.

For patients, there's plenty of reason to be concerned. A shortage means longer wait times to get appointments, difficulties seeing specialists, and less personal time with physicians to discuss health issues.

For doctors, it unfortunately means an increasingly hectic workload on top of their already stressful positions that have for years yielded them higher rates of burnout, depression, and suicide risk than other occupations and education levels.

"Doctors can hurt a lot inside, yet there are few places for them to heal that hurt," Triplett said. "We experience a lot of loss."

It's just one reason the Boonshoft School of Medicine welcomed the institute to its new home at Wright State University. Its forebearer, the Institute for the Study of Health and Illness (ISHI), was founded by Rachel Naomi Remen, M.D., at Commonweal, a center for healing in Northern California.

"We are committed to RISHI's dream of making this kind of education for

"It's inspiring and powerful for the person sharing but also for the people listening."

professional resiliency available to all health professional students, residents, and practicing health professionals," said Margaret Dunn, M.D., M.B.A., FACS, dean of the medical school. "We want to develop health professionals who not only have the necessary scientific knowledge and superb technical skills to cure, but the heart to persevere through challenges, inspire others to embrace their calling, and to make the bedrock values of health care as tangible in our hospitals as the science of health care."

RISHI works to help caregivers

There is no one-size-fits-all solution. Many doctors turn to practices like yoga or tai chi to help manage stress and prevent burnout. Some get more out of other methods. What works depends largely on personal choice and comfort.

For practicing doctors, RISHI supports Finding Meaning in Medicine (FMM) groups. These are small, intimate cohorts



whose members share their personal stories as the price of admission.

Meetings of these groups take place throughout the world. One, comprised of doctors connected to the Boonshoft School of Medicine, has been meeting for years in the Dayton area.

"For thousands of years medicine has been a vocation of the heart. What is required for the healing of our patients and ourselves is that we reclaim our intention to love—to reach out to one another in ways that are simply human."

—Rachel Naomi Remen, M.D.

"I have been a member since the beginning. I had seen the burnout, with some of my classmates leaving medicine within 10 years of graduating," Triplett said. "I knew that we as doctors needed help, or a way to help each other."

A few rules govern FMM group interactions. Everyone respects and maintains the confidentiality of the group, understanding that the purpose of the gathering is to be respectfully attentive to what others share and not to offer advice or attempt to solve a problem.

"These groups use the self-discovery model of learning, following the guidelines of generous listening. Group members offer no advice. They are just listening to others reveal their truth," Andarsio said.

The acceptance felt in the small meetings helps physicians to open up and remember what drew them to medicine in the first place.

"I've seen it be a great resource for some of my colleagues," said Dean Parmelee, M.D., associate dean of the Office of Medical Education and professor of psychiatry and pediatrics at the medical school. "What keeps me continuing with it is the strength and support that I gain from it. It provides a safe and supportive place for sharing our challenges and often getting a helpful perspective."

Techniques used in the groups nurture self-exploration and mindfulness. Some involve sharing selections from classic world literature or reading personal poems. Just presenting problems to the group has helped doctors to see that they share many things in common.

There are certain experiences that only other physicians can fully understand. The ability to share with one another in a safe place is incredibly fulfilling and inspires a greater sense of satisfaction and meaning in their work.

"I hear people tell stories that are truly shocking. And you think, 'Wow, how'd you get through that? Where did you find the strength to go back into that room?'" said John Donnelly, M.D., professor of family medicine and associate professor of population and public health at the medical school. He wrote the original grant proposal to support the Healer's Art course for Boonshoft School of Medicine students. "It's a respectful and supportive environment. It's inspiring and powerful for the person sharing but also for the people listening."

Donnelly and many colleagues discovered the group well into their careers. One of the hopes behind bringing the Healer's Art course to the Boonshoft School of Medicine, in collaboration with Andarsio, Parmelee, and Bruce Binder, M.D., Ph.D., was to offer medical students a head start in nurturing resilience throughout their careers as physicians.

"We were working to safeguard students from cynicism. It was sort of an epiphany to give them the tools to pre-empt that,"

"There's something about being with other doctors. It's a safe space."

About the Remen Institute for the Study of Health and Illness

The Institute for the Study of Health and Illness (ISHI) was founded by Rachel Naomi Remen, M.D., in 1991 at Commonweal. In 2016, the institute became part of the Wright State University Boonshoft School of Medicine and was renamed the Remen Institute for the Study of Health and Illness (RISHI) in her honor.

RISHI's mission is to contribute to healing the culture of health care through innovative educational programs and the formation of supportive communities. Since its beginning, the institute has provided education and support programs for health professionals who practice a medicine of service, human connection, and compassionate healing.

The programs provide innovative tools, practices, and resources to help health professionals sustain their service values, humanity, and passion. They are available for every level of professional training — Finding Meaning in Medicine for physicians, nurses, and students; the Healer's Art course for medical students and physicians; and Power of Nursing for nurses and nursing students.

Through the programs, learners find deeper satisfaction and meaning in their day-to-day work lives and strengthen their original sense of calling. They discover that they are not alone and form authentic connections with colleagues while learning self-care tools that help them renew their commitments to themselves, their patients, and medicine.

For more information, rishiprograms.org



Donnelly said. “Down the road, we wanted them to have preparation.”

Another aim was to provide students tools to get through the arduous experience of a medical education.

“It was nice to see that you weren't the only one going through stress and difficult times during medical school. It was reassuring and a great way to build and strengthen bonds with your peers,” said Kareem Atwa, a second-year Boonshoft School of Medicine student who took the course his first year. “Whenever we feel pressure or need some guidance, we can always look to each other.”

The course offers a safe learning environment for a personal, deep exploration of the values of service, compassion, healing relationships, and reverence for life. The curriculum fills a gap left in traditional medical training that leaves out important human dimensions of practicing medicine such as deep listening, presence, acceptance, loss, grief, and healing, as well as relationships, self-care practices, and encounters with awe and mystery.

More than 75 percent of first-year students at the Boonshoft School of Medicine enroll in the elective course that was first offered in 2006. It has helped many gain perspective and an appreciation for connecting with those around them.

“You realize that you have to make time for yourself, to collaborate with people and get to know your classmates. With medical school, you think you'll be studying all the time but you realize that you'll burn out if you do that,” said Jennifer Barbadora, MS2. “You're developing a different aspect — that's unique to Wright State's medical school. You begin to feel that your time spent studying is more efficient by also making time for the relationships and hobbies that you value.”

Designed by Remen in 1991, the course has spread to more than 100 medical schools worldwide. Through the Center for the Study of the Healer's Art, established in 2005 at University of California, San Francisco, more than 15 peer-reviewed studies and general articles have been published showing the course's effectiveness.

“It brings a certain aspect of humanity back to our studies. I think sometimes we are so stuck in studying the science that we almost forget the human aspect of their story,” said Joycelyn Akamune, MS2. “I've learned you don't really know about a person until you talk to them — where

“In difficult times, a door to the heart may open unexpectedly and we are able to feel the invisible web that connects our deepest self to others and know that we are not alone.”

— Rachel Naomi Remen, M.D.

they come from, who they are, what people have gone through. You have to be an active listener and cultivate an environment so that people will open up.”

“I hope to give students the assurance that they are not alone,” said Triplett, who helps with the course as a clinical assistant professor of pediatrics at the medical school. “Medicine has its crappy days, sometimes endless crappy days. However, the mystery, awe, and the service of being a physician will also be there for them and we can be there for each other.”

The course has been taught for more than a decade at the medical school. In that time, numerous students have followed up after graduation to let faculty know how the training has helped shape their development as practicing physicians.

For Boonshoft School of Medicine students entering their third and fourth years, when they begin clinical rotations, there is another Finding Meaning in Medicine group. It is led by students alongside faculty members who serve as guides.

“It’s more informal. The first hour is a social gathering, with food and drinks. Then we reconnect,” Donnelly said. “The student leading it will introduce a topic, we lay out the guidelines for the discussion, and off we go.”

RISHI also supports many other types of Finding Meaning in Medicine groups, including gatherings for residents and registered nurses. There also is the Power of Nursing program for those still in nursing school seeking better resilience and strategies to prevent burnout. Launched in 2012, it has spread to seven nursing schools and nursing residency training programs.

Nurturing resilience

In their everyday lives, many doctors lack the support and perspective gained from coming together. The simple act gives them an outlet for the pains their work can inflict.

“I hear their stories, they have listened to mine. They are thoughtful, loving people who often have no way to express that. We can look after each other. We can walk each other home,” Triplett said. “I feel encouraged as a physician to continue in my work after these meetings.”

The groups lend physicians more strength than going it alone. Through reflection and self-exploration, doctors also begin to learn personal strategies that help them improve their resilience.

The beauty is that there is no right or wrong way to get there. For some physicians, just analyzing difficult situations to identify stressors can give them the perspective they need for renewed strength. Others have special rituals that they use to maintain the right frame of mind and clarity of purpose.

One key is finding meaning in their work, an important part of continuing in

medicine over the long term. The sentiment is powerfully illustrated by an old Sufi parable about three stonecutters that Donnelly shares with his students.

Finding meaning

As the story goes, everyone can see the stonecutters are all doing the same task. People bring them rocks, they cut them into blocks, and then someone comes along to take the blocks away. The process repeats itself over and over again.

Imagine that we walk up to the first stonecutter to ask him about his work.

He responds with hostility, saying, “Idiots, you can see what I’m doing. I am cutting rocks into blocks over and over again. I’ve been doing it from the moment I started working. I’ll do it till the day I die. Why are you asking me such a stupid question? Use your eyes!”

When we go up to the second man to ask what he’s doing, he greets us with a smile.

“I’m earning a living here for my beloved family,” he says. “There’s good food on the table and a roof over our heads and the children are growing strong.”

Talking with the third man, we find something different in our exchange. He has a perspective all his own.

“Ah. I am building a great cathedral, a holy lighthouse, where people who are lost and frightened can come and remember that they are not alone,” the stonecutter says. “And it will stand for a thousand years.”

What is powerful about the parable is its clear depiction of someone who has given himself a purpose. Though his work is hard and repetitive, it is his attitude that makes all the difference. He has taken charge of the hopeless situation he’s in and found meaning for his daily walk.

“How can you expect someone to work so hard without meaning?” Donnelly said.

Finding one’s meaning is something that is deeply personal. But uncovering it can be a great source of strength.

“The passion that I had for delivering babies, I bring that same passion to this work — prevention of physician burnout,” Andarsio said. “It’s all about patient care and safety, and a part of that is caring for physicians.” **VS**

—Daniel Kelly



Faculty in Focus



Learn, lead, and serve

Kate Conway, M.D., '05, wasn't sure she wanted to attend medical school. She loved studying biology, but she also loved theater and creative writing. So when she was in college, a wise mentor encouraged her to explore her other interests.

"I had a great mentor in the biology department at the University of Dayton. He encouraged me to explore other areas of study," Conway said. "I graduated with a degree in biology and a double minor in English and human rights. I loved being able to explore other fields of study."

But she found that she kept coming back to medicine.

"I was definitely a science nerd," Conway said recently during a break from seeing patients and teaching at the Boonshoft School of Medicine, where she is an assistant professor of family medicine and director of medical education for the Department of Family Medicine. "I loved biology. Whenever I studied the material, hours flew by. I never felt like I was burdened by studying biology."

During the summers after her senior year of high school and freshman year of college, she worked in an internship in genetics at the

Cleveland Clinic. "I saw the inside scoop of how physicians applied science with humanity," she said. "I was hooked. I became much more interested in medicine as a career."

Her mother's experience as a physical therapist also influenced her decision to go into medicine. Mary Ann would share stories with Conway, her sister, and her brother about her patients. "She found so much joy in learning each person's individual gift," Conway said. "She went above and beyond what needed to be done as a physical therapist."

Conway grew up in Fairview Park, a suburb of Cleveland, moving there when she was 3. The family moved from Dayton for her father's job. Mike was a TV news reporter. He worked on human-interest stories and special reports. He was passionate about bringing awareness of organ donation to the public.

“He took us to events where donors and recipients were gathered,” Conway said. “I have always remembered their moving stories and was inspired by my dad being such a strong advocate for this cause, giving voice to people who needed it most.”

Her parents demonstrated generosity and kindness to others. “My parents told us to be aware of how lucky and blessed we are to have what we have,” she said. “They encouraged us to reach out and lift others up.”

Her parents also encouraged them to dream big and work humbly. “You can do anything, as long as you work hard and are your best self,” Conway said.

Learn, lead, and serve

She attended Magnificat High School, a girls’ Catholic college-preparatory high school, whose mission is to educate young women to learn, lead, and serve. “It was a very comfortable environment to develop yourself as a leader and find your voice,” Conway said. “Magnificat was a place to develop leadership, service, and confidence.”

Magnificat’s motto of learn, lead, and serve also was the motto at the University of Dayton when she attended college. “Magnificat inspired me to become a self-motivated learner of the world,” she said. “UD inspired me to believe in the power of community and commitment to social justice.”

At the University of Dayton, she saw faith in action. “UD was so committed to engaging its students in outreach and service,” she said. “The Masses were the best. You were gathered with your roommates, friends, and other students from the student neighborhoods. The priests gave vibrant messages in their homilies that spoke directly to the students’ hearts.”

That commitment to outreach and service remained with her. So when she decided to go to medical school, she looked for a school that emphasized outreach and community service. She found that at the Boonshoft School of Medicine.

“I chose to attend the Boonshoft School of Medicine because of its commitment to the community,” she said. “The Boonshoft School of Medicine was committed to cultivating students into people doctors, not just science doctors.”

She recalls studying with some of her closest friends. “We picked different places on campus or throughout the city of Dayton. I think we found every library and coffee shop in the city!” Conway said. “We were both super serious and super silly together. It was a supportive group that helped all of us get through medical school.”

She stays in touch with those friends. “Being back here now as faculty, the memories of all the challenges and celebrations we had together often make me smile,” she said. “The time you spend here as a student is life changing.”

She met her husband, Ben Kimmel, during her first year of medical school. Another medical student, Christian Agricola, M.D., ‘05, introduced the couple. Like Conway, Agricola was from the Cleveland area. When they were on winter break, Agricola suggested they meet somewhere in Cleveland. “He said, ‘You bring a friend, and I’ll bring a friend,’” she recalled. “Unbeknownst to me, Christian was setting me up! I talked to his friend, Ben, the whole time. I knew right away I liked him.”

They dated throughout medical school long distance. Ben’s job was in Cleveland. He was working for Cleveland Clinic in the finance department. “We put a lot of miles on our cars and memorized every exit on I-70 and I-71!”

Once Conway was in Cleveland, they got married during her second year of residency. “I was ready to marry him after the second date,” she said. “But it was a lesson in patience that paid off.”

Global health and refugee medicine

During medical school, she participated in the Global Health Initiative (GHI), a student organization that was founded in 2000 by first-year medical students at the Boonshoft School of Medicine. GHI’s mission is to enhance the education of WSU medical students by facilitating their exposure to both the medical issues facing people in other countries and those of people in the United States who have emigrated from other countries.

The mission resonated with Conway. She became involved in the organization and went to Guatemala with two other Boonshoft

“There is a need for refugee medicine. Ohio has been at the forefront of welcoming newly arrived refugees.”

School of Medicine students and Dave Eberlein, M.D., of Cleveland Clinic's Family Medicine Residency to work in a clinic located in a very rural area of Central America. Eberlein inspired Conway to consider global health as an extension of her interests in caring for underserved populations. "The experience made me realize that I wanted to have this as part of my medical career," Conway said.

But she also knew she wanted to be a family physician. "I saw the family physician as having a unique role with their patients and their families. The family physician is the patient specialist, the physician who knows the patient best. The family physician is the first point of contact and the director for a team of others all centered around the patient to provide the best care possible," Conway said. "I knew I could be happy doing this for the rest of my life."

She wanted to combine family medicine with global health. "That's why I went to University Hospitals Cleveland Medical Center for my residency in family medicine," she said. "I completed the global health track and earned my Master of Public Health degree through Case Western Reserve University. This combination helped develop my physician skills toward a global patient population, seeing how to effect change for my individual patients upstream and in their community."

She recognizes Masahiro Morikawa, M.D., M.P.H., as her residency mentor and global health rock star. "He engaged us in such meaningful work both at home and abroad. He was a humble and brilliant clinician who integrated global health medicine into



everyday work," Conway said. "To this day I still hear his words reminding me of how to care for the sickest patients. I like to share my favorite Mori-isms with my own resident team now."

During residency she took two more trips to Guatemala to work on various community health outreach programs for the indigenous Mayan populations. She also gained experience working in refugee medicine in Cleveland. "This was an amazing opportunity," she said. "I was doing global health right there in my own neighborhood."

The United States has become home for people seeking refuge from war, persecution, failed states, and unremitting instability. "There is a need for refugee medicine. Ohio has been at the forefront of welcoming newly arrived refugees," Conway said. "Within the past five years, Ohio has welcomed more than 13,000 refugees."

After residency, she spent the next five years working in Cleveland at a Federally Qualified Health Community Center where she was the director of a refugee health program and later the medical director of a new start-up clinic specializing in refugee and immigrant populations. She worked on a multidisciplinary team with other medical professionals, including behavioral health specialists, community health workers, and nurse specialists.

"Caring for refugees helps us learn how to care for any patient who may be part of a vulnerable and marginalized group," Conway said. "Patients who are historically underserved suffer worse health outcomes. We must work together to identify health disparities and remove barriers."

She saw firsthand how refugees' health was affected by what was going on in their lives. A stressful new job or lack of one could affect a patient's health. For younger children, difficulties overcoming the language barrier in school might affect their health. "I learned to pay attention to the other things going on in their lives," Conway said. "Treating the refugee population is more than just treating their symptoms. You need to know some world history, geography, culture, and most of all how to listen to their story and honor their journey."

As she started building the refugee program, medical students, medical residents, and dental students approached her about refugee medicine and mentoring their research projects. Other physicians, hospital systems, and community organizations sought her out to teach on topics of refugee health and primary care integration. "I realized that I was doing more and more academic medicine, and I loved it," she said.

Academic medicine

She completed a fellowship in academic medicine through Northeast Ohio Medical University and contacted faculty members at the Boonshoft School of Medicine. "I had always kept in touch with faculty and trusted their advice," Conway said. "I reached out again, asking questions about next steps in my career."

Bruce Binder, M.D., Ph.D., invited her to come talk with the Department of Family Medicine. That invitation led to a job offer in academic medicine. While she wasn't necessarily looking to leave her job in



Cleveland and move her family to Dayton, Conway couldn't pass up the opportunity.

"I cried all of the way driving home to Cleveland, because I knew I was going to love this job," Conway said. "I have been here for more than two years, and I love it. My career is my calling and service."

As an assistant professor of family medicine and director of medical education at the Boonshoft School of Medicine, Conway is also newly responsible for the medical school's international health curriculum. "Our goal is to expose all medical students to the value of family medicine and primary care in meeting the needs of our global patient populations abroad and locally," Conway said.

In addition to teaching, Conway spends time in the clinical setting as a family physician with Wright State Physicians Family Medicine. Medical students often accompany her during clinic sessions. She also does in-hospital patient rounds and enjoys working with the Family Medicine residents on their inpatient team.

Conway encourages her students and residents to serve others. "Bringing that perspective to my students is a really important piece of their education," she said. "Staying humble and remembering to put others first can bring so much joy to your daily tasks. It's important to find happiness in the small things to sustain a lifelong, fulfilling career."

The third part of her role with the Boonshoft School of Medicine includes research. In 2016, a team of researchers led by Conway was approved for a \$15,000 award by the Patient-Centered Outcomes Research

Institute (PCORI) to support a project focused on better understanding the health perspectives of Ohio's refugee populations. Conway and her team will use the funds provided through PCORI's Pipeline to Proposal Awards program to build a partnership of individuals and groups who share a desire to advance patient-centered outcomes research focused on the health of resettled refugees in Ohio.

Collaborative resettlement and integrated refugee health care exists in Ohio, but it is still in the beginning stages. "Partners with skill sets from health care and medical education, community engagement, and public health must act in unison to elevate the health status of this vulnerable population," Conway said. "Most importantly, the voice of the refugee must be at the center of emerging strategies."

The project aims to better understand the health perspectives of Ohio's refugee populations. So far the bulk of best practices for health care delivery has been determined by expert opinion, national guidelines, and anecdotal experience. "To achieve full health potential, refugees need to guide our development and research further," Conway said.

Maintaining a healthy balance

When Conway is not teaching medical students, seeing patients, or conducting research, she is enjoying time with her husband and their three children. They have two daughters, ages 8 and 6, and a 2-year-old son. Like Conway, her children are interested in theater. They are taking classes at a local community theater in Dayton. "We enjoy seeing shows together and performing the best songs back at home for each other," she said. "I love the confidence that theater gives kids."

Even though both she and her husband have busy careers, they make time for their family.

"The key to a healthy balance? We are still figuring it out as we go!" Conway said. "We discuss our schedules and determine what's feasible. Then when we mess up and crisscross our calendars, we know to laugh and support each other. We do our best, and we know it looks and feels pretty messy sometimes!"

She also is learning to say no more and yes more smartly. "My family lets me know when I'm getting out of balance," she said. "My husband is very supportive, and we work hard to make sure everyone is getting what they need. Being a mom is the hardest and yet most rewarding job I have. It brings out the best and the worst in me all at the same time! I can teach a classroom of students about asthma or run a productive research meeting, but watch me try and convince a 6-year-old to clean her room. I have probably failed that test like a million times."

In addition to her husband, Conway is close to her sister, who lives in Cleveland. "We're really close in terms of being mommy supports to each other," she said. "We call each other and share stories of the crazy chaos only we could love."

Conway hopes her students see the struggle and reward of career and family. "I try and bring a healthy perspective to my students. There is no perfect right or wrong for everybody," she said. "We all stumble and feel lost at times. We all could benefit from leaning on each other a bit more and giving ourselves more credit than we do. Live the questions and answer your passion. You won't regret it!" **VS**

—Heather Maurer

Life-saving Medical Care for Law Enforcement Officers

The Division of Tactical Emergency Medicine works with special operations teams in dangerous environments where injury is a constant threat

When a police officer taking his fitness test during SWAT school at the Ohio Peace Officer Training Academy in London, Ohio, dropped to the ground suffering from cardiac arrest, Brian L. Springer, M.D., jumped into action and resuscitated the officer.

“We had an automated external defibrillator on him within minutes and got his pulse back after a shock,” Springer said. “He was helicoptered in critical condition. Twenty-four hours later, he called me on my cell and thanked me for saving his life.”



As director of the Division of Tactical Emergency Medicine in the Department of Emergency Medicine at the Wright State University Boonshoft School of Medicine, Springer and Jason R. Pickett, M.D., assistant professor of emergency medicine, work with regional law enforcement special operations teams in aviation, bomb disposal and SWAT teams that work in dangerous environments where injury is a constant threat.

The division, a component of the department's Center for Prehospital and Operational Medicine, supports medical care of law enforcement agencies' special operations through qualified faculty serving as tactical medical providers. Springer and Pickett are medical advisors and liaisons, providing lifesaving measures in the tactical environment and initiating medical care as necessary. They teach the officers about self-care and buddy-care and tactical emergency medical support.

"We know that the sooner that treatment is initiated, the better the odds of survival," said Springer, who also is an attending emergency physician at Kettering Medical Center.

That training is making a difference. SWAT officers, medically trained by Springer and his

colleagues, can immediately treat their colleagues who are injured. Springer said that a division-trained officer treated his colleague who suffered a gunshot wound to his leg from an unintentional discharge while holstering his sidearm. Another division-trained officer provided immediate medical attention to a colleague who suffered a severe laceration to his forearm when a breaching shotgun was used to blow off a door handle. The handle struck the officer, causing significant bleeding.

"In both instances, rapid control of bleeding with tourniquets quickly controlled hemorrhage, preventing shock," Springer said.

Another division-trained officer found an intoxicated individual, whose foot was amputated by a train after he had passed out on the train tracks. The officer quickly applied a tourniquet before the ambulance arrived, saving the individual from bleeding out.

The division's attending physicians and residents have provided care to officers, bystanders, and suspects. They have treated blunt injury, sprains, strains, lacerations,

contusions, gunshot wounds, intoxication, chemical exposures, traumatic amputation, blast trauma, cardiac and respiratory complaints, and cardiac arrests. They have treated, released, and transported patients to hospitals via law enforcement vehicles, ambulances, and helicopters.

Springer and his colleagues have examined suspects and their families after raids and exposure to tear gas. They have provided rapid assessment and medical clearance on scene. "Most individuals, even suspects, are grateful to be medically evaluated," Springer said. "They are scared and may be injured. They are not expecting to receive medical care so soon after contact with law enforcement."

Springer identifies himself as the law enforcement team's medical provider. He asks the individual whether he or she is injured. "Overall, injuries tend to be minor," he said. "We have rarely had to send anyone to the emergency department for more detailed evaluation and treatment."

Even if the suspect has committed a crime, Springer explained that his job is to provide compassionate care to that individual. "The ability to provide compassionate care to all in

need is something that we teach in emergency medicine from the first day of residency training,” he said. “Your job is to evaluate and treat the patient, not pass judgment on them. This is no different whether you are in the emergency department or out on the streets working with law enforcement or EMS.”

Although most operations regionally are related to narcotics trafficking or barricaded suspects usually in the context of drugs or domestic violence, the division has supported operations where the focus is on international or domestic terrorism. It has trained hundreds of law enforcement officers in Ohio on self-aid buddy-aid



(SABA),

which is a military concept that has been adapted to civilian law enforcement. Officers are taught basic life support and limb-saving techniques that are key to surviving a life-threatening injury.

“In a terror attack or other violent threat to law enforcement and the public, law enforcement cannot rely on immediate response from emergency medical services. They must be able to bridge the gap between time of wounding and EMS response through aggressive hemorrhage control and airway management,” said Springer, who also serves as the tactical medicine director for the Ohio Tactical Officers Association. “It would be ideal if tactical medical providers could be embedded with law enforcement officers on the scene all of the time. But that’s not realistic.”

Tactical emergency medicine has gained tremendous insight from U.S. military operations. “What we learned about tourniquets, hemostatic dressings, and management of hemorrhages during the military conflicts in the Middle East has helped shape and improve tactical medicine,” said Springer, who served six years in the Marine Corps Reserve and was deployed during the first Gulf War before becoming a physician. “Most importantly, there is the relatively newfound realization that tactical emergency medicine is not just for SWAT

teams. All civilian

law enforcement officers are potentially in harm’s way and need to know these skills.”

Springer and his colleagues also train emergency medicine medical residents in tactical emergency medical support. Interested

medical residents attend the tactical emergency medical support resident interest group during their first year of residency. Meetings include lectures, tactical first aid, hands-on activities, discussions of law enforcement tactics, equipment lessons, and field exercises.

“We prefer to wait until residents are mostly done with their intern year before we allow them to be active with a tactical emergency medical support team,” said Springer, who also serves as the medical director for the Kettering Fire Department and a police officer for the Grandview Medical Center

Police Department. “It gives us a chance to vet and train them, and it gives them a chance to get through the internship and decide whether they want to be a part of this.”

For those who want to pursue tactical emergency medical support, the next step is to attend a tactical EMS class. Then, equipment is issued to the medical resident, and that person is assigned to a team. The medical resident is connected with attending-level mentors on the team to help them transition into an active role. “We want our emergency medicine residents out there in the field using their skills,” Springer said. “We want them to take the lessons learned in the field and bring them back to the emergency department.”

He explained that a physician who has experienced prehospital care, whether in tactical emergency medicine with public safety organizations or in a traditional emergency medical services setting, will be a better provider in the emergency department of a hospital. In addition, that physician will be a more effective medical director who can work with both emergency medical services personnel and tactical emergency medical services.

“Working with law enforcement officers and emergency medical services personnel in the field has given me tremendous respect for the day-to-day challenges they face,” Springer said. “It also has guided me in seeking solutions for the medical concerns faced by public safety.” **VS**

—Heather Maurer

Research Spotlight

Wright State University awarded prestigious grant from the Office of Naval Research



The Office of Naval Research has awarded Wright State University researchers a \$7.5 million, five-year Multidisciplinary University Research Initiative (MURI) grant to study precision medicine approaches to physical training.

The highly competitive Department of Defense MURI program supports research teams working in more than one traditional science or engineering discipline to accelerate breakthroughs in basic research.

The U.S. military relies on physical training to increase and maintain force readiness. Physical fitness impacts readiness, particularly during initial recruit and special operator training. Over-training can also lead to performance degradation and injury. The Office of Naval Research has particular interest in understanding the individual response to training as it could allow high-impact optimization of force readiness in warfighters from diverse backgrounds and physical abilities.

The Wright State-led project, titled “Precision High-Intensity Training Through Epigenetics” (PHITE), is focused on discovering epigenetic biomarkers that identify individuals who could benefit from high-intensity training as well as determining when individuals have reached peak performance.

The principal investigator for the team is Timothy Broderick, M.D., associate dean for research affairs at the Wright State Boonshoft School of Medicine and chief science officer at the Wright State Research Institute. The PHITE project includes a world-class team of researchers from Wright State University, the University of Alabama at Birmingham, and the Salk Institute.

“Traits such as height, exercise endurance, and muscle strength are inherited from our parents through genes,” Broderick said. “But variation in the DNA sequence of sports genes explains significant difference in our

athletic performance, but not all. The remaining variation is attributable to environmental factors, including gene-environment interactions.”

Epigenetics — literally “upon genetics” — describes how environmental factors turn genes on and off, thereby changing traits. Epigenetics has become a very hot field in science. In January 2015, President Barack Obama announced the Precision Medicine Initiative, an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle.

“Epigenetics helps explain how exercise and nutritional supplements change the ‘read out’ of muscle genes. The DNA sequence does not change, but with proper training an athlete’s muscles become larger and more powerful,” Broderick said.

In the PHITE project, young male and female volunteers will participate in a 12-week training program. One group will receive traditional moderate intensity training, while the other group will receive high-intensity interval training. At the beginning and end of their training, each group will undergo extensive physical evaluation and epigenetic analysis of their blood to determine biomarkers of fitness.

“This research is exciting because it will help us understand how exercise alters cellular memory and metabolism at the molecular level,” Broderick said. “Our work could significantly improve health and performance through a combination of tailored exercise and easy-to-obtain epigenetic biomarkers.”

Researchers identify predictors of transition to heroin use

In 2014, more people in the United States died from drug overdoses than in any other year, according to the Centers for Disease Control and Prevention. Of the 47,055 drug overdose deaths in 2014, 61 percent involved some kind of opioid (prescription pain relievers or heroin).

Many communities throughout the United States are in the midst of pharmaceutical opioid and heroin epidemics. Increases in illicit pharmaceutical opioid use, such as OxyContin, Fentanyl, Vicodin, and Percocet, have been associated with the risk for transition to heroin use.

To help identify predictors of transition to heroin use among young adults, researchers at the Wright State University Boonshoft School of Medicine conducted a 36-month study supported by a grant from the National Institutes of Health and the National Institute on Drug Abuse.

The study, "Predictors of Transition to Heroin Use Among Initially Non-Opioid Dependent Illicit Pharmaceutical Opioid Users: A Natural History Study," is among the first to identify the predictors of heroin

commentaries, and policy analyses in the area of drug, alcohol and tobacco use, and dependence.

Led by Robert G. Carlson, Ph.D., principal investigator, professor of population and public health and director of the Center for Interventions, Treatment and Addictions Research (CITAR) in the Department of Population and Public Health at the Boonshoft School of Medicine, a team of researchers recruited 383 young adults, age 18-23, in the Columbus, Ohio area who were active non-medical users of illicit pharmaceutical opioids. However, these users were not dependent on pharmaceutical opioids or heroin. They had no history of heroin use or illicit drug injection. After a baseline interview, the study participants were interviewed every six months for three years to describe changes in drug use practices and identify predictors of transition to pharmaceutical opioid dependence and heroin initiation.

Over 36 months, 27 (7.5 percent) of the final 362 study participants initiated heroin use. The rate of heroin transition was 2.8 percent per year. Although almost half of the sample were African American, all those who initiated heroin use were white.

The researchers concluded that the following characteristics were associated with greater risk of transitioning to heroin use: having first used illicit pharmaceutical opioids at age 15 or younger, used pharmaceutical opioids to get high but not for self-medicating purposes, used pharmaceutical opioids by sniffing or snorting (as opposed to orally ingesting), or becoming dependent on pharmaceutical opioids.

"This is the first longitudinal study conducted using a community-based sample of young pharmaceutical opioid users in the United States to identify significant predictors of heroin initiation," Carlson said. "It largely supports hypotheses derived from previous cross-sectional and retrospective research among heroin users."

Carlson said that the findings from a community-based sample provide insights into key dimensions for the design and testing of urgently needed interventions.

"Our results suggest that preventing transition to non-oral pharmaceutical opioid use, preventing transition to opioid dependence by reducing or eliminating the frequency of pharmaceutical opioid use and educating users about the risks involved for those who are non-opioid dependent are important intervention targets," Carlson said. "Preventing illicit pharmaceutical opioid initiation at an early age is vital."

In addition to Carlson, members of the research team from the Boonshoft School of Medicine included Raminta Daniulaityte, Ph.D., associate professor of population and public health and CITAR associate director; and Ramzi W. Nahhas, Ph.D., associate professor of population and public health. Silvia S. Martins, M.D., Ph.D., associate professor of epidemiology at Columbia University Mailman School of Public Health, also is a member of the research team.

initiation among active, non-dependent illicit pharmaceutical opioid users using longitudinal data.

The study has been published in *Drug and Alcohol Dependence*, a peer-reviewed international journal that publishes original research, scholarly reviews,



Researchers study tweets to learn more about use of marijuana edibles



Social media such as Twitter are shedding light on how people are consuming marijuana edibles, including brownies, cookies and candies. Tweets related to the use of marijuana and derivatives are providing data for researchers at the Center for Interventions, Treatment and Addictions Research (CITAR) in the Wright State University Boonshoft School of Medicine and the Ohio Center of Excellence in Knowledge-enabled Computing (Kno.e.sis), who are using Twitter data analysis as a tool to monitor emerging drug use practices and trends.

Their study, “Those Edibles Hit Hard’: Exploration of Twitter Data on Cannabis Edibles in the U.S.,” is the first to attempt to describe and analyze Twitter data on marijuana edibles. The study has been published in *Drug and Alcohol Dependence*, a peer-reviewed international journal that publishes original research, scholarly reviews, commentaries, and policy analyses in the area of drug, alcohol and tobacco use, and dependence.

Despite the overall positive attitude about marijuana edibles, negative tweets revealed that users of marijuana edibles could be at risk of overdosing if they are not aware about the real potency of edibles, according to the Wright State researchers. Many do not understand how much is safe to consume and how often they can consume it. In addition, the amount of THC, one of the main mind-altering chemicals found in cannabis, varies from one product to another.

“Our results demonstrate that adverse effects linked to cannabis edibles are not isolated cases,” said Francois R. Lamy, Ph.D., postdoctoral research fellow in CITAR and Kno.e.sis. “If you take into consideration that Twitter users overall have a positive attitude toward marijuana edibles, it suggests that more users will try to consume edibles and will be at risk of experiencing adverse events if not forewarned of the real potency of edibles.”

Led by principal investigators Raminta Daniulaityte, Ph.D., associate professor of population and public health and CITAR

associate director, and Amit Sheth, Ph.D., Lexis-Nexis Ohio Eminent Scholar and executive director of Kno.e.sis, an interdisciplinary team of researchers has developed and deployed an innovative software platform, eDrugTrends, capable of semiautomated processing of social media data on cannabis and synthetic cannabinoid use in the United States.

The three-year study is supported by a \$1.4 million grant from the National Institutes of Health and the National Institute on Drug Abuse.

“The key strength of our collaborative project is the creative adaptation of the state-of-the-art technological advancements in computer science and engineering to meet the unique needs of drug abuse research,” Daniulaityte said.

Sheth described eDrugTrends as a social big data analytics platform that enables near real-time analysis of large and diverse social media content to tease out insights.

Tweets on marijuana edibles were collected using Twitter’s streaming application programming interface that provides free access to 1 percent of all tweets. The Twitter data filtering and aggregation framework was available through the eDrugTrends platform.

Over a three-month period, eDrugTrends collected more than 100,000 tweets mentioning marijuana edibles, with 26.9 percent containing state-level geolocation. The researchers found differences in the proportion of Twitter users posting about edibles that were statistically significant, with more posts coming from states where marijuana use is legal than from states where it is prohibited.

“The results of our study demonstrate the ability of our platform, eDrugTrends, to analyze regional differences in terms of marijuana edibles consumption and capture the general opinion of Twitter users on this particular product,” Lamy said. “Twitter data analysis offers the possibility to retrieve timely information concerning trends of emerging cannabis product use.”

The Wright State researchers hope that the results of the study will reinforce the content testing of marijuana edibles as already established by the states of Colorado and Washington. However, Lamy warned that content testing would not affect cannabis users who cook their own edibles and don’t really know the THC content of their homemade products.

“Educating marijuana users to consume edibles safely is critical,” he said.

The Twitter data could help policymakers tackle and target specific aspects of a given phenomenon or trend. Classical methodologies are unable to capture emerging drug use trends because they require an extensive period of time to collect and analyze the data.

“Monitoring Twitter offers the possibility to detect new trends as they emerge and observe their changes over time,” Lamy said.

“Considering the actual changes happening across the nation in terms of cannabis legislation, the ability to obtain epidemiological data in real time through Twitter represents a real advantage to both prevention and harm minimization. Social media provide a large amount of volunteered data from a larger user base.”

Other senior members of the research team from Wright State include Ramzi W. Nahhas, Ph.D., associate professor of population and public health, and Robert G. Carlson, Ph.D., professor of population and public health and CITAR director. Silvia S. Martins, M.D., Ph.D., associate professor of epidemiology at Columbia University Mailman School of Public Health; Edward W. Boyer, M.D., Ph.D., professor of emergency medicine at the University of Massachusetts Medical School; and Monica Barratt, Ph.D., postdoctoral fellow at the Drug Policy Modelling Program, National Drug and Alcohol Research Centre, University of South Wales Australia, also are members of the research team.





Game.
Set. 
Match
Day 2016

1,000 Words

The daughter of Nicolas Antoon, M.D., accepts the Match Day envelope from Dean Margaret Dunn, M.D., M.B.A., to discover the family is moving to Orlando, Florida, for her father's emergency medicine residency at Orlando Health.

—Photo Will Jones

On The Move

Eric S. Bennett, Ph.D., named professor and chair of neuroscience, cell biology and physiology



Eric S. Bennett, Ph.D., has been appointed professor and chair of the Department of Neuroscience, Cell Biology and Physiology at Wright State University, effective Oct. 1, 2016.

Bennett comes to Wright State from the University of South Florida (USF) Morsani College of Medicine where he served as professor and vice chair of the Department of Molecular Pharmacology and Physiology and associate dean for Ph.D. and Postdoctoral Programs. He was responsible for the development and implementation of new programs at the department and college levels in addition to maintaining significant teaching and course administration duties and an active and well-funded research program.

Bennett was highly heralded as an excellent educator at USF, having won many awards from medical students (five), Ph.D. students (two) and the Office of Educational Affairs (two).

After receiving a B.S. in applied and engineering physics from Cornell University, Bennett earned his master's and Ph.D. degrees in biophysics from the University of Rochester School of Medicine and Dentistry. He then moved to the University of Colorado Health Sciences Center for a postdoctoral fellowship in neuroscience.

Julie Gentile, M.D., '96, named interim chair of psychiatry



Julie Gentile, M.D., has been named interim chair of the Department of Psychiatry, effective Jan. 1, 2017. She also serves as a professor in the department and has taught at Wright State University since 2000. During her time at the university, Gentile has also served as director of Medical Student Mental Health Services and as director of the Division of Intellectual Disability Psychiatry.

She has been the Professor of Dual Diagnosis for the Ohio Department of Mental Health and Addiction Services, the Ohio Department of Developmental Disability, and the Ohio Developmental Disabilities Council since 2003 and has evaluated more than 3,000 individuals with co-occurring mental illness and intellectual disability.

Gentile is the recipient of both the American Psychiatric Association's and the National Association for the Dually Diagnosed's Frank J. Menolascino Award for Excellence in Psychiatric Services for Developmental Disabilities and the Excellence in Contributions to Clinical Practice Award from the National Association for the Dually Diagnosed. She is also the recipient of the Nancy Roeske Award in Medical Education from the American Psychiatric Association, along with numerous teaching awards.

Gentile earned her M.D. from the Wright State University Boonshoft School of Medicine and completed an internship and residency in the Department of Psychiatry. She is a member of the Alpha Omega Alpha Medical Honor Society.



Douglas W. Leaman, Ph.D.,
named dean of College of Science
and Mathematics

Douglas W. Leaman, Ph.D., has been named dean of Wright State's College of Science and Mathematics, effective Oct. 1, 2016. He was chair of the Department of Biological Sciences at the University of Toledo before coming to Wright State.

Leaman is experienced in scholarship, pedagogical and curricular innovation, strategic planning, team building and administrative leadership. As chair of the University of Toledo's biology department, he has overseen the education of two-thirds of the majors in the university's College of Natural Sciences and Mathematics.

Leaman is an innate immunologist, specializing in biochemical and physiological aspects of host-virus interactions. He continues to run a successful research laboratory, which gives him insight into current trends in the life and physical sciences and an advantage in an administrative position that requires appropriate allocation of resources and teaching loads.

Leaman obtained his bachelor's and master's degrees from the Ohio State University, majoring in molecular growth and development/animal science. He earned his Ph.D. in molecular biology and reproductive physiology from the University of Missouri. Before arriving at the University of Toledo, Leaman worked at the Cleveland Clinic Taussig Cancer Center.

Events



Internal Medicine Reception during the American College of Physicians Annual Meeting in San Diego

March 31, 2017, 6–7:30 p.m.

Marriott Marquis San Diego Marina, Room: Marina Ballroom F, 333 West Harbor Dr., San Diego, CA 92101



Medicine & Spirituality Conference Pediatric Health and Healing: Exploring the Spiritual and Emotional Needs of Our Young Patients

Featuring Rev. Cheryl V. Minor, Ph.D. and Chaplain Ryan Campbell

April 14, 2016

Sinclair Conference Center, Dayton, Ohio

medicine.wright.edu/med-spirit



Academy of Medicine 2017 Distinguished Guest Lecture and dinner meeting

Featuring Roger W. Pacholka, M.D.

April 26, 2017

Sinclair Conference Center, Dayton, Ohio

medicine.wright.edu/academy

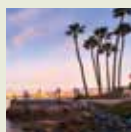


Aerospace Medicine Reception during the Aerospace Medical Association Conference in Denver

April 30, 2017, 7-9 p.m.

Sheraton Denver Downtown Hotel, Room: Windows

1550 Court Place, Denver, CO 80202



Psychiatry Reception during the American Psychiatric Association Annual Meeting in San Diego

May 22, 2017, 7-9 p.m.

Hilton Bayfront, Room: Cobalt 501C, 1 Park Blvd., San Diego, CA 92101



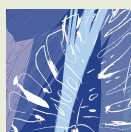
Reunion Weekend

Honoring the classes of 1982, 1987, 1992, 1997, 2002, 2007, 2012

July 21-23, 2017

Dayton, Ohio

- Dragons game
 - Boonshoft School of Medicine Open House and Campus Visit
 - Continuing Education
 - Gathering at Tuty's Inn Restaurant
 - Kings Island Family Fun Day and Picnic
- medicine.wright.edu/community/alumni



W.E.L.L. Weekend

Marco Island Marriott Beach Resort Florida

February 1-4, 2018

medicine.wright.edu/well

For information about these, or other upcoming alumni events, visit medicine.wright.edu/community/alumni, or contact Nicki Crellin, Director of Major Gifts at 937.245.7628 or nicki.crellin@wright.edu.

Future Docs

Boonshoft School of Medicine student speaks at White House Symposium



A Wright State University Boonshoft School of Medicine student spoke at the second White House Symposium on addiction, “Medicine Responds to Addiction II,” on Oct. 25, 2016.

Christen Johnson, a fourth-year medical student, spoke on behalf of medical students and underserved communities in support of addiction medicine curriculum and bias training in medical education.

The event brought together federal partners and national leaders from medical schools, residency, and fellowship programs to advance addiction medicine education and training and to explore Centers of Excellence in Addiction Medicine models.

Johnson described the need for addiction medicine curriculum in medical education so that future physicians can better treat patients with addiction problems.

“The problem with that is a lot of physicians, especially our attending physicians, don’t necessarily have the experience in addiction medicine to be able to give us the sensitivities we need,” she said.

When addiction is considered a health issue or a disease rather than a crime, medical students can learn about an integrated approach to substance use disorders and expand their skills so they treat addiction as future physicians, Johnson said.

Johnson is also the national president of the Student National Medical Association (SNMA), the oldest and largest medical student organization dedicated to serving the needs of underserved communities and underrepresented minority students who wish to pursue careers in the field of medicine.

The organization is working on a plenary session for its national conference about addiction medicine. The session will focus on addiction medicine in underserved communities,

biases in medical education, how medical students can unpack these biases before they become physicians, and how they can assist their medical schools through curriculum research. SNMA is working on curriculum that targets bias.

“If we are able to achieve these things in medical education, then we’ll have medical students who are fully able to take on this task and potentially enter these fellowships and become really socially conscious and culturally competent physicians,” Johnson said. “They will also be clinically excellent in helping us deal with this issue.”

Kevin Purcell receives AMA Foundation Physicians of Tomorrow Award



The American Medical Association (AMA) Foundation has announced that Kevin Purcell, a fourth-year medical student at the Wright State University Boonshoft School of Medicine, is one of 15 medical students nationwide to receive the 2016 Physicians of Tomorrow Award.

He is the fifth Boonshoft School of Medicine student to receive the award since 2012. He will receive a \$10,000 tuition-assistance scholarship.

Recipients were nominated by their medical schools and chosen based upon academic achievement and financial need. The AMA foundation has awarded more than \$61 million in scholarships to deserving medical students since 1950.

Born and raised in Brooklyn, New York, Purcell comes from a medical family. His father is a vascular surgeon and his mother is a registered nurse. In addition, his aunt is a pediatrician. He credits his

parents and his aunt with encouraging him to pursue his dream of becoming a doctor.

"My aunt provided me with emotional support, love, and affection. She always believed in me and encouraged me," he said. "I remember growing up saying I wanted to be like my mom, dad, and aunt because they impacted people's lives."

Purcell earned his undergraduate degrees in black studies and cell molecular biology from State University of New York at New Paltz in 2010. He earned his Master of Science in physiology and biophysics from Stony Brook University in 2012 and a Master of Public Health from State University of New York Downstate Medical Center in 2013.

During his undergraduate years, he cofounded the mentorship/community service organization "Get Up & Get Out" and worked as a youth counselor, community volunteer and college host. The organization exposed at-risk youth in the New York City area to higher education and its benefits. He also was a workshop facilitator for the Kings Against Violence Initiative (KAVI), hospital/school-based anti-violence intervention program. In addition, he co-founded the Purple Boot Initiative (PBI) in the Harlem section of Manhattan. PBI offers minority

youths reading classes, different forms of physical activity, and crafts.

One of Purcell's life goals is to start a minority mentorship program for young males in Brooklyn. He wants to teach them about the importance of education, professionalism, and life skills. He is concerned about how few minorities are entering medicine and other fields such as engineering, law, technology, and business.

"Mentoring minority and at-risk students is something that I have been passionate about for years," Purcell said. "Mentorship plays a significant role in diversifying these different workforces. It is important to start mentoring folks from a young age so that we can mold and prepare them to seize an opportunity that arises."

After he graduates from medical school in May 2017, Purcell plans to begin his residency in orthopaedic surgery. He is applying all over the country for residency programs. He is excited to see where he will be for the next five years of his life. Ultimately, he would like to practice in Brooklyn after completing his residency.

During his second year of medical school, Purcell was selected to serve as an adjunct member of the

Boonshoft School of Medicine Admissions Committee. Along with other members of the committee, he interviewed candidates and voted on applications.

Purcell participated in several student organizations during medical school. He traveled to Ghana on a medical mission trip as part of the Boonshoft School of Medicine's International Education Program. He plans to travel to Cambodia on another medical mission trip in February 2017. He also participated in the American Medical Association Medical Student Section and the Student National Medical Association. In addition, he was inducted into the Gold Humanism Honor Society.

"The best part of my Boonshoft experience has been the supportive staff and faculty," Purcell said. "There have been numerous instances where staff and faculty have given their personal time outside of work hours to help me with a challenging concept, review an essay, or give me words of encouragement. Coming to Boonshoft has been one of the best decisions that I have ever made."

Following the call to a future medical career with the World Health Organization

While most first-year medical students at the Wright State University Boonshoft School of Medicine were cramming and studying for their final exams in June 2016, Vishal Dasari learned that his internship with the World Health Organization (WHO) in Geneva, Switzerland, had been confirmed.

The internship was scheduled to begin in a little more than a week. But he couldn't go unless he had a visa from the Swiss embassy. So he immediately booked a flight to New York City, took a cab to the Swiss embassy, and submitted his passport. He hailed another cab, flew back to Dayton, and took his final medical exams. Then he flew back to New York City, picked up his passport, and flew to India to see his parents for a few days before flying to his internship in Geneva.

After racking up lots of frequent flyer miles, Dasari was thrilled to hit the ground running in Geneva. For years, Dasari had dreamed of working for the World Health Organization. He had mapped out a plan — apply for an internship with the World Health Organization, earn his Master of Public Health degree, finish medical school

by 2020, complete a residency in internal medicine by 2023, practice internal medicine for four years, and then apply for a job with the WHO in 2027.

Now, he would learn if it was truly his calling.

"I have always wanted to have a career in public health," Dasari said. "There is no other organization like the World Health Organization that has a mandate of improving the health of the world's population."

During his internship, Dasari worked in the planning resource coordination and performance department in the general management cluster of the WHO.

"The best part of working at the World Health Organization is that you are working with people who are the best in their fields," he said. "They have an infectious passion for what they do."

While interning with the WHO, Dasari gained a better understanding of international health. He contributed to finishing the Compendium of Resolutions, a library of resolutions passed by the WHO during the past 15 years. He attended the Global Pandemic Influenza Preparedness Workshop.

He also worked on his own paper for the World Health Organization. The paper, "The Coordination of Cross-Cutting Issues: Antimicrobial Resistance Monitoring,"

looked at how to coordinate monitoring and prevention efforts across all 194 member states of the World Health Organization. It will be included in a yearly book of recommendations, which will be given to the World Health Assembly.

Dasari met several people who recommended that he practice medicine first for several years and then apply to the WHO at country and regional offices. Eventually, he could apply for a job at the headquarters in Geneva.

"The work with the World Health Organization has a global impact, and that's what I want to do with my life," he said. "It's a feeling of belonging. This is what I'm meant to do. This is a calling."

Dasari's interest in public health can be traced back to his childhood spent in both the United States and India. While he was born in Chicago, his parents were originally from India. By age 1, Dasari and his parents moved to Canton, Ohio, where his mother, who is a nephrologist, completed her residency at a local hospital and a fellowship with the Cleveland Clinic. His father was working for a global manufacturer. By age 4, his father's job took them to Jamshedpur, India, near Kolkata, India. Then, in 2004, his father took another job with a truck and bus manufacturing company in Chennai, a city in the southern part of India. His mother started a dialysis clinic in Chennai for people with kidney disease.



Dasari attended Indian schools but went to the American International School of Chennai in 11th and 12th grades. A lot of his classmates were children of diplomats, ambassadors, and manufacturers.

"My friends from high school were from the United Kingdom, the Philippines, Japan, Zimbabwe, Denmark, and Korea," Dasari said. "Being with people from different countries was not only eye opening, but it also made me feel part of a larger community."

Medical students go to Washington, D.C., to tackle national health care issues

For Wright State University Boonshoft School of Medicine student Nick Christian, the opioid epidemic has hit home. One of his close friends from high school became addicted to opiates after injuring his back playing football. Christian's friend overdosed, but he was revived with naloxone, a medication used to treat opioid overdoses.

"The opioid abuse epidemic is not just a phenomenon affecting lower-class, inner-city neighborhoods," said Christian, who is from Covington, Ohio, north of Dayton. "This is affecting people of all backgrounds. Addiction has no boundaries."

Shocked to see the impact of the opioid epidemic in rural Ohio, Christian jumped at the opportunity to bring visibility to the issue as part of the American College of Physicians (ACP) Leadership Day 2016 in May. Leadership Day is the ACP's annual two-day advocacy event in Washington, D.C. Members of the national organization converge on the U.S. Capitol and meet with legislators and staff. The ACP is a national organization of internists, specialists who apply scientific knowledge and clinical expertise to the diagnosis, treatment, and health care of adults.

Christian is pursuing both his Doctor of Medicine and Master of Business Administration degrees (M.D./M.B.A.) through the Boonshoft School of Medicine Physician Leadership Development Program (PLDP), a dual-degree program through which medical students can obtain a master's degree in public health or business while pursuing their medical degree over five years. He expects to graduate in May 2017 and pursue a residency in internal medicine.

He was joined by another Boonshoft School of Medicine PLDP student, Jensen Kolaczko, of Lorain, Ohio, who also expects to graduate in May 2017. Kolaczko plans to pursue a residency in orthopaedic surgery and a fellowship in sports medicine.

Congress was in recess when they were in Washington, D.C., so they met with legislative assistants from the offices of Senator Sherrod Brown and Representatives Steve Stivers (15th District), Brad Wenstrup (2nd District), Steve Chabot (1st District), and Tim Ryan (13th District). The ACP addressed several key issues during Leadership Day on Capitol Hill, including the increase in opioid abuse and graduate medical education funding.

Christian spoke to legislative aides about stemming the increase in opioid abuse. The Senate already passed the Comprehensive Addiction and Recovery Act. Christian urged the legislative assistants in the House of Representatives to encourage the congressional representatives to take action on the issue.

"Everyone was in agreement that this is a serious problem that needs to be addressed in Ohio," he said. "Many of the offices have been advocates for laws pertaining to this issue."

Kolaczko addressed limits on graduate medical education (GME) funding, a problem he and his classmates will face within the next year as they begin applying for limited residency positions. The number of graduate medical education residency spaces available is capped at the 1996 level.

According to the Association of American Medical Colleges, there will be a shortage of as many as 35,600 primary care physicians by 2025. Non-primary care specialties are projected to have a shortage of as many as 60,300 physicians. The association recommends lifting the cap on federally funded residency training positions to train at least 3,000 more doctors a year over the next five years.

"With more funding from Congress, the number of GME residency spots can be increased," Kolaczko said. "If Congress funded 3,000 more GME residency spots every year over the next five years, that would help train an additional 15,000 doctors, which would allow people to have access to health care more readily, especially with the baby boomer generation aging."



Milestones

2016 Match Day



In March 2016, 96 graduating Boonshoft School of Medicine students learned where they will pursue their residency training.

Gathered with family and friends at the Wright State University Student Union, the students took part in the national event that has become a rite of passage.

Wright State students matched in outstanding programs in Dayton, throughout Ohio, and across the country, including Case Western Reserve University, Stanford University, University of Michigan, University of Southern California, and Wake Forest University.

Julian Anderson
Mount Carmel Health System
Family Medicine
Columbus, OH

Nicholas Antoon
Orlando Health
Emergency Medicine
Orlando, FL

Katherine Babbitt
WSU Boonshoft School of Medicine
Surgery-General
Dayton, OH

Rebecca Beesley
Carolinas Medical Center
Family Medicine
Charlotte, NC

Colleen Begley
Case Western/University Hospital
Case Medical Center Pediatrics
Cleveland, OH

Kevin Bree
WSU Boonshoft School of Medicine
Surgery-Preliminary
Dayton, OH

Katherine Bruening
Case Western/MetroHealth Medical Center
Internal Medicine/Pediatrics
Cleveland, OH

Bogna Brzezinska
Riverside Methodist
Obstetrics and Gynecology
Columbus, OH

Benjamin Buettner
Barnes-Jewish Hospital
Internal Medicine
St. Louis, MO

Leah Carter
Case Western/University Hospitals
Case Medical Center
Emergency Medicine
Cleveland, OH

Ryan Chenevey
Wake Forest University, PGY2
Ophthalmology
Winston-Salem, NC
Kettering Medical Center, PGY1
Transitional
Kettering, OH

Claire Christian
Medical College of Wisconsin
Affiliated Hospitals
Pediatrics
Milwaukee, WI

Jennifer Clark
Indiana University School of Medicine
Internal Medicine
Indianapolis, IN

Brian Cothorn
WSU Boonshoft School of Medicine
Internal Medicine
Dayton, OH

Nicole Craker
University of Kentucky Medical Center
Otolaryngology
Lexington, KY

Dustin Cunningham
University of Tennessee
St. Thomas Hospitals
Emergency Medicine
Murfreesboro, TN

Thao-Vi Dao
Baylor College of Medicine
Internal Medicine/Pediatrics
Houston, TX

Kelly Davidson
Keesler Medical Center
Internal Medicine
Biloxi, MS

Allison Dixon
University of Alabama
Medical Center
Internal Medicine
Birmingham, AL

Claire Dolan
Case Western/University Hospitals
Case Medical Center
Internal Medicine
Cleveland, OH

Michelle Durrant
WSU Boonshoft School of Medicine
Obstetrics and Gynecology
Dayton, OH

Ashlee Edgell
Grand Rapids Medical Education Partners
Emergency Medicine
Grand Rapids, MI

William Elder
Sutter Medical Center of Santa Rosa
Family Medicine
Santa Rosa, CA

Amye Farag
Phoenix Children's Hospital
Pediatrics
Phoenix, AZ

Rachael Ferrari
WSU Boonshoft School of Medicine
Psychiatry
Dayton, OH

Michael Finucan
Summa Health/NEOMED
Surgery-General
Akron, OH

Eric Fischer
Barnes-Jewish Hospital-PGY2
Radiology-Diagnostic
St. Louis, MO
Transitional Year-PGY1
Scripps Mercy Hospital
San Diego, CA

Eliza Foley
Children's Hospital-NEOMED
Pediatrics
Akron, OH

Immaculate Foy
WSU Boonshoft School of Medicine
Internal Medicine
Dayton, OH

Andrea Frazier
Naval Medical Center
Pediatrics
Portsmouth, VA

Michael Gemma
UPMC Medical Education
Anesthesiology
Pittsburgh, PA

Sibel Gokce
WSU Boonshoft School of Medicine
PGY2
Dermatology
Dayton, OH
Kettering Medical Center PGY1
Transitional Year
Kettering, OH

Adam Goldberg
Baylor College of Medicine
Psychiatry
Houston, TX

Abbie Goodman
Vidant Medical Center/East Carolina University
Internal Medicine/Pediatrics
Greenville, NC

Willie Harrington
St. Elizabeth's Hospital
Psychiatry
Washington, D.C.

Katherine Helmuth
Stanford University Programs
Pediatrics
Stanford, CA

Jennifer Hilgeman
WSU Boonshoft School of Medicine
Pediatrics
Dayton, OH

Spencer Hill
University of Cincinnati Medical Center
Urology-PGY2
Surgery-General-PGY1
Cincinnati, OH

Jordan Jacobsen
WSU Boonshoft School of Medicine
Emergency Medicine
Dayton, OH

Daniel Johns
University of Alabama Medical Center-Birmingham
Anesthesiology
Birmingham, AL

Zachary Jordan
Ohio State University Medical Center
Neurology
Columbus, OH

Siddhi Joshi
WSU Boonshoft School of Medicine
Internal Medicine
Dayton, OH

Katherine Kaiser
WSU Boonshoft School of Medicine
Pediatrics
Dayton, OH

Areum Kim
Ohio State University Medical Center
Psychiatry
Columbus, OH

Adrienne Kirby
Eastern Virginia Medical School
Pediatrics
Norfolk, VA

Matthew Knapke
Ohio State University Medical Center
Family Medicine
Columbus, OH



Allison Knorzer

Health Partners Institute/Regions
Hospital
Emergency Medicine
St. Paul, MN

Benjamin Leffel

St. Elizabeth's Medical Center
Internal Medicine
Boston, MA

Bonnie Marmora

San Antonio Military Medical Center
Internal Medicine
San Antonio, TX

Richard Marriott

WSU Boonshoft School of Medicine
Emergency Medicine
Dayton, OH

Nathan Marzlin

Medical College Wisconsin Affiliated
Hospitals Internal Medicine
Milwaukee, WI

Nicholas Mata

Case Western/MetroHealth Medical
Center
Physical Medicine and Rehabilitation
Cleveland, OH

Trisha Miller

University of Louisville School of
Medicine
Pediatrics
Louisville, KY

Jacob Mitchell

Indiana University School of Medicine
Radiology-Diagnostic
Indianapolis, IN

Kathryn Morrison

George Washington University
Internal Medicine
Washington, D.C.

Clifford Mueller

Cincinnati Children's Hospital
Medical Center
Pediatrics
Cincinnati, OH

Shankar Narayanan

Ohio State University Medical
Center
Orthopaedic Surgery
Columbus, OH

Erin Nealon

Nationwide Children's Hospital
Pediatrics
Columbus, OH

Jennifer Norman

Nationwide Children's Hospital
Pediatrics
Columbus, OH

Gregory Orgel

University of Texas at Austin Dell
Medical School
Emergency Medicine
Austin, TX

Aaron Palmer

Grand Rapids Medical Education
Partners
Surgery-Preliminary
Grand Rapids, MI

H. Robert Papas

Summa Health/NEOMED
Ophthalmology PGY2
Internal Medicine PGY1
Akron, OH

Brian Patterson

Arrowhead Regional Medical Center
Surgery-General
Colton, CA

Dylan Phillips

University of Michigan Hospitals
Anesthesiology
Ann Arbor, MI

Michael Robertson

WSU Boonshoft School of Medicine
Family Medicine
Dayton, OH

Sabera Saklayen

Stony Brook Teaching Hospitals
Psychiatry
Stony Brook, NY

Bijan Salari

University of Toledo
Urology-PGY2;
Surgery-General-PGY1
Toledo, OH

Saagar Sanghvi

University of Cincinnati Medical
Center
Internal Medicine
Cincinnati, OH

Jessica Schucht

University of Louisville School of
Medicine
Surgery-General
Louisville, KY

Matthew Scott

Indiana University School of
Medicine
Emergency Medicine
Indianapolis, IN

Jasmin Scott-Hawkins

University of Southern California
Psychiatry
Los Angeles, CA

John Shearer

University of Cincinnati Medical
Center
Anesthesiology
Cincinnati, OH

Eric Shepard

Indiana University
School of Medicine
Pediatrics
Indianapolis, IN

William Shoemaker

Medical College of Wisconsin
Affiliated Hospitals
Internal Medicine/Pediatrics
Milwaukee, WI

Diane Shumbusho

San Antonio Military Medical Center
Obstetrics and Gynecology
San Antonio, TX

Udit Singhal

University of Michigan Hospitals
Urology PGY2
Surgery-General PGY1
Ann Arbor, MI

Anna-Maria South

University of Kentucky Medical
Center
Internal Medicine
Lexington, KY

Courtney Sumner

University of Louisville School of
Medicine
Pediatrics
Louisville, KY

Blake Szelestey

Case Western/University Hospitals
Case Medical Center
Otolaryngology
Cleveland, OH

Eric Szymanski

Akron General Medical Center/
NEOMED
Emergency Medicine
Akron, OH

Eric Thuney

WSU Boonshoft School of Medicine
Family Medicine
Dayton, OH

Tetsoma Tonwe

Grant Medical Center
Family Medicine
Columbus, OH

Huong-Thao Tran

Trident Medical Center
Family Medicine
Charleston, SC

Wayne Tse

Virginia Commonwealth University
Health Systems
Surgery-General
Richmond, VA

Aarti Vala

Phoenix Children's Hospital
Pediatrics
Phoenix, AZ

Rachel Warwar

Riverside Methodist
Obstetrics and Gynecology
Columbus, OH

Sarah Weiskittel

University of Cincinnati Medical
Center
Internal Medicine
Cincinnati, OH

Lauren Welch

University of Colorado School of
Medicine
Pediatrics
Aurora, CO

Austin Williams

WSU Boonshoft School of Medicine
Family Medicine
Dayton, OH

Sydney Wiltshire

Walter Reed
Internal Medicine
Washington, D.C.

Cara Wolters

WSU Boonshoft School of Medicine
Family Medicine
Dayton, OH

Charles Woods

WSU Boonshoft School of Medicine
Pediatrics
Dayton, OH

Walter Woznick

WSU Boonshoft School of Medicine
Internal Medicine
Dayton, OH

Kriscilla Yang

Baystate Medical Center
Surgery-Preliminary
Springfield, MA

Rachael Zacks

Rhode Island Hospital/Brown
University
Internal Medicine
Providence, RI

Rachel Zinsou

St. Vincent Mercy Medical Center
Emergency Medicine
Toledo, OH

Milestones

2016 Graduation

One-hundred members of the Boonshoft School of Medicine class of 2016 received their M.D. degrees

during the school's commencement ceremony at the Benjamin and Marian Schuster Performing Arts Center on Friday, May 27.

Christopher Lewis, M.D., chief educator and production manager for Doctors in Training, an online education company that offers study guides and board review courses for medical students, delivered the commencement address.

In addition to the degrees, several special awards and honors were presented during the ceremony:

Appreciation Award

Evangeline Andarsio, M.D., '84 clinical associate professor and director of the Remen Institute for the Study of Health and Illness (RISHI) at Wright State

For her significant contributions in support of students and medical education.

Dean's Award

Matthew T. Scott, M.D., '16

For demonstrating a commitment to academic excellence, embodying empathy and compassion toward others, exemplifying personal integrity and professionalism and earning the respect and trust of classmates and faculty.

The Arnold P. Gold Foundation's Leonard Tow Humanism in Medicine Award

Cara M. Wolters, M.D., '16, (graduate) and Erica Taylor, M.D., '05, assistant professor of pediatrics and director of medical student education (faculty)

For consistently demonstrating compassion and empathy in the delivery of care to patients.

Teaching Excellence Award

Karen Kirkham, M.D., '89, associate professor of internal medicine

For displaying outstanding professional skill and pride in discharging her instructional duties.





Milestones

2016 Convocation

The Boonshoft School of Medicine welcomed 108 students during the Convocation and White Coat Ceremony last July, formally marking the start of their medical education.

During the ceremony, students took their first oath of professional medical ethics, concluding with the words, “I commit myself to a lifelong journey of learning how to cure, relieve, and comfort with humility and compassion.” Each student received a white coat—a traditional symbol of the medical profession—personalized with his or her name and the medical school patch.

This is the fourth year that each student also received a stethoscope engraved with the words, “Excel in Leaving a Mark,” thanks to the Jason Madachy Foundation, alumni, and friends. The foundation has given thousands of stethoscopes to medical students nationwide in honor of Jason Madachy, who died tragically in June 2007 just before he was about to start medical school.

The class of 2020 was selected from a group of more than 5,234 applicants. Educated at various universities across Ohio, including Case Western Reserve University, Denison University, Miami University, Ohio State University, Wittenberg University, and Wright State University, among others, members of the class also hail from The Citadel, Cornell University, Harvard University, Morehouse College, Spelman College, and Wake Forest University.

From volunteering at homeless shelters to serving as fire fighters and EMT/paramedics, they have shown a strong commitment to community service. Several have taken service trips. Others have volunteered with blood drives, food banks, and music therapy programs. Some have been volunteers with the American Red Cross, Big Brothers Big Sisters, Habitat for Humanity, Relay for Life, Ronald McDonald House, and Special Olympics. Three members of the class of 2020 obtained the rank of Eagle Scout, the highest achievement in Boy Scouts of America. Six of the incoming medical students have served in the military.

In addition to Ohio, the class of 2020 comes from as far away as Alaska, California, Connecticut, Florida, and Texas. Fifty-seven percent are women, while 43 percent are men. Twenty-one percent are from groups under-represented in medicine. Seventy-five percent speak more than one language, including Arabic, Chinese, French, and Spanish.





In Good Company

Access to Care



Jeremy Slone, M.D., '06, brings pediatric cancer care to Southern Africa

While in medical school, Jeremy Slone, M.D., had the chance to work in pediatric oncology at Dayton Children's Hospital under Emmett Broxson, M.D., now professor emeritus, and Mukund Dole, M.D., associate professor of pediatrics. That's where he fell in love with the field.

"I liked that treating pediatric cancers was very complex," said Slone, now an assistant professor of pediatrics at Baylor College of Medicine. "The social support of helping a patient with care, getting to know their families — I really liked that aspect."

But it was a two-month medical mission elective to Papua New Guinea during his fourth year that really cemented his career path. The lack of resources and treatment options he saw for young cancer patients would help to refine his efforts to improve the quality of care available in low and middle income countries (LMICs).

It struck him that the biggest determinant of treatment options available to patients was where they were born. And the lack of resources in Papua New Guinea was considerable. "I was pretty unfamiliar at the time. There were really no options for them to be treated. It was a very formative experience for me," Slone said. "I thought, 'Why can't children in Papua New Guinea have the same treatments available in the USA?'"

During his pediatric hematology-oncology fellowship and enrollment in a Master of Public Health program at Vanderbilt University, Slone developed a research partnership with the largest government hospital in Zambia to study pediatric cancer.

Not long after wrapping up his efforts in Zambia, Slone started working in the Global Hematology-Oncology Program at Texas Children's Hospital. The next stop: Botswana.

He worked there for three years in a government hospital, again encountering limited resources and relatively fewer options for treatment.

"In many ways, it's very challenging. You have fewer resources than you're used to. It's like if you wanted to build a house but you didn't have a hammer to drive any nails. The house will get built, maybe using a rock instead of a hammer, but it's going to take some innovative thinking to do it," Slone said. "In the United States, I write out chemotherapy orders and then experienced people mix the chemotherapy and administer it to the patient. In Botswana, I would write the order, go into a windowless room and make it, then go in and give it to the patient. That requires more ingenuity."

Between patients in the United States and Botswana, Slone saw many of the same kinds of cancers. These include leukemia, brain tumors, and Wilms tumor, a type of kidney cancer.

But in areas of Africa along the equator, malaria and the Epstein-Barr virus combine to produce a heightened risk of developing Burkitt lymphoma. The prevalence of HIV raises the risk for other cancers as well. Overall, the suspicion is that the rate of childhood cancers is equivalent to or higher than that in the United States and Europe.

"We don't really know why this is. In most LMICs, we don't know what the true amount of cancer is. In the United States, we have population-level cancer registries," Slone said. He mentioned the National Cancer Institute's Surveillance, Epidemiology, and End Results Program. Its online database, he said, provides very strong data on how many kids in the United States have cancers like leukemia.

"Similar programs exist in LMICs like Botswana, but there are logistical issues," he said. "Some children die of cancer before they even get diagnosed."

To help understand pediatric cancer in Botswana, Slone and others have set up the Botswana Pediatric Oncology Database at Princess Marina Hospital, the largest government hospital in Botswana, where Baylor College of Medicine and Texas Children's Hospital, since 2007, have been operating the country's only pediatric hematology-oncology program in partnership with Botswana's Ministry of Health and Wellness.

"It's hard to compare what was there at the beginning and what's there now because there really wasn't anything before," Slone said. "But we've gotten to the point of diagnosing 50 children per year with cancer, and we're training physicians, nurses, and setting up infrastructure to continue the work."

Slone continued, "A large part of what we're doing is building local capacity so our LMIC colleagues can care for patients without our assistance. One way is through what I call 'mentorship through research' to help local



health care workers develop tools to expand on what we're doing."

One big goal, to build a children's cancer center in Botswana, has taken a small step forward. Slone said the government and other key stakeholders recently signed an agreement to advance the project, but there is still much work to do.

For now, he's working from Houston to help with similar pediatric cancer programs, through Baylor College of Medicine and Texas Children's, in Malawi and Uganda in addition to Botswana.

"I'm now trying to facilitate education and training from a distance. How do we train the physicians, pharmacists, dieticians? How do we generate services to treat children with cancer?" Slone asked. "All these projects are in expansion. For me, it's really exciting to use that experience I had in Botswana, learning from challenges on the ground, to help our programs going forward."

His time back in the United States has also given him an informed perspective on the differences between caring for patients here and in LMICs. In Botswana, all of the paperwork was done with actual paper whereas medical records here are kept electronically. He also didn't have to do any billing or coding there because the government provides health care.

"Now I'm back working with a team, I thought I had to do certain things not realizing others were there to help. I can guarantee that I'll never take these colleagues for granted again," Slone said. "I'm much more aware of what I missed. These specialists, like nurses, pharmacists, social workers, and others, that we have here are great for patient care. But how do we replicate that in other parts of the world? How do we replicate that so the children in Southern Africa get the same level of high-quality care as those in the USA?" **VS**

—Daniel Kelly



CDC's Rupa Narra served as an instructor in the CDC Safety Training Course for health workers going to West Africa to help with the Ebola epidemic in 2014. Anniston, Alabama. (Credit: Michael Jhung, CDC)

CDC Disease Detective

**Rupa Narra, M.D., '05,
investigates disease
outbreaks worldwide**

As a boots-on-the-ground disease detective, Rupa Narra, M.D., '05, is ready to go anywhere in the world at a moment's notice for the Centers for Disease Control and Prevention (CDC).

Narra serves the CDC and its partners as a medical epidemiologist, providing rapid, creative, and effective solutions to public health problems. Her work has focused on cholera outbreaks and response in several countries, including Kenya, Tanzania, Zanzibar, Ethiopia, and Haiti.

In January, she traveled to Mali to work on a long-term project to improve water sanitation and hygiene in health care facilities with poor access to safe water. She also traveled to Cameroon to help with cholera preparedness.

"As a medical epidemiologist, I feel like I am making an impact on the health of a population rather than an individual," Narra said. "As a CDC disease detective, we are among the agency's first-line rapid responders, helping public health officials investigate and control infectious disease outbreaks."

Her path to becoming a CDC disease detective started when she was a child. Her father, Bhaskara Rao Narra, M.D., and her mother, Vineela Narra, are originally from India and came to the United States in the 1970s so he could finish his medical training. After residency, her father joined a medical practice as a family physician in Elmore, a small town near Toledo. Narra grew up watching her father take care of his patients. As she got older, he took her on hospital rounds and house calls.

"Our phone number was always listed in the phone book," she said. "My dad always wanted to be accessible and available to his patients at any time, day or night."

She considers her father her hero, best friend, role model and mentor. "He gave me advice," she said. "I looked up to him. At Wright State University, he was the one who did my hooding."

She majored in biology and pre-medicine at Ohio University and then chose to attend medical school at the Boonshoft School of Medicine because of its commitment to primary care and the smaller classes.

"The Boonshoft School of Medicine had more hands-on experience and mentors compared to other academic medical schools," she said. "I was really fortunate to have excellent mentors like Dr. Ann Burke, Dr. Steven Peterson and Dr. Arthur Pickoff."

After graduating from the Boonshoft School of Medicine, she was accepted into a highly competitive residency in pediatrics at the University of Colorado School of Medicine – Denver. Then, she began a pediatric cardiology fellowship with the University of Colorado School of Medicine at Children's Hospital Colorado.

During a break in her fellowship in early 2010, she went with a medical mission group to help in Haiti after the Jan. 12 earthquake that had a magnitude of 7.0.

"That was a turning point in my career. I felt like I had helped more in one month in Haiti than in one year in residency," she said. "I was helping vulnerable populations that had curable diseases but no access to care."

Inspired by her experience in Haiti, she quit her fellowship to work with Doctors Without Borders, an international humanitarian non-governmental organization known for providing medical care in war-torn regions and developing nations affected by disease.

"My pediatric cardiology fellowship was an amazing opportunity," she said. "But it was not the right fit for me."

She worked with Doctors Without Borders from 2010 to 2014. She was in South Sudan, Central African Republic, and India. The experience taught her how to work on a multidisciplinary team.

"It was the most humbling and incredible experience that I have had," she said. "I worked with inspiring people, including the local and international health care staff."

She met lots of people, including colleagues from Nepal, Australia, and Kenya. "We

became best friends. You live together, work together, and go through lots of experiences together," Narra said. "I feel like I have a friend on every continent that I could call."

Her experience working with Doctors Without Borders influenced her decision to pursue a career in public health. "When I worked with Doctors Without Borders, I would return to the same countries and see the same outbreaks," said Narra, who also worked as a pediatrician in a pediatric emergency room between Doctors Without Borders assignments. "I wanted to be on the public health and preventive side instead of giving direct patient care."

In July 2014, she joined the CDC's Epidemic Intelligence Service (EIS) program. The service is a two-year training program in the practice of applied epidemiology. Each year, 70 to 80 new EIS officers are selected for the highly competitive fellowship program. The program teaches EIS officers how to apply epidemiologic strategies to public health problems.

Outbreak investigations give EIS officers experience in developing questionnaires, conducting surveys, analyzing data, tracing contacts, identifying causes of disease outbreaks, recommending control measures, and devising strategies to prevent future outbreaks. EIS officers are based in the United States, but they can be sent overseas on a temporary assignment for a few weeks at a time.

Within a few weeks of starting with EIS, the Ebola epidemic started ramping up. She was sent to Guinea and Mali to help with the outbreak control and response. She worked on data collection, case investigation, contact tracing, and analysis of the epidemiology of the cases.

"It was an emotional experience but also a challenging time to be there and see these Ebola cases," she said. "I had never seen such an international collaboration and response like I saw with Ebola."

For her first year as an EIS officer, Narra focused mostly on Ebola. During her second year, she focused on cholera.

“Working as an EIS Officer allowed me to have a breadth of experience in public health including outbreak investigations and response, long-term projects, and data analysis and manuscript writing,” Narra said.

She finished the EIS fellowship in July 2016 and decided to stay with the Waterborne Disease Prevention Branch at CDC, where she is a medical epidemiologist.

“Traveling to other countries during a disease outbreak and working with Ministries of Health, local surveillance officers, and international partners is both my favorite part of this job and where I learn the most,” Narra said. “By working with local governments, we learn from these outbreaks and staff, and I am able to carry that experience to the next response. Also, I think we do our best to help teach local public health officials and assist in their country’s ability to respond to the next outbreak.”

While she is based in Atlanta, she is ready to travel at a moment’s notice. International deployments can range from two to six weeks, usually averaging about four weeks. Depending on the local accommodations, she and her colleagues have stayed in nice hotels, basic guesthouses with limited electricity and running water, and small hotels in remote regions.

“Traveling is my favorite part of the job. It can be stressful and last minute at times, but I feel equipped to manage it given my experiences with Doctors Without Borders,” Narra said. “I can honestly say that I have not been more content in my career.”

When Narra travels internationally, she engulfs herself with the local people, animals and culture. “I like to try the local cuisines, visit local markets, meet local people, and learn the language,” she said. “I also like to visit historical or meaningful sites, and I always try to see local flora and fauna if time and security permits me to do so.” **VS**

— Heather Maurer

CDC’s Rupa Narra and team are assessing health posts that were serving as checkpoints during the Ebola epidemic in 2015. Bamako, Mali. (Credit: CDC)



In Memoriam



Founding father of the medical school, Richard A. DeWall, M.D.

Richard A. DeWall, M.D., the inventor of an early heart-lung machine used in cardiac surgery worldwide who played a critical role in founding the Wright State University School of Medicine, died at his Oakwood home on Aug. 15, 2016, at the age of 89.

A pioneer heart surgeon and prolific inventor, DeWall created the first workable, portable bubble oxygenator in 1955. The DeWall Bubble Oxygenator would become the model used around the world for open-heart surgery.

“Every bend, and every curve, every piece had a purpose in it,” DeWall told a reporter for this magazine in a 2015 profile piece. “But if you didn’t know what the purpose was, it looked very strange and peculiar.”

DeWall came to Dayton in 1966 to join the Cox Heart Institute. With encouragement from Virginia Kettering, he started the first open heart surgery program at Kettering Hospital, where he later established the general surgery residency-training program, serving as director from 1970-76.

Soon after his arrival in Dayton, DeWall felt the city might support a medical school to supply doctors for local hospitals. For the next three years, in addition to his increasingly busy surgical practice, DeWall worked to enlist support for the new school from community leaders. He wrote the original proposal for what became the medical school.

“I didn’t want to develop a school of specialists because I didn’t think it would fly,” DeWall said in the profile piece. “You had to do what was practical. You had to do what would fit.”

In addition to his wife of 63 years, Diane, he is survived by daughters Beth Barclay DeWall, Amy (Steve) Dadmun, and Melissa (Tim) Slager, seven grandchildren, and many friends and relatives.

To donate to the Richard DeWall M.D. Lecture Series Fund, visit medicine.wright.edu/giving.



Long-time school supporter Walter A. Reiling Jr., M.D.

A founding member of the medical school, Walter A. Reiling Jr., M.D., died on Oct. 25, 2016, at the age of 77.

A clinical professor of surgery at the time of his death, Reiling served on the search committee for the school’s first dean and was a charter member of the Wright State University Academy of Medicine. He served on the Academy’s Board of Trustees, which he chaired from 1999 to 2001.

Reiling was a Wright State University Foundation Trustee from 1975 to 1977 and served as the Academy of Medicine representative from 1999 through 2001, as well as serving on the Finance and Audit Committee. He was a member of the Ohio Board of Regents from 2005 to 2012.

He was a past president and member of the Ohio State Medical Association (OSMA), past president and current member of the Montgomery County Medical Society, and former chief of staff at Good Samaritan Hospital. In 2016, he was honored with the OSMA Distinguished Service Citation for 50 years as a practicing physician. He was only the second physician in this century to receive OSMA’s most important recognition, joining a select group of 19 who have received the award in the past 170 years.

Reiling earned his medical degree from Harvard Medical School and completed his internship and residency at Boston City Hospital-Harvard Surgical Services.

At the time of his death, he was continuing to serve the community as a physician in the Good Samaritan Surgical Clinic.

Reiling is survived by his wife, Suzanne, children Walter A. (Jo Anne) Reiling III, M.D., Mary (Ed) McMahon, M.D., Joe (Cindy) Reiling, and Jennifer (Moritz) Richter, in addition to siblings Richard (Liz) Reiling, M.D., Barbara (Bob) Aselage, and seven grandchildren.

To donate to the Reiling M.D. Resident Education Fund, visit medicine.wright.edu/giving.



**Former family medicine chair
Mark E. Clasen, M.D.**

Mark E. Clasen, M.D., Ph.D., who chaired the Wright State University Department of Family Medicine for 18 years, died on Feb. 3, 2016, at the age of 68.

An emeritus professor of family medicine and geriatrics, Clasen was passionate about the provision of health care for all people and had a special interest in cardiovascular risk reduction, geriatric medicine, and mitigating the burden of suffering in vulnerable populations.

He joined Wright State University School of Medicine in 1992 when he was appointed chair of the Department of Family Medicine. He came to the medical school from the University of Texas-Houston School of Medicine, where he had been vice chair of the Department of Family Practice and Community Medicine. He retired from Wright State on Oct. 31, 2010.

During his tenure, Wright State was recognized by the American Association of Family Physicians numerous times with the prestigious Family Practice Gold Achievement Award for ranking first in the nation for the percentage of its graduates who entered family medicine.

From 1995 to 1998, Clasen served as president of the University Medical Services Association, which later became Wright State Physicians. He was a lifetime member of Alpha Omega Alpha, was listed in the Best Doctors in America publication and was a principal investigator on numerous grants and contracts. He served the U.S. Health Resources and Services Administration as a grant reviewer and served as a peer reviewer for the Higher Learning Commission of the North Central Association of Colleges and Schools.

Clasen is survived by his wife of 36 years, Carla.

To donate to the Dr. Mark Clasen Endowed Scholarship Fund, visit medicine.wright.edu/giving.



**Long-time faculty member
Sidney Miller, M.D.**

Former Wright State professor of surgery and codirector of the Miami Valley Hospital (MVH) Adult Regional Burn Center Sidney F. Miller, M.D., FACS, died on Jan. 18, 2016, at the age of 72.

Recognized as a leading authority on the diagnosis and treatment of burns and burn disaster planning, Miller started the Burn Center at Miami Valley Hospital (MVH) along with Robert Finley, M.D., in 1975. He held the post of codirector and medical director until 2006, when he left to establish the Burn Center at the Ohio State University.

Miller served on the Wright State University School of Medicine surgery faculty from 1975 to 2006. He was associate program director of the Surgery Residency Program for many years and served as acting chair of the Department of Surgery from 2002 to 2003. In 2004, the Wright State University Board of Trustees awarded him the title of Frederick A. White Distinguished Professor of Service. The award recognizes outstanding service by a Wright State faculty member.

Miller's primary research interests were in burn care, wound healing, disaster planning, nutrition, and psychosocial aspects of burn management. While at Wright State in the early 1990s, Miller used technology originally developed for custom-fitted helmets and facemasks for fighter pilots to fashion special masks that reduced scarring and hastened recovery in burn patients.

Miller practiced as a general surgeon for nearly 50 years. He graduated from Indiana University School of Medicine in 1968 and went on to complete his internship at Methodist Hospital Indianapolis in 1969. He joined the medical staff at MVH in 1973 as a surgery resident, and two years later joined Dr. Finley in practice.

He is survived by his wife, Babs, daughters Amy Fiorella and Debra Gaetano, and several grandchildren.

To donate to the Sid Miller Resident Research Fund, visit medicine.wright.edu/giving.



**Douglas Longenecker, M.D., founding
chair of family medicine**

Douglas Longenecker, M.D., the first chair of the Department of Family Medicine at the Wright State University Boonshoft School of Medicine, died on March 3, 2016, at the age of 76.

He was a graduate of the University of Cincinnati College of Medicine and received post-graduate training from Good Samaritan Hospital in Dayton. Longenecker received honors from the Alpha Omega Alpha Honor Medical Society, from the Charter Diplomat American Board of Family Practice in 1971, and the Fellow American Academy of Family Practice in 1972.

Longenecker had his first private practice in Englewood, Ohio from 1965-1972 and was the founding director of Good Samaritan Family Practice Residency from 1972-1973. The following year, he worked in a Riverside Methodist Hospital Family Practice Residency in Columbus. He later returned to private practice in Englewood through 1990.

From 1986-1988, Longenecker was appointed chief of staff at Good Samaritan Hospital in Dayton. He was formerly senior vice president of medical affairs at the hospital, founding president and CEO of Samaritan Family Care, Inc. from 1990-1995 and the former chairman of the board for Samaritan Family Care, Inc.

Longenecker was also former chairman of the board for Life Stages Centers for Women and served on the Ohio State Medical Association Council. He was a member of the American Medical Association, Ohio State Medical Association, Montgomery County Medical Society, American Academy of Family Practice, and the American College of Physician Executives. He served in the U.S. Air Force Reserve from 1965-1972.

Longenecker is survived by children Lucinda "Cindy" (John) Murphy, Mary Longenecker, Douglas (Mindy) Longenecker II, Amy (Curtis) Tillman, and mother Catherine Akers, as well as sister Paige (Garry) Royer, sixteen grandchildren, two great grandchildren, and many friends and relatives.

Alumni Notes

We're proud of our alumni and graduates of our residency programs and want to spread the word about your achievements. If you have professional news or personal updates to share—or simply want to stay in touch—please contact the Office of Advancement at som_adv@wright.edu or 937.245.7610.

1980

William Elder, M.D., who practices family medicine at American Health Network in Fredericktown, Ohio, and serves as medical director of Country Court Nursing Center in Mount Vernon, was named medical director of Hospice of North Central Ohio.

1983

John A. Dietrick, M.D., joined the Florida Hospital Physician Group as part of the Florida Hospital Tampa Surgical Weight Loss Institute in Tampa, Florida.

1984

Robert S. Schaefer, M.D., of Orthopaedic Associates of Kalamazoo, returned to orthopaedic work at Oaklawn Hospital in Marshall, Michigan.

1985

Daniel C. Mills, M.D.,* has been named the president of the American Society for Aesthetic Plastic Surgery. He works in private practice in Laguna Beach, California.

Frances Owen, M.D., was recognized by the Georgia Department of Public Health with a 2016 Contributions to Quality Care of Children and Youth with Special Needs award. She is a pediatrician on Georgia's St. Simons Island and treats disadvantaged children with significant disabilities.

1986

Stuart Donovan, M.D., was named chair of the surgery department at Bethesda North Hospital in Montgomery, Ohio.

1989

Marcus "Chris" Griffith, M.D., and his wife Jeana Griffith, Ph.D., have recently completed *The Tale of Two Athletes: The Story of Jumper and the Thumper*, an inspirational children's book to help combat the obesity epidemic. He is a practicing psychiatrist at Southeastern Permanente Medical Group in Atlanta, Georgia, and clinical assistant professor at both Morehouse College and Emory University Schools of Medicine.

1990

Holli K. Neiman-Hart, M.D., is a founding director of the family medicine residency at Western Michigan University's Homer Stryker M.D. School of Medicine, where she is also an associate professor in the Department of Family and Community Medicine. She and her husband, John Hart III, have two children: Grant and Jason.

1991

Terri Wilkerson Riddiford, M.D., joined Kettering Physician Network Primary Care at the Huber Health Center in Huber Heights, Ohio.

Vivian von Gruenigen, M.D., was named chief medical officer at Summa Health, a hospital system based in Akron, Ohio.

1992

Sophia Apple, M.D. has a new job as vice chair of anatomical pathology and professor at City of Hope in Pasadena, CA. She retired from UCLA after 14 years.

1997

Jennifer Byrd, M.D., a geriatrician, was appointed medical director of the Will County (Illinois) Community Health Center.

Candice Sieben, M.D., joined Novant Health Family & Internal Medicine South Brunswick in South Brunswick, North Carolina.

Bitu Tabesh, M.D., was named chief of hematology and oncology at Atrius Health, a nonprofit health care organization in Massachusetts that offers cancer treatment.

1999

Laurie Bankston, M.D., joined Kettering Physician Network Primary Care at Xenia (Ohio) Health Park.

Atul Gupta, M.D., was selected to chair the American Heart Association's 20th annual fundraising Heart Ball of the Southern Coast at Hilton Head Island, South Carolina.

2003

Chastity Takoma Edwards, M.D., was welcomed to the International Association of HealthCare Professionals with a publication in *The Leading Physicians of the World*. Previously, she was honored as one of *Chesapeake Family Magazine's* Top 100 Physicians while practicing in Maryland. She currently practices obstetrics and gynecology with Maui Medical Group in Hawaii.

Courtney Holland, M.D., a pediatric orthopaedic surgeon, joined the Community Howard Orthopedic Center in Kokomo, Indiana.

Erin Lindsay Mathews, M.D., joined Kettering Physician Network Primary Care in Tipp City, Ohio.

2004

Allen P. Chudzinski, M.D., was named medical director for the Advanced Center for Colorectal Surgery, which is part of the Digestive Health Institute at Florida Hospital Tampa.

2005

Tracie Bolden, M.D., joined Kettering Physician Network Primary Care in Beavercreek, Ohio.

Rupa Narra, M.D., joined the Atlanta-based Centers for Disease Control and Prevention as an epidemic intelligence officer.

2007

Amanda Vince, M.D., a family medicine physician specializing in obstetrics, was hired by Hallmark Health Medical Associates in Malden, Massachusetts.

2008

Todd A. Bialowas, M.D., a major in the U.S. Army, completed an operational medicine assignment as battalion surgeon and flight surgeon with Special Operations Command at Fort Bragg, North Carolina, and was assigned to be chief of emergency medicine at Fort Campbell, Kentucky.

2011

Jake Deister, M.D., an orthopaedic surgeon, joined the staff at Cotton O'Neil Orthopedic & Sports Medicine in Topeka, Kansas.

Nicole Y. Turkson, M.D., an assistant professor of family medicine at the Wright State University Boonshoft School of Medicine, began accepting patients at the Wright State Physicians Health Center on campus.

2012

TJ Hufford, M.D., is finishing his residency at the Cleveland Clinic and has been named a Top Five finalist for the Jameson L. Chassin Award for Professionalism in General Surgery by the American Board of Surgery. He lives with his husband, Carlos, in Chicago, Illinois.

In Memoriam

Eugene Imbrogno, M.D., '81, died on Sept. 8, 2016. Imbrogno is survived by his wife, Diane ('81), and children Brian ('09), Tyler, and David. Since 1985, Imbrogno was the medical director and head physician for MedWork Occupational Health Care. For more information: legacy.com/obituaries/morningjournal/obituary.aspx?pid=181398481.

Dream fulfilled

Future physician-scientist fascinated by the brain and neurosurgery

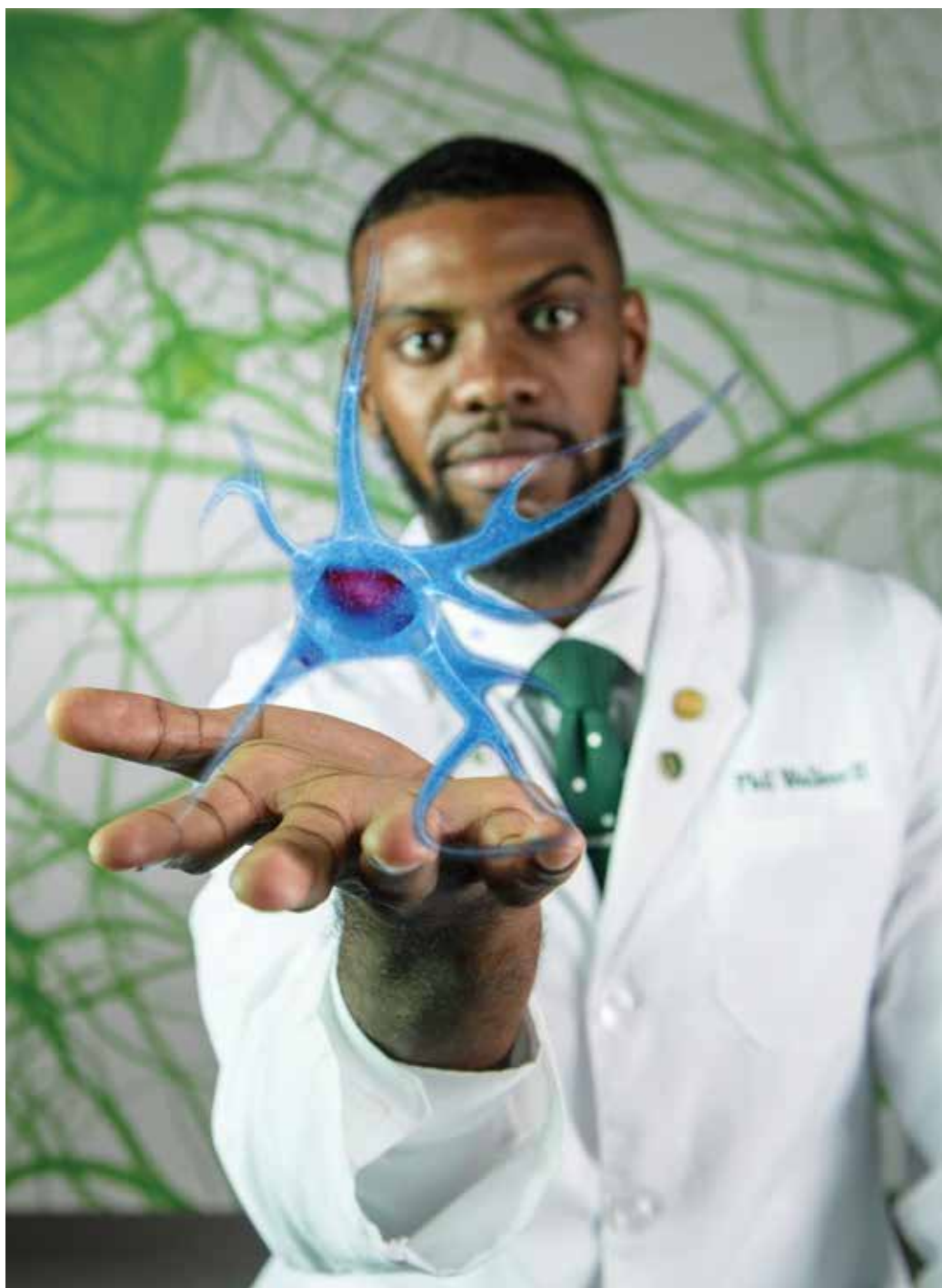
Phil Walker's journey to medical school began at 7 years old. He decided that in order to prepare for his life as a surgeon, he would operate on his pet goldfish. His parents found him on the front porch operating with a butter knife.

"Rather than simply scolding me for my ridiculous logic and regrettable behavior, they helped me embrace my curiosity," he said. "Namely, they kept me on a healthy diet of books related to medicine and science. It would be one of those books that would introduce me to the field of neurosurgery."

This book set him on a path to pursue medicine. Ultimately, it led him to the Wright State University Boonshoft School of Medicine, where he is a first-year medical student pursuing an M.D./Ph.D. dual degree.

"The opportunity to participate in an M.D./Ph.D. program is something I've dreamt about. While the seven years it will take to complete the program may sound daunting to others, I don't view it as such," said Walker, who is president of the class of 2020. "I treat it as an investment in the care of my future patients and those who will be impacted by my research. I love learning and, especially where I am from, having the option of being a full-time student is a privilege."

Walker is a recipient of two Boonshoft School of Medicine scholarships. He is very appreciative of those scholarships. "These scholarships have lessened some of the financial burden that pursuing M.D. and Ph.D. degrees puts on me and my family," he said. "For that backing and support, I am truly grateful for those who contribute to our institution's scholarships."



Your support can give students like Phil an opportunity to fulfill their potential, pursue their dreams, and prepare for a lifetime of service to their patients, their communities, and the world. The life-changing impact of your contribution is almost limitless.

Please visit medicine.wright.edu/giving to make your gift to the Boonshoft School of Medicine today.



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