

Vital Signs

Boonshoft
School of Medicine
WRIGHT STATE UNIVERSITY

Making way for MARIJUANA

Medical marijuana
will soon be legal
in Ohio.

**Is that best
for patients?**



12

Vegas massacre

Emergency medicine alumni
relive Strip shooting.

24

**There and
back again**

Ayfer Ekiz, M.D., '15, comes back
to Dayton to finish residency.

From the Dean

No matter the changes occurring in society at large, our true north as physicians is to do what's best for the patient. It is our guiding principle. However, this shared ideal does not ensure consensus on what is best when there is a paucity of evidence and divergent clinician opinion.

In this edition of *Vital Signs*, we explore a few ongoing debates that turn on this challenge, such as improving care for the elderly and the coming legalization of medical marijuana in Ohio. Those on all sides of these issues have fervent arguments for their positions. There is no shortage of good intentions, but there is little consensus.

Welcoming the beliefs and differences of others is part of what makes our medical school such a strong and supportive community. It's helped to make the Boonshoft School of Medicine such a dynamic place, full of ingenuity with a passion for serving others. As welcoming others has served to make our collective fabric stronger, we can only hope for more unity elsewhere in our society.

It is an unfortunate fact that mass shootings have become more common. And while we continue to prepare our students with advanced medical knowledge, insight, and experience, we also now must understand the tragedies they may face. It is an unpleasant but informed assumption to make, as many of our alumni have already served after these tragic events. You'll read about a few working in emergency medicine who were called in after the Las Vegas shooting.

We also feature alumni whose careers were impacted by Horizons in Medicine, a program nearing its 40th anniversary that has introduced more than 600 underrepresented and minority high school students in the Dayton area to careers in science and medicine. This incredible program has encouraged 80 percent of its students to attend college.

Many Horizons students have gone on to become students at the Boonshoft School of Medicine. Their passions and curiosities are an inspiration. I hope you feel the same pride I do as you read about them and their peers.

It is a distinct honor to educate our students and a joy to watch them grow into caring and competent physicians. We couldn't do it without the support of the Wright State family, our alumni, and friends. Thank you all for your passionate support and continued encouragement as we work together to train the next generation of physicians.



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



What's Inside

Vital Signs

Vol. 40, No. 1

Winter 2018

**Director of Marketing
and Communications**
Emily Stamas

Senior Writer and Editor
Daniel Kelly

Art Director
Emily Stamas

Contributing Writers
Daniel Kelly
Heather Maurer

Photography
Eric Drewes
William Jones
Erin Pence
Chris Snyder

How to contact us:
Editor, *Vital Signs*
Wright State University
Boonshoft School of Medicine
3640 Col. Glenn Hwy.
Dayton, Ohio 45435

Tel: 937.245.7634
Fax: 937.245.7949

som_mc@wright.edu
medicine.wright.edu

To submit Class Notes:
som_adv@wright.edu
Tel: 937.245.7634

Vital Signs is published each year
for alumni, faculty, staff, and friends
of Wright State University Boonshoft
School of Medicine.

© 2018 Wright State University
Boonshoft School of Medicine

**View *Vital Signs* online at
medicine.wright.edu/vitalsigns**



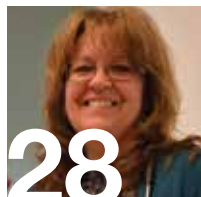
From Rudolph to research

How a claymation
special spurred a
researcher's love
for science.



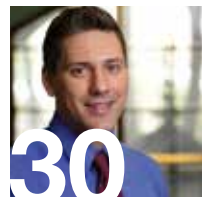
Horizons in Medicine

Program has helped
more than 600
disadvantaged high
school students.



Improving geriatric medicine

Karen Kirkham,
M.D., '89, is
improving quality of
care for the elderly.



Changing Perspectives

Aaron Patterson,
M.D., M.B.A, '09
M.A., works to
improve physician
resilience.

Snapshots

Surgeons in Sri Lanka 4

Issues in Depth

Making way for marijuana 5

Faculty in Focus

Eric Bennett, Ph.D. 10

A Closer Look

Tragedy in Las Vegas 12

The Greene brothers 15

Horizons in Medicine 17

Research Spotlight

New antifungal therapy 19

Pediatric immunotherapy 20

Transforming primary 21

care curriculum 21

Ohio's refugee population 22

In Residence

There and back again 23

Future Docs

Refugee health conference 25

Minority Medical Student Award 25

Student joins AAMC Board 25

of Directors 25

New VP of Student National 26

Medical Association 26

American College of 26

Physicians Leadership Day 26

Malawi global health trip 26

On The Move

27

In Good Company

Improving geriatric medicine 28

Physician resilience 30

Events

32

In Memoriam

33

Alumni Notes

34

Dream Fulfilled

35

Snapshots



Surgeons travel to Sri Lanka to teach, share knowledge

Two professors from the Wright State University Boonshoft School of Medicine traveled to Sri Lanka this past summer to teach residents and surgeons about the latest developments in trauma and minimally invasive surgery. This is the first time that American surgeons have taught surgery at the University of Jaffna in Sri Lanka.

Mary McCarthy, M.D., professor and chair of the Department of Surgery, and Joon Shim, M.D., M.P.H., assistant professor of surgery, spoke at the northern chapter of the Sri Lankan Association of Surgeons in June. They joined Siva Vithiananthan, M.D., associate professor of surgery at Brown Medical School, and Thav Thambi-Pillai, M.D., who was previously at Wright State University.

McCarthy represented the American College of Surgeons and taught trauma, global surgery, trauma evaluation and management, and focused assessment with sonography for trauma to medical students, residents and physicians. Shim and Vithiananthan taught advanced minimally invasive surgery and performed cases in the operating room with local surgeons.





R_x

PATIENT NAME _____

ADDRESS _____

Prescription:

Making way for **marijuana**

Medical marijuana will
soon be legal in Ohio.

Is that best for patients?

SIGNATURE _____

DATE _____

In less than a year, medical marijuana will be legal in the state of Ohio. There are those who support the move, made by the state legislature, and those who don't. But no matter their position on the issue, much of the debate among those with opinions centers on what's best for patients.

The most discernible difference comes in defining what "best for patients" actually means. It's not an easy question, and the reality is that the answer varies depending on who is asked. Further reducing clarity, there has been little research into the effectiveness of marijuana for most illnesses because of its federal designation as a Schedule I drug by the Drug Enforcement Administration.

So even though a patient may find personal benefit for symptoms, in most cases there are few supporting scientific studies. And that is where some see a common belief — that those using medical marijuana are just abusing the system so they can get high legally.

"A lot of progress has been made, but there is still a weird stigma," said Shaughnessy O'Brien, 33, of Seattle. Once a research associate at Indiana University, he suffers from Crohn's disease with chronic abdominal pain and diarrhea. "I don't get that from anyone who knows me or knows how sick I have been, but I notice it more from people in states that don't have medical marijuana and who have a limited frame of reference for it."

O'Brien has used marijuana to help treat his symptoms for years, and it has helped immensely. Before moving to Washington, he had to use fentanyl patches to continuously manage his pain.

"As a long-term solution, marijuana has given me better results with fewer side effects across the board," O'Brien said. "It's not physically addictive, it isn't as mentally incapacitating, and it actually helps the underlying conditions responsible for my symptoms."

Crohn's is one of 21 qualifying medical conditions laid out in the Ohio bill

legalizing medical marijuana, House Bill 523. Like most on the list, including the likes of Alzheimer's, cancer, glaucoma, and multiple sclerosis, there aren't proper double-blind, large-sample studies with controls for standards of care that prove marijuana's effectiveness in treatment.

The lack of data is the focal point of much debate surrounding its legal use. Physicians struggle with this ethical question: can it be called medicine if it hasn't been thoroughly tested, studied, and approved for use in humans by the federal government?

"As a physician, when I have something that's called medicine in the United States, it's a product that the Food and Drug Administration has evaluated and looked at research that looks at the safety and efficacy and says that these are better than somebody taking a placebo or essentially a sugar pill," said Glen Solomon, M.D., professor and chair of internal medicine and interim chair of neurology at the Boonshoft School of Medicine. "So when I prescribe an antibiotic for you — if I were to give you penicillin to treat your infection, I know that penicillin has been studied in that infection and that it works, that it's safe to give or at least we know what the side effects are. And third, that the manufacturer has met with the requirements such that when it says penicillin on the bottle, you're not getting something else."

O'Brien believes that what he purchases in Washington is pure because of "hands-on and transparent" production. Dried or cured flowers work best for his condition, and so quality standards are not nearly as complex as those for pharmaceutical drugs. He credits competition among vendors and quality controls such as marking each bag with a grower identifier, batch number, and harvest date, for ensuring quality issues are addressed.

Solomon's interest in the subject has recently increased because his patients keep asking about it. As a physician who specializes in treating headache, he knows that these conversations will only become more common and wants to prepare medical students and other doctors to give the best advice possible.

He's helping to launch the Medical Marijuana Task Force in the Department of Internal Medicine. It will educate medical students, residents and physicians about the evidence concerning medical marijuana so they can decide if they want to recommend it to their patients. And that is all they can do — it can't be prescribed in Ohio because of its federal status.

"It was something we decided we needed to put together. The patients are going to ask," Solomon said. "Either you work from knowledge or you work from ignorance. It's usually a lot better to work from knowledge."

He notes that the positive experiences of a few users are essentially testimonials. There's not much evidence there, outside of personal opinion, to sufficiently prove the effectiveness of marijuana for medical use. How, then, can physicians confidently recommend it to patients?

To the best of his knowledge, the only disease that marijuana has been clinically proven to treat is Dravet's disease, a seizure disorder.

"They may have seizure disorder on the list. That is the only disease that it has been shown to work better than a placebo, in children, and it's rare," Solomon said. "There is no other disease in which there's been a study to show that marijuana is effective. So, obviously I have problems with calling this stuff medicine."

O'Brien doesn't have much of an opinion on the medicine designation. He can only speak from his experience.

"We consider corticosteroids and opiate-based pain management to be medicine, but marijuana has allowed me to avoid both of those for years now while providing a considerably more livable quality of life for me," O'Brien said.

Steve Huffman, M.D., '95, the Ohio state representative who sponsored House Bill 523, is more concerned with giving patients the option to use the drug for their ailments.

Huffman completed his family medicine residency at Wright State University and now works as an emergency room physician. He is the first person with an M.D. degree to be elected to the Ohio



General Assembly. The achievement gave him the ideal platform for sponsoring the bill. “Being a physician and with my background, I wasn’t the one who went out and said, ‘Look, I want to do this or I’m the big marijuana doctor,’” Huffman said. “After studying this as a group, the House said, ‘Hey, look, you’re the guy to do this because we’ll get more traction from a doctor than somebody else.’”

The bill was passed less than a year after Ohio voters rejected a statewide ballot initiative seeking to legalize recreational and medical marijuana. The measure would have granted a few growers a monopoly on producing marijuana in the state.

The circumstances of its passage appear suspect to Solomon and others who believe the state is only seeking more tax revenue.

“The state charges a very large sum of money for people applying to run a dispensary or be a grower of marijuana,” Solomon said. For growers, of which there will be 18 in the state, the licensing

fee is \$200,000 each, payable in cash because of federal banking restrictions, to the Ohio Department of Taxation. “The state will make a very large amount of money and I think that was probably the driving force behind this.”

Huffman says the state will see benefits from taxing marijuana growers and dispensaries. They will be taxed as any other business in Ohio, he argues, paying things like property and income tax. The sale of medical marijuana itself will not be taxed because the state constitution forbids taxing medicine.

For some background, O’Brien has seen recreational marijuana taxed as high as 37 percent in Washington. Ohio will not see tax rates that high, at least in the near future. And Huffman makes the case that the new law achieves a more ideal outcome for Ohio voters.

“A lot of passing House Bill 523 was to keep recreational marijuana out of the state of Ohio,” Huffman said. Just a few days after the bill was voted on in the

Ohio senate, he noted that a major marijuana legalization advocacy group ended its push for recreational approval. “If you look at what’s happened in other states, they will get recreational and medical approved. And many people only want medical, but when they can only vote on one thing, medical and recreational, they vote to keep both of them. And so House Bill 523 was to prevent the two from getting lumped together and getting approved.”

The infrastructure that it puts in place is extensive. The bill sets up a medical marijuana system from the ground up, taking into consideration the legalization efforts that have already taken place in around half of all American states. The bill establishes, among other things, the list of qualifying medical conditions, definitions for what is medical marijuana — the smoking of marijuana doesn’t make the list, though vaping does — and medical education requirements for physicians.



"The bottom line is you need to have a license in good standing and you need to take two hours of medical education about the use of medical marijuana. These are not real stringent requirements to put it mildly," Solomon said. He questions how state lawmakers came up with the list of qualifying conditions.

The bill also establishes quality standards for growing medical marijuana, which other states don't have. This includes restrictions on pesticides used and standards for drying it out to avoid mold. It requires that all marijuana sold in Ohio be grown in Ohio, sets up protections so that businesses relying on government contracts can continue drug-free workplaces, and also lays out the steps patients will have to take to get it.

"Washington state's medical program is limited to certain conditions, such as cancer, glaucoma, Crohn's disease, intractable pain, PTSD, etc.," O'Brien said. "If you have one of these qualifying conditions, you ask your general practitioner or a specialty clinic doctor to

fill out an authorizing form for you. You take that form to a medically endorsed dispensary, and they will help you find products that work for you."

It took O'Brien a while to figure out the right ratio of THC, the compound providing most of marijuana's psychological effects, to CBD, a compound believed to have medical benefits. He has had the most luck with a higher level of CBD about five times that of THC. "I am better able to absorb nutrients from food with less pain," O'Brien said.

The steps he goes through to obtain marijuana are similar to what patients will do in Ohio. But only physicians who have an ongoing, primary care relationship with the patient will be able to make the recommendation to use medical marijuana. Nurse practitioners, physician assistants, and other health care workers outside of those with M.D. or D.O. degrees will not be able to make recommendations.

Huffman won't be recommending medical marijuana to anyone.

"I do not plan to be someone who recommends it because I practice emergency medicine," Huffman said. "By definition, you don't really have an ongoing relationship with the patient in the emergency room. So I don't plan to. I have never recommended it or done any research into medical marijuana."

It's not a recommendation that Solomon can make with confidence. It's not clear that it's the best option for patients, and there are side effects to using marijuana. Since it's not well studied, what they are isn't clear. Besides, there are experimental treatments in development that could possibly work better.

"There will be people who choose to use something that's never been shown to work instead of medications that have been shown to work for these conditions," Solomon said. "And so people will suffer needlessly because they're not getting the appropriate treatment because they're choosing medical marijuana. Or people will have a limited budget and



they'll decide, 'I'd rather do marijuana gummies than fill my prescription.'"

O'Brien is most concerned with alleviating his pain. "If I had to choose between gummies or opioid pain meds, gummies win hands down," he said. "I think people might actually be smart enough to make that determination for themselves."

All patients who obtain a medical recommendation will have to register with the state and will receive a medical marijuana card. Their green light to use marijuana to treat their ailments will last one year, after which they will have to get another recommendation. There are also limits on the amount of marijuana one can get depending on the strength of whatever marijuana mix they're buying: oil, patches, ingestibles, etc.

"So what happens if you have a recommendation for using marijuana and you get arrested for marijuana possession? You have an affirmative defense if you're registered and have a physician's recommendation," Solomon

said. "That's really what this is about. This is a legal defense in court that says you won't get arrested for marijuana possession."

The bill has flaws, but Huffman believes that the Ohio approach will be the model for the last half of states to legalize medical marijuana.

"We had a lot of experts from those other states come in and say, 'We screwed it up here or this is what we've done well.' And we kind of patterned Ohio after that," Huffman said. "I don't think it's perfect. Some people say that we're too restrictive. Some people say we're not. But I think we have found a good balance to keep it what it is truly about, the patients and the medication."

In 2018 or 2019, he thinks that there will be an additional bill to fill in the gaps where House Bill 523 has not succeeded. This "cleanup bill" could attempt to solve the banking problem through a digital currency, such as bitcoin, or provide a way for dispensaries to transfer licenses between cities.

Still elusive is reclassifying the drug at the federal level so that it can be researched as fully as needed. Without abundant and clear scientific evidence regarding its effectiveness in treatment, it's not possible to determine what's best for patients. And the debate on what's best for patients will still likely continue.

"It's possible that this might lead to research. But there's nothing in any of the bills that promote research, nor is there funding for research as part of this," Solomon said. "So I do think there will probably be more research because we're legalizing this, but that certainly was never in the bill as a goal."

Huffman wishes more research could be undertaken, as has been done in Europe where he says medical marijuana is approved for the treatment of seizures and multiple sclerosis. But he notes that federal restrictions are in the way.

— Daniel Kelly



From Rudolph to research

Eric Bennett, Ph.D., credits a claymation special for his initial interest in the sciences

Rudolph the Red-Nosed Reindeer is a classic, animated television special that has brought holiday joy to millions since it first aired in 1964. Underlying the magical notions of Santa Claus, reindeer and elves at the North Pole, the claymation story shares values of acceptance, inclusion, and teamwork. Many remember Rudolph and the shiny red nose that made him different. There's also the Island of Misfit Toys, and Hermey, an elf not cut out for work in a toy factory.

This character, who instead wanted to be a dentist, had special prominence for Eric Bennett, Ph.D. Long before he was chair and professor in the Department of Neuroscience, Cell Biology and Physiology, a two-year-old Bennett thought he might grow up to be a dentist like Hermey. That dream was capped in high school, but Bennett still chose a path less traveled like the animated elf.

"I wanted to be a dentist from like age 2 to 16, but then I realized, 'I don't think I want to be a dentist,'" Bennett said. "When I graduated from high school, the principal asked what I wanted to do. And he announced to everybody, I didn't know he was going to do this, that I wanted to become a genetic engineer, which at that point barely existed."

It was an incredibly futuristic career to choose at the time, and Bennett admits he may have been trying to act cool so his fellow classmates would think he was ahead of the game. "But anyway, it turned out that that's kind of what I ended up doing," he said.

After high school, Bennett attended Cornell University, where he majored in applied and engineering physics. There were only a handful of applied physics programs in the country at the time, most led by ex-Manhattan Project scientists, and he describes what he studied as essentially physics with an experimental focus. Bennett credits the field with helping him learn to organize his thoughts and to think critically.

Again branching away from his fellow classmates, who coupled physics courses with electrical engineering study, Bennett chose to pursue more concentrated study into biophysics. It's a very broad field whose aim is to use sound physics and math to formalize the biology of the human body.

"I tend to be more at the cellular end of things, like a cellular physicist, which basically, simply means I try to

understand how the cell works from a more quantitative angle," Bennett said.

Following a year in Cleveland working as an engineer, Bennett went back to college to obtain master's and Ph.D. degrees in biophysics from the University of Rochester School of Medicine and Dentistry. He completed post-doctoral work at the University of Colorado School of Medicine in Denver and then served on the faculty at the University of South Florida Morsani College of Medicine. He found what he wanted to do working in a field few understand.

His experiences have made him good at explaining its finer points in terms everyday people can grasp. The shelves of his office are lined with teaching awards, for which he credits coming from a family full of educators. The discipline is "in his blood."

When he shares his research and the numerous firsts he and colleagues have helped uncover, his eyes light up. He clips the ends of sentences to make points. He clarifies and dissects, stressing the significance of each find and how they build on each other. It's a matter of heart for him.

"The heart does two things. It sends an electrical signal, which then coordinates the precise contraction of the heart so that you pump blood to the body. That's basically the function of the heart," Bennett said. "So you have this electrical signaling, you have this contraction, all of which are highly coordinated, and you have to somehow take that electrical signal and translate it into a contractile event."

Bennett has helped make breakthroughs in electrical signaling including research to better understand the cellular events that contribute to arrhythmias. His efforts described for the first time how the large amount of sugars attached to the ion channels expressed in excitable cells directly modulate ion channel function and thereby contribute to the control and modulation of electrical signaling in the cardiac and neuromuscular systems. He now believes that the effect of these sugars on ion channel function may modulate more than just electrical signaling, potentially contributing to a novel mechanism for heart failure.

Still, Bennett only seems led to the next great puzzle. He's a passionate researcher on a hunt for answers — one who also never stops looking for more questions.



"I think that's probably one of the biggest things in science is that you absolutely need to be creative, and I worry that there's not enough creative scientists out there," Bennett said. "A lot of people tend to get into a groove, in a rut, and they tend to just kind of, 'Oh I know I can do this, so let's just get this paper out and be done.' And that's fine. But the problem with that is if everybody does that, science will end up being stifled at some point and not move forward."

In other words, there's more to science than publish or perish. Advancing is key. And he pushes forward knowing full well that failure is likely. With about 90 percent of research ending in failure, Bennett has found a way to persevere.

"You have to be that type of person that really thinks 'that's' amazing. And it's all worth banging your head against a wall many times before 'that' happens," Bennett said. "Science is one of those things. You don't have to be the brightest. You need to be creative and you need to be pretty headstrong to continue."

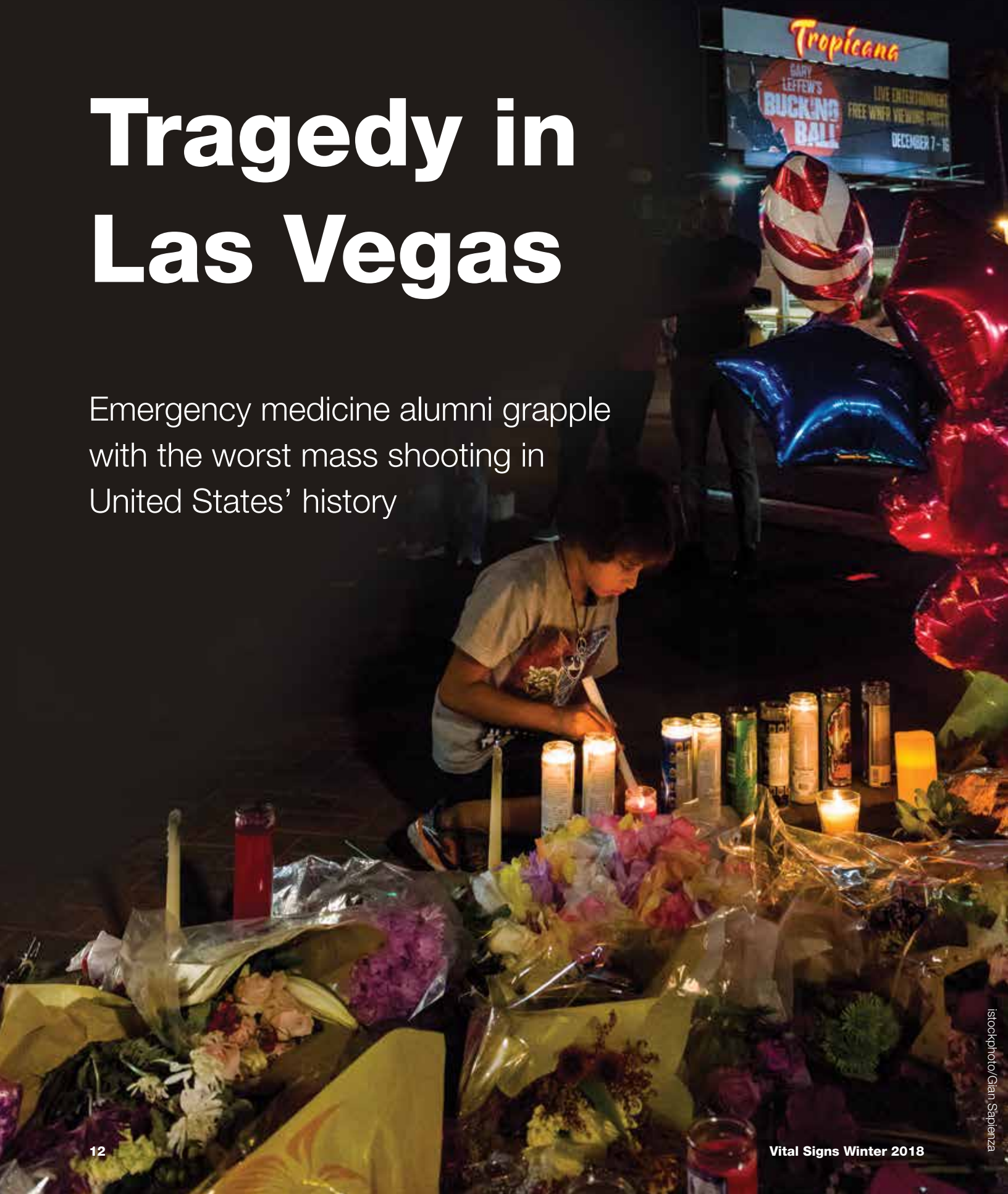
He hopes graduate students in his lab think about their research not just when they are sitting in the lab, but at any moment, like in the middle of the night. If they have such similar passion, Bennett believes they can make it in science.

When he's not in the lab, Bennett is usually outdoors. He likes to play volleyball and is fond of hiking. "I used to be an avid volleyball player, even though I'm short, and I used to play mostly sand but also indoor," Bennett said. "I've been to virtually every state and metropark in the area actually, several times. Every weekend I go for some kind of hike in a park. It's wonderful. And I just have to get my bike up and running."

— Daniel Kelly

Tragedy in Las Vegas

Emergency medicine alumni grapple with the worst mass shooting in United States' history



The mass shooting that occurred Oct. 1, 2017, at the Route 91 Harvest music festival on the Las Vegas Strip left 546 injured and 59 dead, including the shooter. Though initial reporting underestimated the extent of the carnage, emergency care personnel were immediately confronted with the realities of the worst mass shooting in the history of the United States.

Husband and wife alumni of the Boonshoft School of Medicine and the Emergency Medicine Residency Program were called in that night: Brian Emil Syska, B.S., M.D., '00, '04, '07, and Heidi Kabler, M.D., '04, '07. Syska is chief of emergency medicine at Dignity Health St. Rose Dominican Hospitals – Siena and DeLima Campuses – Henderson. Kabler is medical director and principal investigator at eStudySite, research director of the Sunrise Health GME Residency Program in emergency medicine, and a clinical assistant professor of emergency medicine at University of Nevada, Reno School of Medicine and Touro University.

Vital Signs: How did you learn of the tragedy that night?

Emil Syska: I currently serve as chief of emergency medicine for two of our community hospitals in Henderson, Nevada. Our emergency medicine group staffs seven of the hospitals in Las Vegas and Henderson. Shortly after the incident occurred, all of the group medical directors were notified of a possible mass casualty event and the need for assistance. At that time, we did not understand the scope of the tragedy that was unfolding on the Strip. My wife, Heidi Kabler, M.D., and I were able to access electronically our emergency departments. We assessed which hospitals had the greatest need based on the arrival patterns and acuity. The overwhelming need was at our level-two trauma center, Sunrise Hospital. We were quickly able to mobilize and guide resources to the facility. Sunrise Hospital treated more than 200 victims within the first few hours of the shooting.

Heidi Kabler: As a director, Emil was notified of a possible mass casualty event, and we quickly turned on the news. Initially, the news was only reporting 24 injured and two deaths; however, one of our mid-level providers was at the concert and was able to notify

our directors by text that it was in fact much, much worse. When we pulled up the tracking boards for the departments, the devastating truth that an actual mass casualty event was occurring in our backyard became a tragic reality. Luckily we had someone who could come stay with our two children, so we could go try to help in any way possible.

VS: How does one train for a tragedy like this?

Syska: There is no amount of training that can prepare anyone for what we saw or did that night. This was the worst mass casualty event in U.S. history. It felt like being in a war zone with casualties coming en masse from a killing field. As emergency medicine physicians, we are trained to think on our toes, react quickly, stabilize with the tools we have available, and multi-task. These qualities that have been instilled in us over years of training allowed us to move quickly, efficiently, and effectively. This is the core of what we do. We recognize within seconds which patients are critical and have a life threat requiring emergent intervention and which patients are less critical. That evening, patients were banded on arrival based on their acuity. We treated patients in any space we could find. Our highest-acuity patients were placed in beds. As the beds filled, patients were placed in chairs that lined the hallways of the emergency room, waiting room, and any space we could find. The surge of patients made it difficult to register their names, which subsequently made it difficult to locate them for treatment. Patients were continually re-evaluated, re-assessed, and re-vitalized when equipment was available.

Kabler: Hospitals and first responders conduct numerous drills to attempt to prepare for something like this and it certainly helps, because I felt like things were going as smoothly as could be expected. Patients were being taken directly to the operating rooms and post-anesthesia care unit who needed to go immediately to surgery. The walking wounded were being directed to our pediatric emergency department where our mid-level providers were able to apply splints or sutures. The police were able to keep the non-wounded family and friends out of the department because there just wasn't space for people's loved ones to be by their

sides. The people involved were so understanding about that, though I'm sure it was adding insult to injury to not be able to be with their loved ones. Everyone from the first responders, the physicians, and other providers to the nurses, technicians, registration personnel, and housekeeping was doing their part quickly and efficiently and many, many lives were saved by the teamwork that occurred that night. The fact that everyone was trained in their own part, and we all came together working fluidly as a team is what made the difference.

VS: What was the coordination like with first responders?

Syska: Our first responders were overwhelmed with hundreds of people needing transport. Their resources were at capacity. Crews were responding from all over the city as quickly as possible. They were dropping off numerous patients in the same rig and, after a quick report, sped back to the scene to continue transport. We had patients arrive in cars and in the back of pick-up truck beds, sometimes four and five at a time. Many had tourniquets or makeshift devices attempting to stop bleeding. Friends, family, and complete strangers were helping with transport and care of the critical. The swift and prompt responses of the people of Las Vegas saved lives that night. Their actions were heroic in every way.

VS: What injuries were most common?

Syska: The overwhelming majority of injuries were gunshot wounds. We also saw shrapnel wounds and complex lacerations as people attempted to scale fences and barricades. Many patients had been trampled after the shooting began as people tried to escape the scene. Essentially, they were all traumatic injuries.

Kabler: One thing that keeps flashing into my mind is the horrifying look of shock on the faces of every victim we saw that terrible night. I can't shake the eerily quiet chaos we experienced. Typically the emergency room is loud with beeping from all directions, and patients calling out from their rooms asking for pain medications or help to the bathroom, but that night the patients

were still, the entire department was chillingly quiet. The shock in their eyes was palpable. We treated the physical wounds, but what continues to devastate me is that every single one of those patients that night has emotional scars that lie beneath and go much, much deeper. The physical scars may fade over time, but the emotional wounds will remain.

VS: How do emergency physicians deal with this? Is something like this just “part of the job” or does it affect one differently?

Syska: There are no words to describe what happened that dreadful night. No one could predict the hostility, hate, and carnage that pure evil unleashed with such furor, for no apparent reason. No one expects this sort of thing to happen, much less in his or her backyard. Everyone involved that night was traumatized, there is nothing that can prepare you emotionally and physically for what happened. The hospital personnel did what they do best, they take the emotion out of what's going on and save lives. I think all of us who work in the emergency room have become comfortable and expect some sort of tragedy when we go to work. In a way, it is an expected part of what we do. However, when you're experiencing more than 200 tragedies within a matter of a few hours, it becomes far from ordinary, it's extraordinary in every sense. It was not until the next day that the true processing began. There was a host of counselors, psychologists, and psychiatric personnel available to help everyone who had been involved that night. In the hours, days, and weeks since that night, it continues to be difficult to cope with such senseless loss and devastation, the shock of seeing so many innocent faces in our emergency rooms maimed and scarred for life. That's what keeps me up at night. My wife and I have solace in knowing we have each other to discuss and replay the events that unfolded that evening. We have been very fortunate in that regard.

Kabler: I think everyone deals with tragedy in different ways, and the important thing is that we do what we can to support each other through it. Our group provided a debriefing to all of the providers who were involved. It wasn't mandatory, but it was encouraged. At first, I wasn't going to do it. I felt like I

should be fine, that I didn't go through anything like the victims, it wasn't necessary to talk to a professional. But one of my colleagues said he was going to do it, so I decided I would call in as well. I found it to be extremely helpful. The woman I spoke to was kind and understanding, and she helped me to realize that there shouldn't be an expected way for me to feel. She explained that this type of extraordinary tragedy can bring up emotions from other tragic times in our lives and that it is OK to allow ourselves to cry, and it is OK to experience this grief in different ways. This was definitely not something that felt like just part of the job, for me at least. Sure we see death every day, and we often carry with us the grief of our patients, but this was different. This was unimaginable tragedy. This was an unimaginable and brutal massacre of hundreds of innocent people in our backyard. This did not feel like just part of the job.

VS: How did your emergency medicine training prepare you for it?

Syska: We are blessed to have been trained at the Boonshoft School of Medicine as well as the Boonshoft Emergency Medicine Residency Program. Having spent more than 11 years of education and training at Wright State, I can truly say I was as prepared as one could be. The benefit of being community-based allows you to adapt to different environments, different electronic medical records, different cultures, and prepares you to be versatile, which is directly applicable to what we do every day in the emergency department.

Kabler: We always talk about how incredibly lucky we feel to have come from such a solid medical school education and tremendous residency program. We have worked in several rural departments without any specialists or backup and time and time again our training carries us through. In addition to the community-based training, I think one of the things that continues to be evident for me is the hands-on education we received throughout our training. Reading in a book is one thing, but having the opportunities to work through scenarios in a simulation lab truly helps cement things to memory. Since graduation, we have worked in several

departments without any specialists or backup, and time and time again our training carries us through.

VS: What lessons do you think were learned?

Syska: I believe the main lesson learned is that we should all be prepared. No one thought that a peaceful and quiet night at a country music festival could lead to the deadliest mass shooting in U.S. history. Simply put, we live in a different world today — a world where any citizen can obtain an arsenal of automatic and semi-automatic weapons and unleash hatred and devastation in minutes. No one dreamed that more than 500 victims could flood our valley's emergency departments within hours, but it happened.

Kabler: It happened and, sadly, it will happen again in someone else's backyard. I agree we all need to be prepared — prepared and aware. Have a plan. As Louis Pasteur once said, “Chance favors the prepared mind.”

Syska: I think it's important to recognize all of the people that were there that night at the Route 91 concert. Those people driving their cars on the Strip who saw the injured and wounded fleeing in droves; they stopped to put people in their back seats or truck beds and quickly transported them to help. Some willingly allowed others to take their vehicles so that the injured could be transported, and didn't think twice about it. The people at the concert who helped others get to safety, or shielded their loved ones to protect them. These were the real heroes of the evening. We pray for all of the victims and their families, many of which are still in our hospitals and have had their worlds collapse around them. We hope they will find the way to move forward. Lastly, the outpouring and support from all of the great people in Las Vegas and from across the country has truly been overwhelming. In many ways this has helped allow our city to start healing and has personally helped me move forward. #VegasStrong.

Kabler: The way people from all walks of life come together in the face of tragedy is astonishing to me. If we can all rise up in the face of tragedy, it seems we should be able to open up the conversations to find a way to try to prevent such senseless devastation to countless people.

— Daniel Kelly



From golf to medical school, brothers share special bond

First-year medical students Wes and PJ Greene could be mistaken for fraternal twins. They come to class together, sit next to each other, and study together. But they're not twins. They're brothers, separated by two years.

"We're each other's best friend," said Wes, the older brother. "We share an apartment. We're pretty much together 24-seven."

The Greene brothers, who are from Mason, Ohio, decided to attend medical school together after Wes took a gap year after college to get a little more clinical experience. He enjoyed his job as a medical scribe, and decided to stay another year to wait for his younger brother to join him in medical school. "I was enjoying my job, and I knew in a year that PJ would be applying to medical school," Wes said.

Once Wes decided to wait for PJ so they could apply together, PJ was on board with the plan. "Getting into the Wright State University Boonshoft School of

Medicine was a dream come true," PJ said. "We were close to home, and we were in the Boonshoft School of Medicine together."

At medical school, they keep each other on track with their studies. "Classes are going really well. We help each other study, whether we are at home or in the library," PJ said. "He makes sure I'm on pace, and I make sure he is on pace."

Living with his brother and going to medical school with him provides constant accountability. "If I see PJ working hard, and I have been watching TV for an hour, I know I need to start studying, or I will fall behind," Wes said.

To take a break from studying, the two brothers play recreational basketball, kickball, soccer, and volleyball. "We're both competitive, but it's fun competitiveness," PJ said.

Wes admits that they go hard against each other in sports. "But at the end of the day, there are no hard feelings."

Their journey to medical school started when they were young. They were born at Miami Valley Hospital in Dayton and lived in Centerville with their parents, Pete and Fran. But the family moved to Mason when they were 7 and 5 years old because of their father's job.

As they reflected on their childhood, they recalled how much they loved their home in Mason. Golf was a big part of their lives. Their childhood home backed up to the 17th hole on a golf course.

"Growing up, we were very fortunate to have a great group of kids around our neighborhood," PJ said. "We played with our friends down in the creek and collected golf balls. We sat near the tee in our backyard and sold the balls for \$1 for the premium balls and 50 cents for the other balls to golfers who had lost a few balls in the woods."

On a good Saturday, they made as much as \$50 selling golf balls for three or four hours. However, the golf course was sold a few years ago, and a developer is building new homes on the former golf course.

They played on the golf team at William Mason High School. "Mason was a nice community to grow up in," Wes said. "Our community and high school definitely prepared us to succeed in college."

After high school, Wes went to the University of Notre Dame, where he played golf on the club team. The experience resonated with him. "It was a great way to meet new people who had similar interests," Wes said. "I started out as safety officer and progressed to vice president of the club."

Wes graduated from the University of Notre Dame in 2015 with a Bachelor of Arts in Sociology and pre-medicine. After graduation, Wes worked in Columbus, Ohio, as a medical scribe for a group of emergency medicine doctors.

"I had a computer on wheels in the emergency room of a Columbus hospital. The experience offered me an opportunity to shadow a doctor full time," Wes said. "I worked with a lot of caring, compassionate emergency medicine physicians. I saw how they treat the entire spectrum of patient populations and diseases."

After high school, PJ played one year of collegiate golf at Hanover College, where he won freshman of the year for the conference. But he transferred to the University of Dayton. "I realized I wanted a pre-med advisor and a pre-med program," PJ said. "I was willing to sacrifice golf to pursue my dream of medical school."

Like his brother, PJ played on the university's club golf team, and enjoyed the experience. The two are competitive with their golf game, but they are supportive of each other. They have different strengths in their golf game, but they agree they make a good team.

"I'm taller by three inches," Wes said. "But PJ hits the ball a little farther."

While PJ was in college, their mother was diagnosed with Stage IV pancreatic cancer. "It came on suddenly," PJ said. "She was diagnosed in February 2016 and passed away a month later."

The Greene brothers and their father rallied around their mother, trying to comfort her as best as they could. "My mother's illness solidified my desire to go into medicine," PJ said. "The physicians who took care of our mom had such compassion. They helped our family

as best as they could during that difficult time."

Wes went with their mother to several medical appointments. But because it was a terminal illness, the doctors could not do much.

"The doctors' care, compassion, and willingness to sit down and answer our questions for as long as we needed meant a lot to us," Wes said. "Like PJ said, it solidified our desire to be physicians. I want to be able to provide that passion and care to patients and their families."

Before she died, their mother encouraged them to continue pursuing their dreams and goals. Medical school took on a whole new meaning for the Greene brothers. Wes decided that he would wait for PJ to graduate from college, and they applied to medical school together. The Boonshoft School of Medicine was an ideal fit for them. Not only did they like the strong sense of community, but it was close to home.

"At this point in our lives, being close to home, especially with our mom passing away, is important to us. Our dad comes up to Dayton sometimes to have dinner with us," Wes said. "During fall break, we went back home and played golf with our dad every day."

PJ added that the brothers also became more interested in the Boonshoft School of Medicine when they learned about the emphasis on clinical skills early in the curriculum. They have enjoyed that part of their medical education.

"When you are going through medical school and are reading for hours, we look forward to the clinical medicine sessions on Fridays," Wes said. "A new exam skill is taught each session. Students practice with a partner. We always are each other's partner."

Both brothers are interested in emergency medicine. Wes' interest stems from his job as a medical scribe, while PJ gained exposure to emergency medicine when he was a student at the University of Dayton. He was an emergency medical technician and served on the University of Dayton Emergency Medical Services, a student-run volunteer emergency medical services organization that provides pre-hospital care and transportation for all medical and trauma emergencies on campus 24 hours a day, seven days a week during the academic year.

"I gained exposure to the emergency medicine side of medicine," PJ said. "I learned how to be calm under stressful situations. I loved every second of it."

The Greene brothers also have other interests in medicine. Wes would like to explore oncology. "The experience with our mom and getting to know her oncologist has made me interested in oncology," he said. "I could see myself pursuing oncology to provide the same type of compassionate care that our mom's doctors gave her."

Wes is interested in health care policy. His interest started in college when he took a class, Sociology of Health and Medicine. He learned how health care is organized in the United States and the benefits and drawbacks of the U.S. system.

"That class was absolutely fascinating. We do a lot of things well, but there is certainly a portion of our population that does not receive the high-quality health care they deserve because of the socio-economic status," Wes said. "I try to keep up with all of the political developments and changes in health care policy to better understand how those changes will affect the quality and access to care for patients."

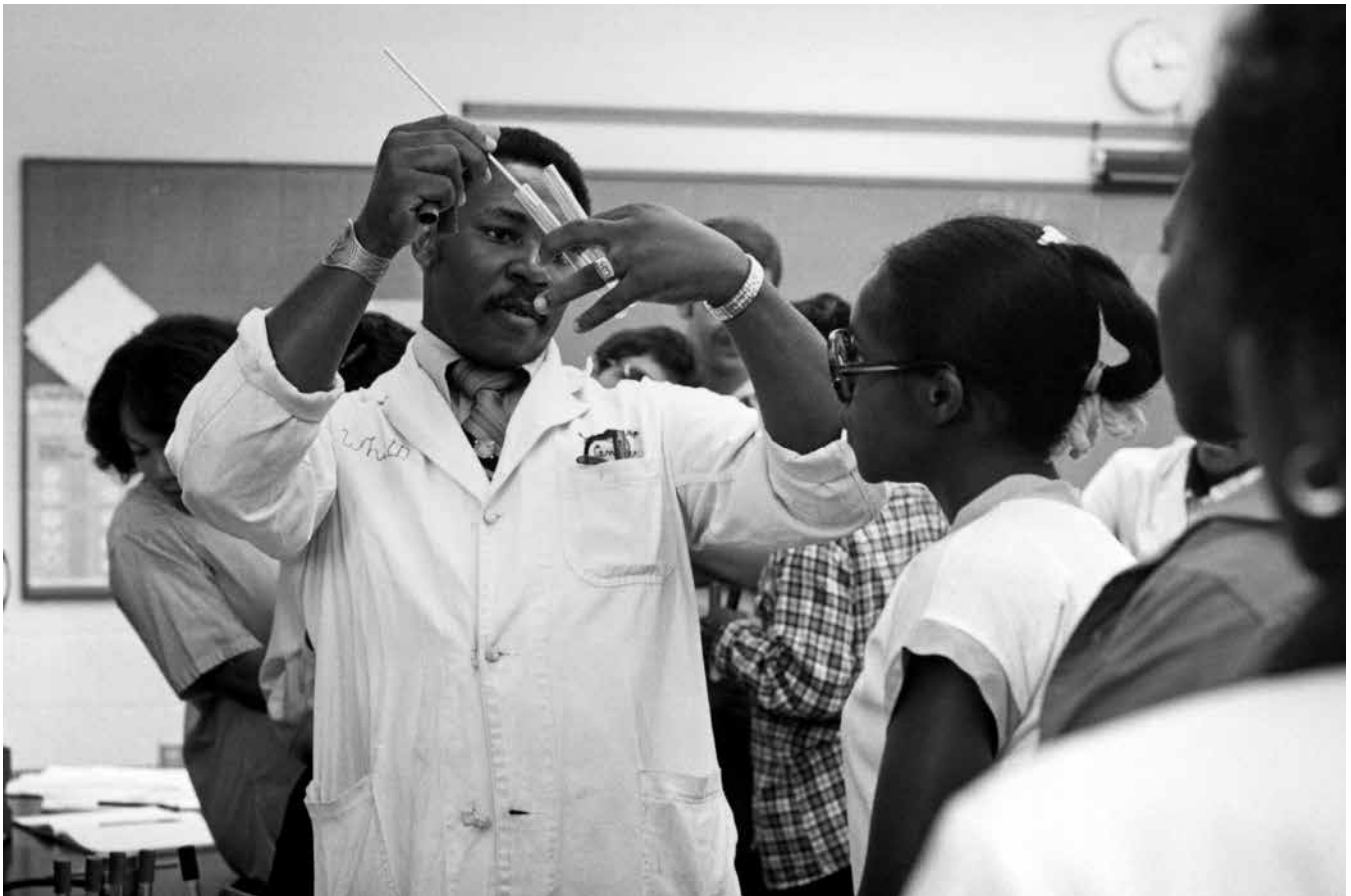
In addition to emergency medicine, PJ also is interested in pediatrics. "I loved our childhood pediatrician," PJ said. "I shadowed our pediatrician and enjoyed my experience. I love kids."

PJ also is passionate about global health. At the University of Dayton, he participated in two medical and public health brigades to Nicaragua. His group helped in a medical clinic in a village, where they triaged patients. They also built a sanitation station that included a septic tank and a toilet and shower on concrete floors.

"Seeing the lack of health care, and the issues that causes, left a lasting impression on me," PJ said. "Health care should be a right for all, not a privilege. I hope to make a difference locally and globally."

For now, the Greene brothers are learning as much as they can at the Boonshoft School of Medicine before they make a decision about residency. But they're open to going into practice together.

— Heather Maurer



Horizons in Medicine approaches 40th year

Coming up on its 40th year, the Horizons in Medicine program has given more than 600 high school students in the Dayton area the opportunity to prepare for careers in science and health care. It has sparked the passions of numerous students who are doctors today, many of whom were educated at the Boonshoft School of Medicine.

Those participating in the program gain shadowing experience and are eligible for a one-year, full-tuition scholarship to Wright State University. Most of the students who attend the program are underrepresented minorities or from disadvantaged backgrounds.

Alumni doctors credit the program with helping them to see that a career in medicine was possible. For some, it started their passion for medicine. For others, it filled in the gaps, strengthening a long-held desire to become doctors.

"I was one of those people who knew very early that I wanted to be a doctor. But I think that the Horizons in Medicine program really solidified it," said Alisahah Cole, M.D., '04, vice president and system medical director of community health at Carolinas HealthCare System. "I think it really was the catalyst or the impetus for me to say, 'You know what, I actually, really can do it.'"

One of her fondest memories of the program was when the class dissected a cadaver in the human anatomy lab. As a high school



student from Trotwood, Ohio, it was her first experience seeing a donated human body. The experience affirmed her desire to pursue medicine as a career.

Students in the five-week program also get to experience instruction in medical school classrooms from current students, shadow physicians in Dayton-area hospitals, and complete a research project.

"We had a project that we were responsible for, focusing on hypertension in the African-American community. I remember it emphasized that whole notion of team-based learning. At the end, we presented our findings in a larger setting," Cole said. "It also taught us public speaking and how to discuss the research and even some tips around how not to be nervous. That was really good to learn as a high school student."

The program does a good job of introducing students to the concept of working in teams and how that applies to health care, she said. Cole also enjoyed interacting with practicing physicians, and getting to see how they went about their jobs on a day-to-day basis.

She heard talks from several medical doctors, including Gideon Adegbile, M.D., clinical professor of family medicine at the Boonshoft School of Medicine. He has served as co-chair of the program since 1979.

"He was very inspirational," Cole said. "It was just good for me, being a young African-American student, seeing physicians of color."

Adegbile is passionate about the program, as he has seen its impact over the years. Eighty percent of students who complete the program go on to complete college. "We want to encourage minorities to attend medical school," Adegbile said. "We are very proud of the program. Every dean has supported the program wholeheartedly."

In part because of her experience in Horizons in Medicine, Cole chose to attend Wright State for medical school after completing her undergraduate degree at Case Western Reserve University. She also appreciated how connected the Boonshoft School of Medicine is with the surrounding community.

The summer after her first year of medical school, Cole was able to relive her Horizons experience by volunteering as a teacher.

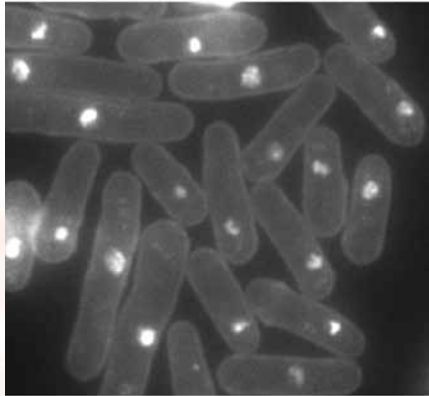
"I was able to help mentor and teach classes to the high school students. That was kind of a full-circle moment for me to be able to give back to a program that has influenced my life so much," Cole said. "Again that moment in the gross anatomy lab, I loved being able to see those who their eyes lit up and they were really excited. I always say you kind of love it or you hate it. And you can always tell which group people fall into."

Now established in her career, community service and giving back is still important to Cole. Her position with Carolinas HealthCare System is a great example.

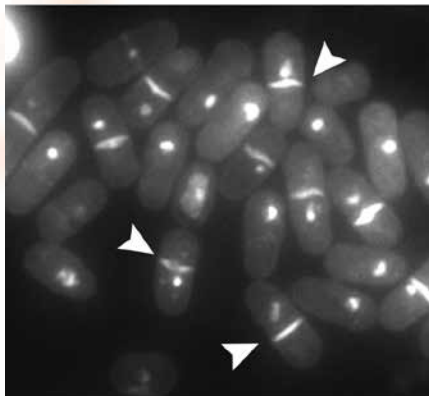
"My responsibility is to develop and implement a system-wide strategy of community health and benefit to improve the health of the communities we serve," Cole said.

— Daniel Kelly

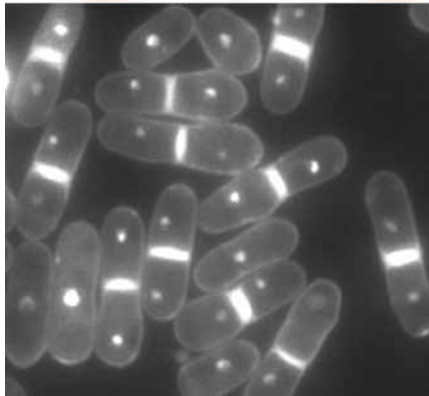
New antifungal therapy may be possible after unexpected find



WT



rad3Δ



reg11-1

It was a bit of a pleasant surprise for a team of researchers at the Wright State University Boonshoft School of Medicine. Using yeast, they have found what could one day be a new and more effective antifungal therapy.

The findings were unexpected for the team, who initially began looking at yeast cells and their response to DNA replication stress. They were screening for different mutations after cells were treated with hydroxyurea, a medicine that blocks DNA replication and is used to treat sickle-cell disease, leukemia, cervical cancer, and other diseases.

They chose yeast as the study subject because it's something that can be easily cultured and grows quickly in the lab. The hope was to find new mutants with defects in cellular response to DNA replication stress. This would help to better understand the biological process and possibly reveal a new way to hinder cancer cell growth and induce cancer cell death. But instead of finding new aspects of cellular response to replication stress, they ended up finding what could possibly become a new antifungal therapy.

"In the beginning, we were really puzzled by our new mutations, because besides the known cellular target of hydroxyurea in DNA replication, no previous report was saying that hydroxyurea could be targeting something else," said Yong-Jie Xu, M.D., Ph.D., associate professor in the Department of Pharmacology and Toxicology at the Wright State University Boonshoft School of Medicine.

"In the end, it turned out to be very interesting," he said. "So, more or less, we aimed to go from A to B, but we zigzagged from A to C. And C turned out to be a good destination too."

One of Xu's Ph.D. students, Amanpreet Singh, led the research project. The original intent was to study the cellular response to replication stress caused by hydroxyurea, because that would provide deeper understanding of cancer chemotherapeutic mechanisms. Xu and his team wanted to better grasp mutations and genome stability of normal cells to improve treatments.

But instead of finding only mutations in replication stress response, they also found other mutations such as those affecting the biosynthesis of heme or sterol that are highly sensitive to hydroxyurea. By combining an inhibitor of heme or sterol synthesis with hydroxyurea, they found new drug combinations that could kill fungal pathogens.

"It worked synergistically to kill the fungal cells. It's very robust," Xu said. "What I mean by synergistically is that it's not just one plus one equals two. You add it together and you get three, four, or five."

Next steps for the researchers are to test the new treatment method on other fungal pathogens. There are also other mutations in Xu's lab that still need to be characterized in order to uncover more therapeutic targets.

"Once we characterize each new mutation, we can potentially also find a new way of combining drugs. And our idea is to find more efficient, safer drug combinations that can tackle fungal diseases, particularly the serious issues associated with drug resistance and systematic infections," Xu said. "The idea is to maximize the therapeutic effects and at the same time to minimize side effects of the drugs. That's an advantage of using drug combinations instead of single-drug therapy."

— Daniel Kelly

Medical student conducts research on pediatric immunotherapy

A Wright State University Boonshoft School of Medicine student's research on neuro-oncology — cancers of the brain and nervous system — has led her to Stanford University School of Medicine, where she is conducting research on immunotherapy and its role in treating various pediatric neurological malignancies as a visiting student researcher. She also is conducting research at the University of California – San Francisco.

Maryam Shahin is taking a year off from medical school to conduct research in neuro-oncology. She hopes to gain a stronger understanding of the scientific process and the current status and future directions of cancer therapy in the central nervous system.

"I want to grow as a physician-scientist and develop the tools necessary to continue basic science research," said Shahin, who is from Irvine, California. "I also hope to contribute new knowledge to the scientific community with regards to treating pediatric brain tumors."

During her second year of medical school, Shahin discovered that she was passionate about research as she

explored neuro-oncology in the lab of Robert M. Lober, M.D., Ph.D., assistant professor of pediatrics at the Boonshoft School of Medicine. She researched diffuse intrinsic pontine glioma, an aggressive pediatric tumor with an extremely poor prognosis. Overall survival is eight to 11 months, and the median age at diagnosis is 7 years old.

"It is particularly devastating, because no effective treatment exists. The data has demonstrated different responses to hypoxia, which occurs when tumors have been deprived of oxygen," said Shahin, who presented research at the Society for NeuroOncology Pediatric Conference in New York in June. "These different cellular responses may contribute to differences in cell behavior, patient prognosis and tumor responses to therapy."

During the fall of 2016, Samuel Cheshier, M.D., Ph.D., assistant professor of neurosurgery at Stanford University School of Medicine, gave a seminar at Wright State in the Neuroscience Engineering Collaboration Building. Shahin attended the lecture and heard Cheshier discuss the ongoing research in his lab investigating the use of immunotherapy.

"Redirecting the immune system to recognize the tumor is a promising frontier in cancer therapy as it lacks the devastating side effects seen in traditional cancer therapeutics," said Shahin, who graduated from the University of California – Davis with a bachelor's degree in neurobiology, physiology and behavior. "After listening to Dr. Cheshier, I wanted to dedicate time to exploring immunotherapy and its role in treating various neurological malignancies."

Traditional methods of cancer treatment often have severe side effects, because they lack the ability to differentiate between normal and cancerous tissue.

"This is of utmost importance in our pediatric population, as they are still developing. Treating their cancer comes at a very heavy price, particularly to their developing nervous system," Shahin said. "Immunotherapy is novel in the sense that it can specifically target the tumor, almost eliminating many of the side effects that happen with traditional treatment methods."

— Heather Maurer



Interdisciplinary team awarded grants to transform primary care curriculum, opioid addiction training

The Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services awarded the Wright State University Boonshoft School of Medicine a \$499,095 grant to accelerate the transformation of the school's primary care curriculum, along with an \$80,000 supplemental grant for medically assisted treatment of opioid addiction.

The \$499,095 grant will be used to accelerate the transformation of the primary care curriculum across faculty and graduate and undergraduate programs in family medicine, internal medicine and pediatrics in addition to nurse practitioner and physician assistant programs.

This is the second year of a five-year renewable grant for primary care training and enhancement. In 2016, Wright State received \$451,764 from HRSA as part of a nationwide effort to prepare the next generation of skilled, diverse primary care providers to serve communities in need.

S. Bruce Binder, M.D., Ph.D., associate professor and interim chair of the Department of Family Medicine at the Boonshoft School of Medicine, is the principal investigator of the grant, "Accelerating Primary Care Transformation Wright (ACT-Wright)." Binder said the grant further meets the medical school's goal of enriching the primary care transformation curriculum.

"We want our medical students and residents in family medicine, internal medicine and pediatrics as well as nurse practitioners and physician assistants to better understand the social determinants of health, population health management, quality improvement, interprofessional team competencies, stewardship of resources, and patient self-management," he said. "By better understanding these issues and learning to work together across disciplines, we will graduate



clinicians who are prepared to serve communities in need nationwide."

Binder's team includes faculty members from the Boonshoft School of Medicine Department of Family Medicine, Department of Internal Medicine and Department of Pediatrics in addition to the Wright State-Miami Valley College of Nursing and Health, Wright State School of Professional Psychology and Kettering College Physician Assistant Program.

The grant also will enable Wright State to develop a one-year primary care transformation fellowship for graduating family medicine, internal medicine, and pediatric residents.

"We are creating a pipeline for academic faculty and primary care transformational leaders in the Dayton region," Binder said. "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."

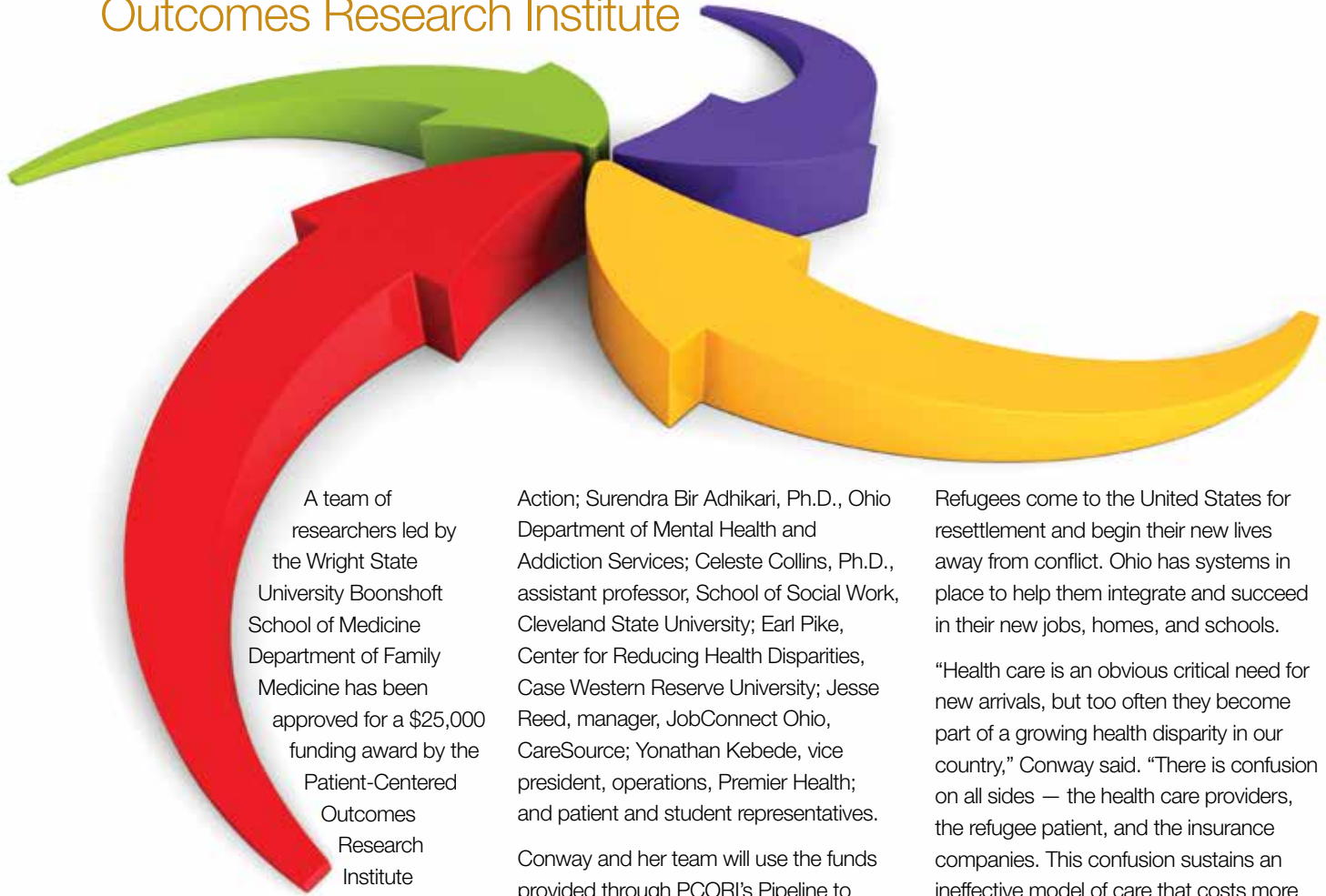
Opioid Addiction Training

In addition to the \$499,095 grant, HRSA awarded Wright State a one-year supplemental grant in the amount of \$80,000 for medically assisted treatment of opioid addiction. The supplemental grant will train physicians in the community, medical residents, nurse practitioners, and physician assistants in opioid addiction treatment.

"In Ohio, unintentional drug overdoses are the leading cause of accidental death. In Montgomery and Greene counties, unintentional drug overdose rates increased by more than 100 percent since 2010," said Binder, who also is the principal investigator of the supplemental grant. "By expanding the number of trained physicians, nurses, and physician assistants to provide medical assisted treatment, we can more effectively address the opioid epidemic in Montgomery and Greene counties in addition to rural counties affiliated with the Wright State University-Lake Campus in Celina."

— Heather Maurer

Researchers receive \$25,000 funding award from Patient-Centered Outcomes Research Institute



A team of researchers led by the Wright State University Boonshoft School of Medicine Department of Family Medicine has been approved for a \$25,000 funding award by the Patient-Centered Outcomes Research Institute (PCORI) to

support a project focused on better understanding the health needs of Ohio's refugee population.

Kate Conway, M.D., '05, M.P.H., assistant professor of family medicine and director of medical education in the Department of Family Medicine at the Boonshoft School of Medicine, is the leader of the project, "Refugee Centered Medical Home – PCMH Working Better for Our Newest Neighbors." This is the second year that Conway's team has received a PCORI award. In 2016, the team received a \$15,000 award.

Her team is composed of several partners, including Michael Murphy, Catholic Social Services of Miami Valley, Center for Families; Cathy Vue, Asian Services in

Action; Surendra Bir Adhikari, Ph.D., Ohio Department of Mental Health and Addiction Services; Celeste Collins, Ph.D., assistant professor, School of Social Work, Cleveland State University; Earl Pike, Center for Reducing Health Disparities, Case Western Reserve University; Jesse Reed, manager, JobConnect Ohio, CareSource; Yonathan Kebede, vice president, operations, Premier Health; and patient and student representatives.

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 Ohio's refugee population.

Pipeline to Proposal Awards enable individuals and groups not typically involved in clinical research to develop community-led funding proposals focused on patient-centered comparative effectiveness research. Established by the nonprofit PCORI, the program funds help individuals or groups to build community partnerships, develop research capacity, and hone a comparative effectiveness research question that could become the basis of a research funding proposal to submit to PCORI or other health research funders.

Refugees come to the United States for resettlement and begin their new lives away from conflict. Ohio has systems in place to help them integrate and succeed in their new jobs, homes, and schools.

"Health care is an obvious critical need for new arrivals, but too often they become part of a growing health disparity in our country," Conway said. "There is confusion on all sides — the health care providers, the refugee patient, and the insurance companies. This confusion sustains an ineffective model of care that costs more and works less."

In the tier I phase of the project, the team gathered together for the purpose of bringing patient-centeredness to the health needs of refugee patients. By the end of tier I, the team was able to recruit refugee patient representatives to the group.

"This group will now develop further recruitment and communication strategies to ensure more refugee patient participation, more health care provider education, and more insurance company connections to facilitate improved health care access and delivery," Conway said. "During tier I, we hosted various meetings and focus groups that captured themes of health topics people were interested in further developing."

— Heather Maurer

There and

Ayfer Ekiz, M.D., '15, completes
residency with help from
Boonshoft School of Medicine

back again.

After graduating from the Boonshoft School of Medicine in 2015, Ayfer Ekiz, M.D., returned to her hometown of New York City for an internal medicine residency at Mount Sinai Beth Israel. Her first year went well, and she was gearing up for year two when she learned that the hospital where she was working was going to be sold.

"We weren't given any options. They wouldn't tell us what was going to happen or when it was going to happen. We didn't have any job security," Ekiz said. "They just told us that they would place us within the health system, which is a huge health system within the New York City area, and we really didn't know what was going to happen to us."

So rather than stick around and wait to see where she would end up, Ekiz reached out to Glen Solomon, M.D., professor and chair of the Department of Internal Medicine and professor and interim chair of the Department of Neurology at the Boonshoft School of Medicine. She asked for his advice, and the two discussed her next steps.

"I don't know if you've ever met Dr. Solomon, but he has a calming effect on almost everyone. He said, 'Everything's fine. You're going to be fine. You're going to be a doctor. Calm down,'" Ekiz recounted. "And then he said, 'Let's see what we can do for you.'"

She soon heard from Roberto Colon, M.D., associate professor of internal medicine and program director of the Internal Medicine Residency. He offered her a position as a second-year resident.

"Definitely had the Boonshoft pride in my heart, and had classmates who were in my class who were in the residency program as well, so it worked out beautifully," Ekiz said. "I always say if you need a bailout and there's a fellow Boonshofer around, they'll be there to help you. It was definitely a situation

where I needed to be bailed out and, lo and behold, Boonshoft was there for me."

Moving back to Dayton felt like a whirlwind for Ekiz, who had moved back in with her Turkish immigrant parents in New York City. She had to find a place to live and would have to get used to driving everywhere again. It was time to readjust to the pace and people of the Midwest, who will say hello and hold the door for you, or strike up a conversation in line at the coffee shop. "People are just nicer in Dayton," she said.

Coming back to the Miami Valley allowed her to continue pursuing her passions in internal medicine. The analytical qualities of the specialty have always appealed to her, and she likes its applicability to other practice areas of medicine. After one gets the base internal medicine training, specializing is possible in a lot of areas, including cardiology, endocrinology, gastroenterology, pulmonary/critical care, and others.

Now working to complete her third year of residency, Ekiz is considering her next step after graduation. Though she respects the position of chief resident, filled by fourth-year residents, it's not the right fit for her or the life she wants in New York City.

"I'm applying for hospitalist opportunities currently in the New York area and I really, really enjoy pulmonary critical care, more the critical care aspect of it," Ekiz said. "I think if I were to specialize, I might do something along those lines. But I have not committed to that yet."

She may also get into academic medicine later on in her career, as teaching is something she's always enjoyed. Especially now, nearing the end of her time as a resident, it takes her back to see new medical students or interns. It wasn't that long ago that she was a scared newcomer just getting her feet wet.

Now she can look back at those times when she was just beginning to build her confidence and knowledge as a physician. It's a dramatic shift from first year to third year.

"The more you see, the more you know. And as a third year you're more comfortable handling any situation that can come your way. You have this growing confidence, growing base of knowledge, and you're kind of ready to do it on your own," Ekiz said. "As a first year, everything is very intimidating. Even though you may have seen it as a medical student, now you're actually responsible for the patient. Your name is on their chart as their doctor."

"I always say if you need a bailout and there's a fellow Boonshofer around, they'll be there to help you."

She's learned many lessons. One is to have an open mind with each patient. You have to leave your preconceptions at the exam room door. Another is that it's difficult at times to help patients when things like insurance or other resources aren't available. The biggest lesson she's learned is to be humble.

Ekiz likes to reflect on her experiences while going for walks at Dayton's many metroparks. The hiking here is a lot better than at parks in the New York City area. She is looking forward to more time with her family, fiancé, and three nephews after she graduates.

"I still play volleyball very amateurishly, as well as soccer, with family. It's the one thing that we definitely do when we go on picnics," Ekiz said. "We always have a volleyball and a soccer ball."

— Daniel Kelly

Future Docs

Refugee health conference welcomes medical student research

Two Wright State University Boonshoft School of Medicine students presented research about refugee patient communities and their health concerns at a workshop at the North American Refugee Health Conference in Toronto, Canada.

Third-year medical students Katie Adib, of Dayton, and Cynthia Joseph, of Littleton, Colorado, were part of a team of researchers from various organizations led by Kate Conway, M.D., '05, M.P.H., assistant professor of family medicine and director of medical education in the Department of Family Medicine at the Boonshoft School of Medicine. They

presented research to an international audience of health care professionals who work with refugee populations.

Their research, "Refugee Centered Medical Home: Refugees as our Patient Leaders," was part of Conway's grant work with Patient Centered Outcomes Research Institute. In 2016, Conway was awarded a grant of about \$15,000 to build a team of refugee patient representatives, clinicians, community stakeholders, and researchers all dedicated toward improving the health care experience and outcomes for refugee communities resettling in the United States.

Medical student selected for Minority Medical Student Award Program

Ramanjot Kang, a fourth-year medical student at the Wright State University Boonshoft School of Medicine, was one of 22 medical students nationwide selected to participate in the American Society of Hematology (ASH) 2017 Minority Medical Student Award Program (MMSAP). This is the second year that Kang has received the award. He was one of four medical students selected to return to the program with new and/or continuing research.

The ASH program encourages underrepresented minority medical students to pursue careers in hematology by supporting them as they implement their own hematology-related research project in the lab of a research mentor. ASH is the world's largest professional society of hematologists dedicated to furthering the understanding, diagnosis, treatment, and



prevention of disorders affecting the blood, bone marrow and immunologic, hemostatic, and vascular systems.

Kang will receive \$7,000 to help cover his research projects and travel expenses to the 59th ASH Annual Meeting in Atlanta, where he will present his research findings on autoimmune diseases during a special session. He presented his research in December 2016 in San Diego and was recognized with an Abstract Achievement Award.

M.D./Ph.D. student to serve on AAMC Board of Directors



The Association of American Medical Colleges (AAMC) selected Marie Walters, an M.D./Ph.D. student at the Wright State University Boonshoft School of Medicine, to serve as the medical student representative on its 2017-2018 Board of Directors.

Passionate about advocating for medical students, Walters has been active with the AAMC, serving as an AAMC

representative since 2013. She served as the chair to the Central Region on the AAMC Organization of Student Representatives Administrative Board in 2015 and then worked as the liaison to the AAMC Committee on Student Affairs in 2016.

She has attended national and regional meetings and worked with students, medical school deans, program directors, and other student affairs staff. "Being on the board of directors will be an extension of my current role," Walters said. "I will be able to advocate for medical students nationwide."

Boonshoft student named national vice president of Student National Medical Association

Charles Grant III, a fourth-year medical student at the Wright State University Boonshoft School of Medicine, has been named the national vice president for the Student National Medical Association (SNMA), the oldest and largest medical student organization dedicated to serving the needs of underrepresented minority students who wish to pursue careers in the field of medicine. As vice president of SNMA, Grant is responsible for leading committee activity and implementing the agenda for the year.

He is just one of a few recent Boonshoft School of Medicine students who have served in national leadership positions for SNMA. From 2016-2017, Christen Johnson, M.D., '17, was the organization's national president. Topaz Sampson, M.D., '15, also served as president from 2014-2015.

"To know that SNMA's membership elected me to hold this position gives me great pride and a huge sense of duty to make them proud," said Grant, a native of Enumclaw, Washington. "When I first started medical school, one of my goals was not just to grow into an excellent physician throughout my training. I also wanted to become someone who can advocate for my community as a leader, especially in regards to youth mentorship, guidance, and health education."

Medical students push for health care improvements on Capitol Hill

Two Wright State University Boonshoft School of Medicine students spoke with legislators and legislative aides from Ohio on Capitol Hill in Washington, D.C., as part of the American College of Physicians (ACP) Leadership Day.



The annual advocacy day brought together 430 ACP members from 47 states and the District of Columbia. They met with their senators and representatives in congressional visits. Medical students and doctors were divided into teams based on the state where they live.

Fourth-year medical student Casey Smiley and Nick Christian, M.D., M.B.A., '17, represented the Boonshoft School of Medicine. Their team met with Sen. Rob Portman and Reps. Steve Stivers (15th District), Brad Wenstrup (2nd District), and Bill Johnson (6th District) in person. They also met with legislative aides for Reps. Steve Chabot (1st District), Warren Davidson (8th District), and Patrick Tiberi (12th District).



Medical students gain global health experience in Malawi

Three Wright State University Boonshoft School of Medicine students spent three weeks this summer in Malawi as part of a global health experience.

Ohio natives Jeff Bierly, of Centerville, Sarah McGraw, of Canfield, and Hannah Polster, of Columbus, volunteered in a local health center in Chilumba. The rural community is in the Karonga district of northern Malawi in southeast Africa. The students, who are now in their second year of medical school, helped clinicians with patients, checked on new mothers, and worked in nutrition clinics, where they measured and documented children's growth and immunizations. They also volunteered at three outreach

clinics where children were weighed, immunizations were administered, and education was provided on various topics including prenatal care, nutrition, and HIV/AIDS.

They volunteered with Determined to Develop, a nonprofit organization that works side by side with community members in Chilumba to identify and address needs and provide assistance in the overall development of the region. The medical students gained firsthand experience with an African culture and learned how health care and population health initiatives are implemented in a highly under-resourced country with a significant burden of disease, high maternal and infant mortality rates, and chronic poverty.

On The Move

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



Julie Gentile, M.D., has been named chair of the Department of Psychiatry, effective Jan. 1, 2018. 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 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 also is 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.

Paul Hershberger, Ph.D., new director of behavioral science for family medicine



Paul Hershberger, Ph.D., professor of family medicine, has been appointed director of the department's Division of Behavioral Health. The new role allows him to continue the division's contributions to the mission and goals of the Department of Family Medicine and the Boonshoft School of Medicine.

Hershberger is responsible for providing administrative leadership of the division, including supervising the director of behavioral science for the family medicine residency program and behavioral health consultants in the

Wright State Physicians Family Medicine Practice. He also oversees current grant funding and works to secure additional grant funding for research and education.

A licensed psychologist, Hershberger is board certified in clinical health psychology by the American Board of Professional Psychology. In addition to his teaching responsibilities, Hershberger maintains an active research program as well as a private practice.

Robert L. Mott Jr., M.D., named medical director of CTRA



Robert L. Mott Jr., M.D., has been named medical director of the Wright State University and Premier Health Clinical Trials Research Alliance (CTRA).

Mott is a board-certified preventive medicine physician and retired U.S. Army colonel with 22 years of experience in population medicine, medical education, research, policy development, international health, corporate medicine, and medical leadership.

As medical director of CTRA, he is responsible for oversight of CTRA clinical research activities including clinical trials at Premier Health hospital campuses,

practice sites of Wright State Physicians, and additional community clinic locations. He also is a clinical associate professor of population and public health sciences at the Wright State University Boonshoft School of Medicine.

CTRA conducts clinical trials throughout Southwest Ohio in a variety of health care areas. The public-private initiative was founded in 2012 by Wright State University Boonshoft School of Medicine, Wright State Research Institute, and Premier Health.



Improving geriatric medicine

Karen Kirkham, M.D., '89, works to alleviate issues threatening the quality of care for elderly patients, including a shortage of geriatricians

It's well known that the population of the United States is aging. But instead of catching up with the coming gray wave as many would think, it appears health care is lagging behind in strategies that could help. A clear example of this is a worsening shortage of geriatricians, physicians who specialize in caring for older adults.

It's a complex issue, brought on, in part, by the structure of the health care system, lower pay in geriatric medicine compared to other specialties, and American culture itself. But the results are easy to see. Older adult patients don't consistently get the attention their life station should receive.

"It's disappointing that we compromise, that we don't prioritize the special needs of our elders the same way we do our children. Nobody says anything when a nurse spends more time playing cards with a child who's sick and going through chemo," said Karen Kirkham, M.D., '89, associate professor emerita of internal medicine and geriatrics at the Wright State University Boonshoft School of

Medicine. "But the same time isn't afforded in our system for someone to spend time with a 90-year-old who just had surgery and is quite confused."

Kirkham worked as a geriatrician with Wright State Physicians Geriatrics, where she got to spend much more time each day to really address the needs of her older, adult patients. In comparison, she saw two to three times as many patients as a general internist in the same time. She completed a mid-career fellowship in 2016 before transitioning to the department. Kirkham now works at Grant Medical Center in Columbus, Ohio.

"My patients get more of me and I get more of them. So for me, that's ideal because I'm a relationship-based person in my work. Other specialties do the detailed technical interventions, but that is not something I have found fulfilling," Kirkham said. "There's time for me to say thank you. There's time for them to ask for what they need and time for me to try to access resources and provide reassurance."

The health care system can afford the extra time because doctors working in geriatrics make, on average, less than other medical specialties. Their income is on par with pediatricians, who are one of the lower-paid groups. Ironically, the job satisfaction of both of these specialties is near the top in national surveys. Kirkham suspects it has a lot to do with the recharge associated with relationship-based care.

"There's roughly 7,500 of us in the entire country right now. And every day we lose two to three to retirement. Not many young physicians are doing the fellowships and few primary care doctors are willing to spend a large part of their practice on the specific health and wellness needs of older adults," Kirkham said.

By comparison, there are about 50,000 emergency medicine doctors. "It's not super sexy to go to a dinner party and talk about the older, adult lady you did a falls assessment on when your buddy, the cardiologist, is talking about that slick new procedure he does to unclog arteries," she said. "Americans are fascinated with technology and that is definitely reflected in the hierarchy and values in health care."

In addition to prestige and pay, the structure of the American health care system helps to feed the discrepancy. It's not set up to prioritize qualitative measures, or to keep older adults out of nursing homes. Often, more financial profit can be gained through fixing what's broken than preventing it in the first place. Kirkham is hopeful a shift is underway in the system to promote health, function, and quality of life, which is more highly valued and common in other nations around the world. Achieving such changes will take decades, as the structure of the current system is hard to change, evidenced by national conversations. But there is hope, as system leaders and legislators are actively exploring patient-focused care initiatives that better encompass wellness and functional outcomes.

There are also cultural impediments for shifts that could benefit older adults. As Americans, we can be geographically or emotionally alienated from our elders, something that is far less common in other societies. It is hard for organizations to advocate for older and

frail individuals as well as for their caring families, so overall outcomes and their sense of well-being can suffer.

Other opportunities exist for systems to better support the care of elderly patients, but would require well-known geriatric knowledge and skills to be much better taught to medical students and resident physicians. Take, for example, hospitalized people who can't sleep. The standard order is to give them Benadryl because it's not addictive and is typically effective in younger adults. But in older, adult patients, going that standard route will often cause harm. For a patient with an enlarged prostate, it could mean a difficult trip to the restroom. For others, especially those with dementia, the treatment commonly causes a state of delirium, as well as falls.

For delirium in older patients, the fix could be as simple as changing the standard order to exempt those over 65 from medications identified as high-risk.

"As our knowledge of geriatrics has grown, hospital and other health care leadership has taken some time to incorporate the information. Incredible opportunities to improve delirium outcomes exist, often through prevention," Kirkham said. "Negotiating these things in a system takes time. Exciting initiatives, such as the Hospital Elder Life Program spearheaded locally by Dr. Steve Swedlund is helping to confirm delirium is not inevitable, but rather preventable."

Elderly patients also sometimes need extra explanations about medical bills, as they grew up paying cash for health care. They don't know their way around insurance procedures and can get overwhelmed. The result can often be less care and poor patient outcomes.

Kirkham is hoping to positively contribute what she can by working inside the system with committed team members and alongside her learners. "Sometimes you have to do things that are a bit counterculture in order to promote patient-friendly care," she said. "What geriatrics has highlighted for me over the past couple of years is a variety of opportunities to better systematize support for the needs of that population. I'm very focused on infusing into the culture that there's a better way of doing things. We partner with hospitalists and primary care doctors, alongside our

resident physicians and medical students, in very rewarding collaborations."

Instead of taking on the primary care of older patients and treating them, another school of thought on geriatrics is to support other specialists who provide care. The hope is that the next time something clinically similar presents, the non-geriatrician physician will recall and use more appropriate treatments. There simply will never be enough geriatricians to provide all the care needed by senior citizens. As a recent internist educated in geriatrics, Kirkham would like to make the incorporation of geriatric care standards as seamless as possible for her former peers.

She has found the work incredibly fulfilling, and believes that most geriatricians are pretty proud of and happy with what they do with their lives. "The relationship-based things make you happier because you're simultaneously getting recharged," Kirkham said.

No two patients are the same and all have stories to tell, as her former internal medicine department chair, Glen Solomon, M.D., always emphasized. It keeps things interesting, and Kirkham feels like she gains wisdom from each interaction. "They have 90 years of uniqueness built into them," Kirkham said. "It challenges me. It keeps me on my game."

One person or organization alone can't address the geriatrician shortage or provide all the care needed for the aging population. Teamwork will continue to be important as the health care system adjusts to care for our elders.

"For the aged, understanding how to navigate the health care system is really overwhelming. So part of what I've learned as a geriatrician is that I need team members from many other health care professions to consistently contribute their unique skills if I want to really maximize the outcome for my patients," Kirkham said. "Sometimes when we're being made into doctors, we're told it's all on you, you have to be really good, and you can't make mistakes. That's not a very realistic message anymore."

— Daniel Kelly



Tackling suicide prevention, resilience, and stress in medicine

When Aaron Patterson, M.D., M.B.A., M.A., was a medical student at the Wright State University Boonshoft School of Medicine, his professors spoke to his class about how difficult the process of becoming a physician can be. But they emphasized they were there to support them. More importantly, they provided the pager number of a psychiatrist that the physicians in training could reach if they needed confidential support.

The prevalence of depression among physicians in training is high. Depression can be caused by work load, work inefficiency, and lack of autonomy and meaning in work. Left untreated, depression can lead to suicide. A 2003 study in the *Journal of the American Medical Association* estimates that 300 physicians a year die from suicide.

"Physician suicide is a significant problem," said Patterson, who graduated from the medical school's Physician Leadership Development Program with an M.D./M.B.A. dual degree in 2009. "Free, accessible, and confidential support from a physician specializing in mental health seemed like the perfect solution to this problem."

A more recent study published in the July 2017 issue of *Academic Medicine* found that 324 people died during residency from 2000 to 2014. The study found that neoplastic disease, or cancer, was the leading cause of death with suicide following second. Eighty residents died from cancer, while 66 died from suicide.

"This study showed that resident suicide rates were lower in the gender and age-matched general population overall

from 2000 to 2014, but there was a temporal association with higher rates of death in early residency,” Patterson said. “This is possibly due to changes in how we approach residency training and the addition of support services.”

“However, any physician suicide is a tragedy that is entirely preventable,” he said. “So, while this is a positive sign, we still have a lot of work to do. We lost 66 physicians in training during the time window of this study, and that is 66 too many.”

When Patterson finished his residency in psychiatry at the Mount Sinai Beth Israel Medical Center in New York in 2013, he saw a need for a program to help other physicians. Patterson had served as the chief resident and received The Albert Einstein College of Medicine Teaching Award for his efforts in medical education.

“I recalled the amazing work of Dr. Julie Gentile and the tremendous commitment of the administration of the Boonshoft School of Medicine,” said Patterson, who returned to Dayton to speak about suicide prevention, resilience, and stress in medicine at a grand rounds event at Miami Valley Hospital. “Dr. Julie Gentile was the psychiatrist who provided confidential support to physicians in training.”

Gentile is now professor and chair of the Department of Psychiatry at the Boonshoft School of Medicine. She is recognized for her work in intellectual/developmental disabilities and co-occurring mental illness and traumatic brain injury. She also is the project director for Ohio’s Coordinating Center of Excellence in Mental Illness/Intellectual Disability and project director of Ohio’s Telepsychiatry Project for Intellectual Disability.

Patterson went to the chair of his department at the time and asked if he could recreate the program that had been offered at the Boonshoft School of Medicine when he was a medical student. However, he did not feel that he would be experienced enough to treat house staff. He wanted to connect the physicians to more experienced faculty.

“Much to my surprise, he thought it was a great idea and appointed me as the mental health coordinator for house staff,” said Patterson, who is a board-certified adult psychiatrist and an assistant professor at the Icahn School

of Medicine. “It was important to me that people have a number they can call to get help directly.”

So, he gave out his cell phone number and asked house staff and program directors to put it in their phones for them to have in case they or someone they worked with needed it. “Physicians in training at our hospital now had a direct line to a psychiatrist, and I started getting calls,” he said. “Our hospital administration has been in total support of the program, and it has expanded. We have other psychiatrists and psychologists who are accessible to staff, as well as primary care physicians, to expand the health care options for our staff.”

The physicians he has worked with often say that they know errors happen, but they should have caught the specific error in question. “Because people fear reprisal at their mistakes or are ashamed of them, there can be a tendency for people to not be transparent about errors or to discuss errors that happened to them,” Patterson said. “Thus, if few providers are talking about errors that involved them, then this makes it look like you are the only one having so many problems and leads to further isolation.”

Patterson said that the medical profession needs to change its perspective. “Even the best physicians will make mistakes, even horrible mistakes,” said Patterson, who is a fellow of the American Psychiatric Association. “Our job is to design systems that catch human error, because we have human beings at work in the system.”

Beginning with medical students and medical residents, Patterson would like to see medical schools nationwide change medical education by implementing courses about physician resiliency like those offered at the Boonshoft School of Medicine. “We need to change our approach to medical education to focus on how we take errors that will happen and learn from them,” he said. “As physician leaders, we can help this process by openly talking about the errors that happened in our work and how they impacted us. We also should not engage in attacking physicians when errors happen. Rather, we should focus on how we can make safer systems.”

— Heather Maurer

At the Boonshoft School of Medicine, the Healer’s Art course is offered to first-year medical students. Designed by Rachel Naomi Remen, M.D., the course is offered annually at more than 90 medical schools nationwide. The Healer’s Art course addresses the hidden crisis in medicine, the growing loss of meaning and commitment experienced by physicians nationwide under the stresses of today’s health care system.

The Boonshoft School of Medicine also offers practicing health care professionals innovative educational programs and supportive communities through the Remen Institute for the Study of Health and Illness (RISHI). 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, the Healer’s Art course for medical students, and Power of Nursing for nurses.

Events

Mark your calendars now! July 27–29, 2018

The weekend promises to be relaxing, fun for your family (children of all ages are welcome), and full of opportunities to reconnect with former classmates, friends, and Wright State University.

REUNION

'83 '88 '93 '98 '03 '08 '13

- Dayton Dragons Baseball Game
- Continuing Medical Education
- Gandhi Medical Education Center Tours
- Carillon Park Family Event and Dinner
- Kings Island

For more information contact
Nicki Crellin, director, at 937.245.7634,
or nicki.crellin@wright.edu.

medicine.wright.edu/community/alumni

Academy of Medicine

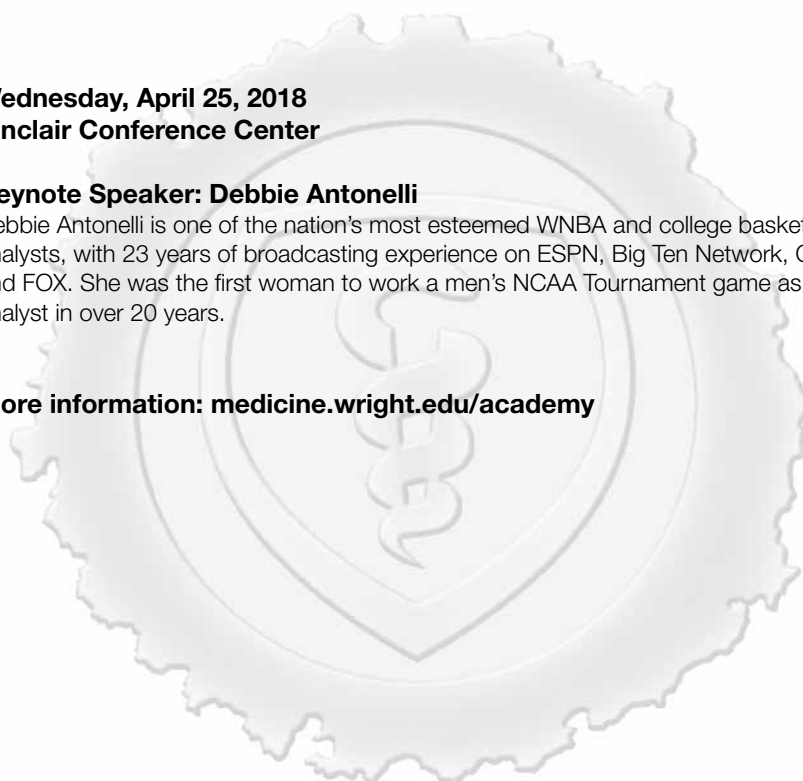


Wednesday, April 25, 2018
Sinclair Conference Center

Keynote Speaker: Debbie Antonelli

Debbie Antonelli is one of the nation's most esteemed WNBA and college basketball analysts, with 23 years of broadcasting experience on ESPN, Big Ten Network, CBS, and FOX. She was the first woman to work a men's NCAA Tournament game as an analyst in over 20 years.

More information: medicine.wright.edu/academy



In Memoriam

Col. Kenneth Beers, M.D., passes at 87

Retired U.S. Air Force Colonel Kenneth “Ken” Beers, M.D., passed away on Sept. 20, 2017, in Vandalia, Ohio. A longtime faculty member at the Wright State University School of Medicine, he was 87.

Beers instructed the departments of community health and family practice and was the associate director and training coordinator of the Aerospace Medicine Residency Program. He retired from Wright State University in 1993.

Beers was born in Treichlers, Pennsylvania. In 1952, he graduated from Muhlenberg College of Allentown, Pennsylvania, and would go on to receive his M.D. degree from Jefferson Medical College in 1956. Beers earned a Master of Public Health from University of California – Berkeley, in 1963. From 1958-1978, he served with the United States’ 8th Tactical Fighter Wing in the Vietnam War, achieving the rank of colonel in 1971.

For his work with NASA’s Manned Spacecraft Center, Beers was awarded the Legion of Merit. He served as a flight surgeon to the Gemini/Titan Program while at NASA, as well as team leader of the Gemini Recovery Medical Team, a surgeon for the Apollo Mission, and in Mission Control for Apollo Missions 8, 9, 10, and 11.

At Beers’ request, his body was donated to the Wright State University Boonshoft School of Medicine Anatomical Gift Program for the advancement of medical science. He is survived by his loving wife, Cecil Mae, four children: Kenneth (Gretchen) Beers Jr., Yellow Springs, Ohio, Richard (Debbie) Beers, Dayton, Ohio, Jeffrey Beers, Issaquah, Washington, and Heather (David) Klepitsch, DeKalb, Illinois; stepchildren Sharon Mutter, New York, New York, Dane (Joyce) Mutter Jr., Charlotte, North Carolina, David Mutter, Union, Ohio, Denis (Melissa) Mutter, West Chester, Ohio, as well as numerous grandchildren, great-grandchildren, and one great-great-granddaughter.



Gregory Boivin, D.V.M., M.B.A., '14, dies at 55

Gregory Boivin, D.V.M., M.B.A., '14, died on Aug. 11, 2017, at age 55 after a courageous fight with pancreatic cancer. He passed peacefully and was surrounded by family.

Since 2008, Boivin served as the director of Laboratory Animal Resources and as a professor in the Departments of Pathology and Orthopaedic Surgery at the Boonshoft School of Medicine. He contributed both as an independent scientist and as a collaborator on various projects ranging from orthopaedic research to animal husbandry.

Thanks to advances in disease modeling and genetic engineering, Boivin worked at the forefront of his field developing techniques and methods to understand pathologic changes. He provided pathology support for numerous investigations and was the lead pathologist in studies of various cancers.

Before coming to Wright State University, Boivin worked for nearly two decades as the director of comparative pathology at the University of Cincinnati, where he provided research support to more than 100 investigators and partner institutions. During the same period, he also served as veterinary medical officer at the Cincinnati Veterans Affairs Medical Center.

Boivin’s groundbreaking career in research began at the University of Washington, where he received a Bachelor of Science in Zoology in 1984. Five years later, he graduated with a Doctor of Veterinary Medicine from Washington State University. He went on to obtain a master’s in laboratory animal medicine from the University of Missouri in 1992 and a Master of Business Administration from Wright State in 2014.

Boivin leaves behind two children, Jordan and Kayla, and his fiancée Pam Williams, who were the loves of his life. Greg and Pam often referred to their family as the Brady Bunch, consisting of Jordan, Kayla, Keaton, Ginny, and Sam. He is survived by his father Dan Boivin and his two loving and supportive sisters, Donna Ditore (Joe) and Diane Donovan and his four favorite nieces and nephews, Michelle Ditore, Anthony Ditore, Megan Ditore and Sean Donovan. He was preceded in death by his mother Linda Boivin in 2011.

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 937.245.7634.

1987

Melchor Antunano, M.D.,* was named president of the International Academy of Aviation and Space Medicine. He is director of the Civil Aerospace Medical Institute at the Federal Aviation Administration.

1988

Bradley Barker, M.D., a family medicine physician in Elyria, Ohio, has received a 2017 Top Doctor Award. The award honors physicians for demonstrating clinical excellence and delivering high standards of patient care.

1993

Col. Thomas J. Rogers, M.D., has served for 24 years as a family physician in the U.S. Army. He was recently named director of the DiLorenzo Health Clinic at the Pentagon in Arlington, Virginia.

1996

Beth Hodges, M.D., is a new member of the primary care division at Triad HealthCare Network in Greensboro, North Carolina.

1997

Vincent "John" Waldron, M.D., has joined Centra Medical Group in Lynchburg, Virginia, as a family medicine physician in the health group's Brookneal Practice.

2002

Joseph See, M.D., a board-certified medical oncologist, is a practicing physician at Oncology Hematology Care of Cincinnati. He treats oncology cases through initial diagnosis, complications, relapse, and remission.

2008

Kyle Horton, M.D., M.B.A., is taking a break from medical practice in Wilmington, North Carolina, to run for a seat in the U.S. Congress. The board-certified internal medicine physician launched her congressional campaign to improve health care access in her community.

2009

Rocky Jedick, M.D., M.B.A., is completing his emergency medicine residency in Salt Lake City, Utah, after serving abroad as a flight surgeon for five years. He continues to serve as a flight surgeon in the United States Air Force Reserve.

Matthew Pellerite, M.D., M.P.H., is an assistant professor of pediatrics at University of Chicago's Pritzker School of Medicine. He has completed a neonatology fellowship and serves in Evanston Hospital's Neonatal Intensive Care Unit.

Jaime Stelzer, M.D.,* has been included in the International Association of HealthCare Professionals' publication of The Leading Physicians of the World. He practices in Anderson, Indiana.

Jessica Vinsant, M.D., M.B.A., is a full partner at a general surgery private practice in Knoxville, Tennessee. She serves on the board of directors for Susan G. Komen of East Tennessee and Cancer Support Community.

2010

Sayuri Cheruvu, M.D.,* has been named hematologist and medical oncologist at Guam Regional Medical City, where she supervises chemotherapy and immunotherapy treatments.

Jeffrey Jenks, M.D., M.P.H., is an assistant professor of medicine at University of California – San Diego, where he conducts clinical research on tuberculosis and is a member of the Antibiotic Utilization Committee.

Linden Karas, M.D., has joined Avita Health System's Center for Bariatric Surgery. The fellowship-trained bariatric surgeon began practicing at her office in Ontario, Ohio, in late 2017.

Daniel Lui, M.D., M.B.A., is medical director of Grace Medical Services in Southwest China. He is also CEO of GivingBackLife, an organization providing medical care to the region's poor.

Sarah McBeth, M.D., M.P.H., recently became clinical assistant professor at University of Pittsburgh Medical Center and medical director of the Pittsburgh AIDS Task Force.

Derek Thomas, M.D., is practicing with Hematology and Oncology Associates in Findlay, Ohio. He is a new member of the care team at the Armes Family Cancer Care Center.

2012

Chad Garven, M.D., M.P.H., was awarded the 2017 Ohio Academy of Family Physicians Foundation Mentorship Award in Columbus, Ohio.

T.J. Hufford, M.D., was awarded the Graduate of the Last Decade Award by the Wright State University Alumni Association.

Matthew Noyes, M.D.,* is a shoulder specialist at the Salem Orthopaedic Surgery Bone and Joint Center in Salem, Ohio.

Daniel Persinger, M.D., is a new member of the general surgery team at Altru Health System in Grand Forks, North Dakota.

Laura Previll, M.D., M.P.H., recently became medical instructor in the Division of Geriatrics in Duke University Hospital's Department of Internal Medicine.

2013

Kyle Ott, M.D., works at the Orthopaedic Institute of Dayton. He specializes in non-operative management of athletic-related injuries, musculoskeletal care from youth to aging adults, and care integration with orthopaedic surgery.

2014

Trevor Short, M.D., is specializing in internal medicine as a new physician at PrimeCare of Southeastern Ohio. Short provides primary care to patients in his hometown of Zanesville, Ohio.

2016

Ben Buettner, M.D., was awarded the Washington University Internal Medicine Intern of the Year award after completing his first year of residency at Washington University School of Medicine and Barnes-Jewish Hospital.

2017

Amanda Wright, D.O.,* is an orthopaedic trauma and fracture care specialist at Andrews Institute for Orthopaedics and Sports Medicine in Gulf Breeze, Florida. Her clinical interests include fracture care, pelvic surgery, and post-traumatic deformity correction.

* Residency graduate

Dream fulfilled

Medical student hopes to become rural family physician

Growing up in rural Northeast Ohio, many of Mitchell Weeman's friends didn't expect to go to college. In fact, his high school's curriculum was geared toward qualifying students to get jobs immediately after graduation.

Now a second-year student at the Boonshoft School of Medicine, he almost didn't attend college, instead taking a year off to help run his family's dairy farm after his father injured a knee. The time off allowed him to reflect and figure out what he wanted to do. He was able to volunteer in a care home dedicated to helping Amish women who have been domestically abused.

And though he enjoyed the hard work and responsibility of helping his family's dairy business, he realized that he wanted to be in a more direct position to help people. He attended college with the ultimate goal of becoming a doctor, backed by the character-building experiences of his upbringing and his friends and family.

"I chose the Boonshoft School of Medicine because it has a strong community mindset just like mine. We're working together in an environment that nurtures learning and growth," Weeman said. "I feel like everyone here is helping me to reach my goal of returning to my hometown and serving as a family physician."

None of this would be possible without the support he's received. "I am truly grateful to those who contribute to medical school scholarships," Weeman said.



Your support can give students like Mitchell 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.**



Boonshoft
School of Medicine
WRIGHT STATE UNIVERSITY

3640 Col. Glenn Hwy., Dayton, OH 45435-0001



Tenth Annual Medical-Spirituality Conference

The Soul Work of Living and Dying

Register now: medicine.wright.edu/med-spirit



Featuring Lucy Kalanithi, M.D.
and Steven Z. Pantilat, M.D.

Thursday, April 19, 2018
8:45 a.m. - 4:30 p.m.
Sinclair Conference Center



While modern medicine and contemporary technologies have extended our lives, we still struggle with the question of living well. For physicians and patients grappling with questions of what it means to live fully in the midst of chronic or life-threatening illness, the quest for answers is worthwhile, challenging and deeply personal.

