SUMMER 2024

Ohio State Medicine Alumni

INNOVATORS ISSUE

Advances in how we teach, practice and explore

Gregory Kolovich '09 MD, '12 MPH, '14 Res

THE OHIO STATE UNIVERSITY
COLLEGE OF MEDICINE

Homecoming and Medical Alumni Reunion Weekend

All College of Medicine alumni are invited back to campus for Homecoming weekend!

Visit go.osu.edu/medreunion to view additional details, including accommodations and registration information. Registration opens July 15.

Schedule of Events

Friday, Oct. 25

9 a.m.-noon
"Back to Class" Sessions at the New Hamilton Hall!
Tour the new Interdisciplinary Health Sciences Center at Hamilton Hall and participate in a variety of sessions hosted to welcome you "back to class"!

Noon-1:30 p.m.
Class of 1974 50th Class Reunion Luncheon
The Class of 1974 is invited to attend a special celebration luncheon in honor of their 50th class reunion.

4-5 p.m.
Student Research Poster Session
Meet our current medical students and see what exciting research is happening at the College of Medicine.

5-6:30 p.m.
College of Medicine Alumni Reception and State of the College
Join your fellow alumni and College of Medicine leadership to hear exciting updates about the college from Dean Carol R. Bradford, and enjoy plenty of time to reconnect with old friends.

7-9 p.m.
Reunion Class Socials
Meet up with your classmates for a fun evening in a social setting to reminisce and make new memories.

Saturday, Oct. 26

***Begins 3 hours prior to kickoff**
College of Medicine Buckeye Tailgate
Join us for food, fun and a dose of Buckeye Spirit at Hamilton Hall before the Ohio State vs. Nebraska football game.

Ohio State Medicine Alumni

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Columbus, OH 43201

Update your contact information through the college's Alumni Affairs website at go.osu.edu/medalum.

Cover photo: Steve Hardy

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ON THE COVER:
Gregory Kolovich '09 MD, '12 MPH, '14 Res, with the MC2, the latest version of the ultra-portable X-ray he created. The device is undergoing FDA review and is not currently for sale. Read more about his work on page 12.

Dean's Message

Daring ideas are like chessmen moved forward; they may be beaten, but they may start a winning game.

— JOHANN WOLFGANG VON GOETHE

INNOVATIONS SURROUND US EVERY DAY. Things that were once wild ideas are now commonplace, like the first paper coffee filter invented by Melitta Bentz in 1908, or Sir Tim Berners-Lee's invention of the World Wide Web in 1989. And as German writer Johann Wolfgang von Goethe wisely observed, new and bold ideas may not always pan out, but they may light a spark that illuminates a fresh way forward.

Take, for instance, the innovative work of Wilson Greatbatch. In 1956, he tried to create a heart rhythm recorder, but accidentally used an incorrect piece of electronic equipment in the process. This mistake yielded a device that produced electronic pulses instead of recording the heartbeat — the first glimmer of a pacemaker. Thanks to this initially failed idea, pacemakers are now used in millions of patients worldwide.

At The Ohio State University College of Medicine and Wexner Medical Center, we know that embracing innovation is not just an option, but a necessity. Every new idea can lead to another, and another, and so on. Our learners are early adopters of emerging technologies, and our faculty and staff are advancing medical breakthroughs that could change the world.

In these pages of the *Ohio State Medicine Alumni* magazine, you will read exciting stories about innovations that are happening now in education, clinical care and research. You will also read about those at the forefront of these efforts. I hope these vanguards and their exceptional work rouse your imagination and inspire your own new thoughts and ideas.

Thank you for your engagement with the Ohio State College of Medicine and the work you are doing every day to lift up health care and drive new, innovative approaches. With all of us as "chessmen" moving forward, we can win the game of transforming heath care and saving lives.

The future of medicine is bright, and it is my privilege to serve as the dean of this tremendous college.

Carol R. Bradford, MD, MS, FACS
Dean, The Ohio State University College of Medicine

Vice President for Health Sciences, The Ohio State University Wexner Medical Center

The Leslie H. and Abigail S. Wexner Dean's Chair in Medicine

Professor of Otolaryngology – Head and Neck Surgery




Sponsor a White Coat

Help today's *students* become tomorrow's *doctors*

As the Class of 2028 enters The Ohio State University College of Medicine, join us in welcoming these doctors-in-training by sponsoring a white coat.

For medical students, the white coat is the first step in becoming a doctor. An Ohio State University white coat is a symbol of the highest standards of health care and a life dedicated to caring for others.

Send your gift today to provide critical scholarship support and help usher in the next generation of Buckeye physicians.

Give today at **go.osu.edu/whitecoat**

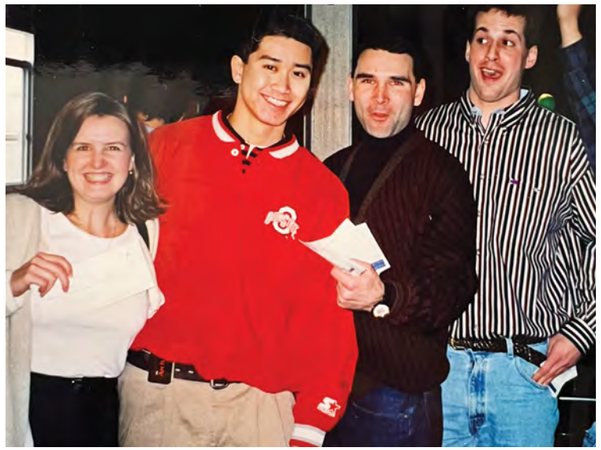
THE OHIO STATE UNIVERSITY
COLLEGE OF MEDICINE

Then & Now

Class of 1999 and Class of 2024
Graduation celebrations

2024

1999



COLLEGE NOTES

NEWS | NUMBERS | RESEARCH

Tamar Gur, MD, PhD, named director of Soter research program

Tamar Gur, MD, PhD, was named the inaugural endowed director of the Sarah Ross Soter Women's Health Research Program in May 2024. The program was established in 2023 with a $15 million pledge from Sarah "Sally" Ross Soter and the Soter Kay Foundation to The Ohio State University College of Medicine.

Under Gur's leadership, the program will become a leading hub for translational, interdisciplinary research that creates healthier futures for women across their lifespan. She will guide clinicians and scientists from Ohio State and The Ohio State University Wexner Medical Center in their work to discover new therapies for preventing and treating conditions that disproportionately affect women, such as cardiovascular and autoimmune diseases, Alzheimer's, osteoporosis, anxiety and depression.

A nationally recognized expert in maternal-fetal psychiatry, Gur is an associate professor of Psychiatry and Behavioral Health, Neuroscience, and Obstetrics and Gynecology in the Ohio State College of Medicine. She is also associate director of the College of Medicine's NIH-funded Medical Scientist in Training Program.

Inaugural App-a-Thon encourages medical app innovation

The first Ohio State College of Medicine App Development Competition, or App-a-Thon, held Spring 2024, brought together clinicians, faculty, researchers and students in the university's Department of Computer Science and Engineering to develop mobile app prototypes and ways to translate those ideas into life-changing solutions in the practice of medicine, medical education and communication.

The competition was created by **Derek Harmon '15 PhD**, a clinical associate professor in the Department of Biomedical Education and Anatomy, who has experience with novel applications in medicine (see page 35).

This year's top three App-a-Thon winners are:

1st place: Lymphedema Scanner, a smartphone 3D image scan of face and neck swelling that tracks fluctuations over time

2nd place: IVAlert, a 24/7 nurse and anesthesiologist communication app that streamlines IV access

3rd place: ClearSkin, an acne and skin lesion graphic identifier and locator

Time Out Tuesday offers space, support for students prepping for Step 1

Time Out Tuesday (TOT) gives second-year medical students a refreshing break from studying, fostering wellness and support during their critical four- to six-week study time to prepare for Step 1 of the United States Medical Licensing Exam.

Step 1 prep is often called an "ultra-marathon" because of the dedicated study time students need to review everything they've learned in the first two years of medical school. For **Morgan Doty**, the puzzles, games and interesting topics of conversation during TOT had a positive impact on her preparation.

"It really helped to take my mind off a lot of the dread associated with such a major exam," she says. "And it provided one of the last few opportunities for our class to be together as one before we split off into separate rotations."

Dean's Excellence Awards recognizes dedicated faculty, staff, administrators

The inaugural Dean's Excellence Awards Gala, held in March 2024, celebrated the exceptional service and impact of faculty, staff and administrative honorees. **Carol R. Bradford, MD, MS, FACS**, dean of the Ohio State College of Medicine, shared how the honorees' care and commitment contributes to the college's collaborative work to transform the health of our communities.

The 13 honorees were **Gregory Archual, MBA**, department administrator in the Department of Emergency Medicine; **Sujit Basu, MD, PhD**, professor of Pathology; **Ashley Bertran**, program director of the Medical Scientist in Training Program; **Nicholas Breitborde, PhD**, clinical professor of Psychiatry and Behavioral Health; **Katarzyna Danis-Wlordarczyk, PhD**, research scientist in the Department of Microbial Infection and Immunity; **Danielle Davis**, director of Anatomical Services and the Body Donation Program; **Kamilah Dixon, MD**, clinical associate professor of Obstetrics and Gynecology; **Marisha Goldsmith, MBA**, division administrator in the Division of Hospital Medicine; **C. Alexander Grieco, MD**, clinical assistant professor of Biomedical Education and Anatomy, clinical assistant professor of Radiology and associate dean for Student Life; **Cynthia Kreger '85 MD**, clinical professor of Internal Medicine; **Zihai Li, MD, PhD**, professor of Internal Medicine; **Susan Massick, MD, '00/'03 Res**, clinical associate professor of Dermatology; and **Melissa Stenger**, department administrator in the Department of Neuroscience.

Cooper receives Linda C. Stone, MD Faculty mentor award

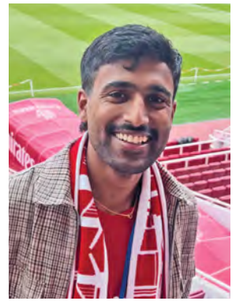
Robert Cooper '10 MD, '13 Res, clinical associate professor of Emergency Medicine, received the Linda C. Stone, MD Award in Mentoring in recognition of his fostering the growth of medical students. As a faculty member and in overseeing the volunteer-run Columbus Free Clinic, Cooper was noted for his exemplary leadership, compassionate advocacy for underserved patients and commitment to cultivating future generations of physicians. Under his leadership, the Columbus Free Clinic was named in August 2023 as a regional winner of the W.K. Kellogg Foundation Community Engagement Scholarship Award from the Association of Public and Land-grant Universities. The award recognizes extraordinary community engagement initiatives among public four-year universities nationwide.

Leadership Announcements

Richard Gumina, MD, PhD, was named director of the Division of Cardiovascular Medicine at the Ohio State College of Medicine. A nationally recognized leader in cardiovascular medicine, Gumina serves as the associate dean for convergent research and associate division director for research within the Division of Cardiovascular Medicine, among other key positions within the college.

Sara Koenig '16 PhD, was named senior director of Research Strategy and Operations at the Ohio State College of Medicine. She is an assistant professor of Physiology and Cell Biology at the Ohio State College of Medicine.

Gilbert Liu, MD, was named director of the Ohio Colleges of Medicine Government Resource Center (GRC) in April 2024. A clinical professor of Pediatrics at the Ohio State College of Medicine and a practicing pediatrician at Nationwide Children's Hospital, Liu provides strategic direction to the GRC on innovative practices to improve access to quality health care for all Ohioans through partnerships.



Samuel Paul

Ellena Privitera

Lauren Southerland, MD

Two students, one professor receive Fulbright scholarships

Two learners and one professor at The Ohio State University College of Medicine have been selected to receive Fulbright scholarships from the widely recognized and prestigious international exchange program.

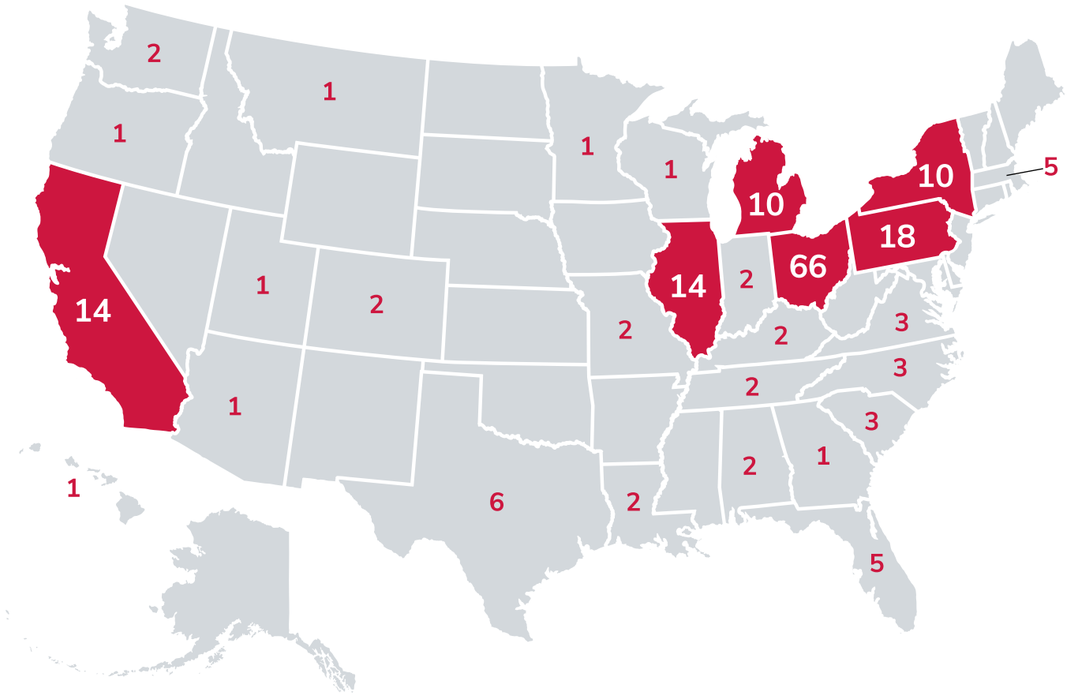
Fourth-year medical student **Samuel Paul** will pursue a master's degree in critical care medicine at Queen Mary University of London. Fourth-year medical student **Ellena Privitera** will conduct research at Universidade Nova de Lisboa's National School of Public Health, with a focus on migrant health.

Lauren Southerland, MD, associate professor in the Department of Emergency Medicine, has been awarded a Fulbright U.S. Scholar Award to research "Accelerating Geriatric Emergency Medicine Models of Care Dissemination Using Implementation Science" in Australia. Southerland will evaluate local and national strategies to improve hospitals' abilities to implement high-quality geriatric care in emergency departments.

BY THE NUMBERS

Match Day Statistics

The Ohio State University College of Medicine 2024 Graduates Matched by State*



Top 3 Specialties

Internal Medicine

Pediatrics

Emergency Medicine

Grads matched in **31 states**

187
grads matched nationwide

40
matched in Columbus

32
grads matched at The Ohio State University Wexner Medical Center

*Based on Post-Graduate Year 1

BY THE NUMBERS

Ohio State College of Medicine Rankings

Academic Excellence

U.S. News & World Report 2024–25, "Best Medical and Graduate Schools" results:

Top tier school for research

1st in central Ohio for research

1st in central Ohio for primary care

Top Recognized Programs, School of Health and Rehabilitation Sciences

#8 Physical Therapy

#11 Occupational Therapy

MD Education

7,634
applications received in 2024

Top 20 Departments*

#5 Physical Medicine and Rehabilitation

#5 Physiology and Cell Biology

#11 Surgery

#13 Emergency Medicine

#18 Otolaryngology

Research**

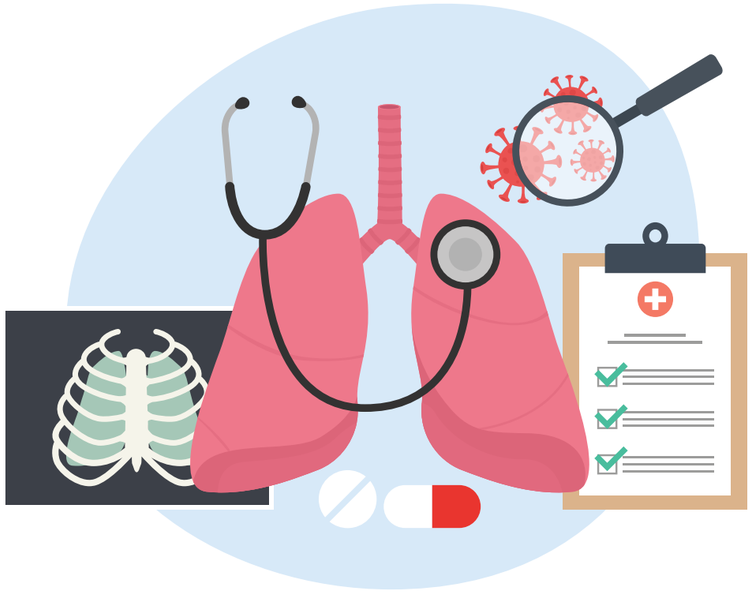
The Ohio State University College of Medicine is ranked **40th** in the country, with more than **$400 million** in National Institutes of Health (NIH) research funding in fiscal year 2023. Physical Medicine and Rehabilitation and Physiology and Cell Biology both rank in the top 5 nationwide. Surgery ranks in the top 11.

** Blue Ridge Institute for Medical Research, 2024*
*** A compilation of National Institutes of Health funding rankings for U.S. medical schools*

Class of 2024

55%

of Ohio State MD graduates are women



Ohio State pulmonary experts to study age-related lung disease

The Ohio State College of Medicine and the Department of Internal Medicine, in collaboration with the Division of Pulmonary, Critical Care and Sleep Medicine, received a National Institutes of Health T32 grant to provide postdoctoral training in the biology of aging and lung diseases. Unique in its focus on aging, the three-year program aims to train the next generation of scientists, physician-scientists and PhD scientists.

Ana Mora, MD, professor of Internal Medicine and the grant's contact principal investigator, says prioritizing age is crucial to adapting medical practice in lung-related diseases.

"With age comes a lot of changes, physiologically, in your cells and in your organs," she says. "So, the capacity to repair is really deteriorated, and that increases the severity of diseases that happen, but also the risk of new diseases, like, for example, idiopathic pulmonary fibrosis."

Faculty research

Study shows adverse pregnancy outcomes increase risk of maternal cardiovascular disease

A recent study by **Kartik Venkatesh, MD, PhD,** assistant professor of Obstetrics and Gynecology at The Ohio State University College of Medicine and director of the Diabetes in Pregnancy Program at the Ohio State Wexner Medical Center, and his team showed that women who experienced adverse pregnancy outcomes in their first birth were more likely to have a higher predicted risk of atherosclerotic cardiovascular disease — narrowed arteries due to built-up plaque — two to seven years after delivery. The results were published in the journal *Obstetrics & Gynecology*.

"Continued risk assessment and engagement in preventive care after an adverse pregnancy outcome remain important opportunities to reduce atherosclerotic CVD risk and improve maternal health in the postpartum period," Venkatesh says.

The United States has the highest rates of maternal mortality in the developed world.

The new research contributes to a greater understanding of how adverse pregnancy outcomes are an important contributor to cardiovascular disease in women later in life and emphasizes the importance of pregnancy health for women's heart health.

New psychedelic therapy research shows clinician-patient bond may matter most

In a new study, researchers from the Ohio State College of Medicine and the College of Social Work suggest that when it comes to reducing depression with psychedelic-assisted therapy, what matters most is a strong relationship between the therapist and study participant.

The researchers analyzed 2021 clinical trial data that included depression outcomes and participant reports about their experiences with the drugs and their connection with therapists. They found that psilocybin (magic mushrooms) combined with psychotherapy in adults was effective at treating major depressive disorder, and that the stronger the relationship between a participant and clinician, the lower the depression scores were one year later.

"What persisted the most was the connection between the therapeutic alliance and long-term outcomes, which indicates the importance of a strong relationship," says lead author **Adam Levin, MD**, a psychiatry and behavioral health resident in the College of Medicine.

Past research has consistently found that as treatments changed, a trusting relationship between clients and clinicians has remained key to better outcomes.

"This concept is not novel," says senior author **Alan Davis, PhD,** associate professor and director of the Center for Psychedelic Drug Research and Education in the College of Social Work.

"What is novel is that very few people have explored this concept as part of psychedelic-assisted therapy." The study was published in the journal *PLOS ONE*.

Study shows epilepsy patients benefit from structured 'seizure action plans'

A 16-week study of 204 adult epilepsy patients found that 98% of participants believe that all patients with epilepsy should have a seizure action plan (SAP), regardless of seizure status.

These plans can help patients with epilepsy to safely manage seizure emergencies. But health care providers don't always discuss seizure action plans with their patients.

Researchers at the Ohio State College of Medicine and the Ohio State Wexner Medical Center found that standardizing a structured SAP can help adults with epilepsy safely manage seizures. Epilepsy affects about 3.4 million adults in the United States, according to the Centers for Disease Control and Prevention. The study findings are published in the journal *Neurology: Clinical Practice*.

The future of gene therapy is changing lives

Researchers at the Ohio State College of Medicine and the Ohio State Wexner Medical Center developed a new platform to deliver the gene therapy precisely to specific areas of the brain. This novel approach is improving lives in ways once thought impossible.

One of the team's biggest successes uses gene therapy to treat a rare genetic disorder called aromatic L-amino acid decarboxylase (AADC) deficiency in children. Individuals with this disorder lack the enzyme that produces dopamine and serotonin in the central nervous system, affecting the pathways in the brain responsible for motor function and emotions.

One young patient, Delilah Ramirez, received this life-changing gene therapy surgery at the Ohio State Wexner Medical Center in 2022. At the time, she couldn't hold up her head or sit up by herself. She relied on a motorized wheelchair to move around. She couldn't feed herself or sleep through the night. She had emotional outbursts, and suffered from seizure-like episodes that could last for hours.

Less than two years after receiving the treatment, she can walk on her own and feed herself. On her 9th birthday she blew out a cupcake candle — for the first time.

This breakthrough in treating patients with AADC was decades in the making, says **Krystof Bankiewicz, MD, PhD**, professor of Neurological Surgery.

"It requires a use of the technology and devices that we had to develop and establish over the years to do these surgeries very precisely, very carefully, and then do it safely," he says. "It's no longer being questioned. It works."

Every step she watches her daughter, Delilah, take is a miracle to Arcelia Ramirez. Delilah underwent a novel approach to gene therapy to treat a rare genetic disorder at The Ohio State University Wexner Medical Center in July 2022. Now she continues to surprise her mom with her progress, including walking on her own.

POWER IN PORTABILITY

Orthopedic surgeon **Gregory Kolovich ’09 MD, ’12 MPH, ’14 Res**, turned his frustration into creation. Today, his ultra-portable X-ray could change how X-rays are obtained in countless corners of health care.

By Jennifer Shaffer

IT WAS THE MIDDLE OF THE NIGHT in a Boston emergency department. Frustration bubbled in **Gregory Kolovich ’09 MD, ’12 MPH, ’14 Res,** as he wrestled an 800-pound C-arm X-ray machine while working to reattach a patient’s hand.

The unwieldy amount of equipment, radiation risk and overall annoyance that came with an X-ray seemed wildly out of balance for a process that Kolovich felt could be as simple as operating a point-and-shoot camera.

“It was so inefficient,” says Kolovich, who earned a degree in electrical engineering from the Georgia Institute of Technology before attending medical school at The Ohio State University College of Medicine.

“I thought, ‘man, if I could untether this C-arm, and put the X-ray in my hand, and point it where I want it, that would be so much easier,’” says Kolovich, now an orthopedic surgeon with Optim Orthopedics in Savannah, Georgia.

Kolovich went on to realize the many challenges such an endeavor would present. “I quickly figured out why no one’s ever done it,” he says.

Until now.

OXOS photos: Steve Hardy

Gregory Kolovich ’09 MD, ’12 MPH, ’14 Res (above) stages a positioning-only demonstration of the next generation of his original corded Micro C innovation — a completely wireless mobile X-ray. This newest device is currently under FDA review and is not for sale.

As Kolovich (right) worked to create a portable and efficient device, he focused on safety, accuracy and durability.

The idea stuck with Kolovich, and soon he and his friend Evan M. Ruff, a fellow Georgia Tech engineering graduate, became obsessed with rethinking and shrinking cumbersome imaging devices, tinkering with X-rays, voltages and heat transfer options, patenting their breakthroughs as they went. They founded OXOS Medical, Inc., in 2016 to develop and commercialize their idea of a smaller, portable X-ray instrument.

Those efforts resulted in the Micro C, the first handheld digital X-ray system that brings accurate medical imaging to the point of care safely and quickly. About the size of a large clothes iron, the Micro C combines a compact, handheld X-ray with digital and infrared cameras and an image receptor to capture high-resolution images of any extremity. It also uses Dynamic Digital Radiography to allow providers to see bones in motion and execute modern procedures.

"We knew that the No. 1 thing people would worry about is shooting radiation all over the room," says Kolovich, chief medical officer at OXOS. "We knew that we had to make it extremely safe, extremely reliable and extremely durable."

Thanks to their combined expertise in engineering and material science, the duo was able to create a safe device that could replace bulky and expensive traditional X-ray equipment. The FDA issued clearance for the device in 2021.

OXOS devices typically have less radiation than equivalent devices on the market. Unlike devices with a slow startup, the Micro C system quickly ramps up from zero to full power, and back to zero again in five milliseconds, lowering scatter and ensuring a clearer X-ray with a smaller dose of radiation. To achieve higher clarity and consistently produce clear, noise-free radiographs, OXOS has meticulously refined its portable device's detector and imaging algorithms.

OXOS photos: Steve Hardy

MICRO C VS. TRADITIONAL C ARM

DEVICE	MICRO C	C ARM
Size	1.1 ft	7.5 ft
Weight	7 lbs	1,058 lbs
Resolution	258 px/in	165 px/in
Spot size	75 µm	3,000 µm
Scatter	< 3 ft	16.2 ft
Hand	9.7 µGy	31.4 µGy
Knee	23.4 µGy	498 µGy

All of this is achieved in an ultra-portable form. Compared to a 7.5-foot, 1,058-pound C-arm, the Micro C measures just a little over 1 foot, and weighs just 7 pounds.

Each device also connects to the OXOS radiographic imaging platform, which allows images to be sent back to a clinic or provider or to an on-call radiologist.

Transforming medical imaging

When **Carmen Quatman, MD, '16 Res, PhD**, saw the Micro C at a conference several years ago, she knew instantly what a game-changer it could be, even in its early stages.

"It's pretty rare in your life when you come across something, and you think, 'This will change everything,'" says Quatman, an orthopedic surgeon and associate professor of Orthopaedics in The Ohio State University College of Medicine.

While Kolovich set out to create the Micro C to make jobs like his easier, he quickly learned just how transformational the device could be in countless corners of health care.

The World Health Organization has estimated that around two-thirds of the world's population doesn't have access to X-rays or imaging technology. The Micro C could completely alter those statistics by bringing portable, easy X-ray access to areas of the world where that was never possible before.

Ohio State orthopedic surgeon **Carmen Quatman, MD, '16 Res, PhD**, uses the Micro C corded X-ray in her practice. She says it's "a game-changer."

Kolovich has traveled to Africa with the device in a suitcase, bringing it directly to patients, some of whom don't even have electricity.

"When I started the company, I just wanted to make my job easier. I think everybody wants to make their job easier," Kolovich says. "And now, seven years later, we realized how much of the world didn't even have access to X-ray before this."

The device could also have huge impacts in places like the United States, where getting an

X-ray is possible, but may require long waits in the emergency department or a ride in an ambulance.

Kolovich envisions the Micro C being available in most nursing homes and assisted living facilities, just like a defibrillator, allowing for rapid diagnoses after a patient falls and quick plans for surgery when necessary, cutting out hours of waiting as well as emergency department and ambulance costs.

Without the high costs and space restraints of traditional X-ray machines, the Micro C also opens up new possibilities for urgent care centers, primary care doctors and private practice providers to be able to conduct X-rays. The device also has immense potential in treating military injuries, when taking a series of trauma X-rays quickly can become a matter of life and death, Kolovich says.

"Just by getting a simple X-ray, you can really treat these patients at the point of care and get them to a surgeon if they need it," Kolovich says.

He adds that a newer version — a completely wireless device that is under FDA review — will further expand Micro C's reach.

'X-ray vision,' keeping safe

Since its commercial launch in 2021, the Micro C has been used in clinical offices and hospitals around the country, by NFL and NHL teams, college football teams — including the Buckeyes — and large hospital systems like the Department of Veterans Affairs system.

Quatman is currently using the Micro C in the orthopedics clinic at Ohio State's Outpatient Care East and is hoping to bring in more of them in the future.

For her, it's as close to X-ray vision as an orthopedic surgeon can get. The device allows Quatman and her colleagues to make faster decisions for patients, especially those who are in wheelchairs, experiencing pain or recently out of surgery.

"I fix broken bones for a living, so it really does transform our ability to understand in the moment what's going on, versus having to wait in line to get to an X-ray machine," Quatman says.

Beyond the Micro C's opportunities for improving patient care and treatment, Quatman was struck by the device's safety not just for patients, but also for health care providers who are constantly exposed to radiation while using X-rays in the operating room.

Quatman discusses a patient's X-rays within minutes of using the corded X-ray. The ability to have these same-day communications is not only efficient, she says, but it has transformed patient care and safety for all.

"This device not only transforms patient care, it also transforms our ability to keep ourselves safe in an environment where we are trying to take care of others."

CARMEN QUATMAN, MD, '16 RES, PHD

OXOS photos: Steve Hardy

"Healers are putting themselves out there and sacrificing their health, at times, to take care of others," Quatman says. A 2022 study, for example, found the prevalence of breast cancer among female orthopedic surgeons was four times higher than the general population.

"That's why this really struck me as an opportunity to lower the risk for those of us who use a lot of that technology," Quatman says. "This device not only transforms patient care, it also transforms our ability to keep ourselves safe in an environment where we are trying to take care of others."

Seeds of innovation sown at Ohio State

Kolovich says Ohio State provided limitless opportunities to explore his interests — medical and otherwise — and set him on the path that would eventually lead to transforming the world of X-rays.

"It was like a dream come true for somebody who loved tinkering with things," he says, fondly recalling his time exploring biostatistics, researching baseball pitching mechanics and dabbling in veterinary medicine while in Columbus. "With the breadth of Ohio State, it's like an engineer's dream. You can satisfy any itch that you have."

In addition to his medical degree, he also earned his Master of Public Health at Ohio State and completed his residency in orthopedic surgery at The Ohio State University Wexner Medical Center.

"I married my love of orthopedics and engineering at Ohio State," Kolovich says. "So it's kind of nice for it all to come full circle."

Jennifer Shaffer is senior content specialist with The Ohio State University College of Medicine.

Ohio State interventional radiologist **Mina Makary ’13 MD, ’17 Res/’19 Res**, (left) watches as fourth-year vascular and interventional radiology resident **Aaron Chafitz MD ’19** practices placing a catheter using the VIST G5 simulator.

Practice makes … confident

Mina Makary ’13 MD, ’17 Res/’19 Res, is leading the charge with advanced simulated technologies to prepare interventional radiology residents for precision procedures.

By Emily Glenn

On the sixth floor of Prior Hall, **Aaron Chafitz MD ’19**, a fourth-year vascular and interventional radiology resident at The Ohio State University College of Medicine, carefully threads a catheter for placement in preparation for an aortic stent implantation.

“There we go,” he says as he clicks the stent release and completes the procedure.

Chafitz can check his progress on one of two large monitors in front of him. But if he makes a mistake, he has plenty of opportunity to practice. Chafitz is in the surgical simulation room in the Clinical Skills Education and Assessment Center, a state-of-the-art training center simulating actual patient care experiences.

Today, Chafitz is using the VIST G5 simulator, a leading-edge program that few residents have access to in other programs nationwide, according to **Mina Makary ’13 MD, ’17 Res/’19 Res**, a clinical associate professor of Radiology and director of the Interventional Radiology clerkship.

But Chafitz’s training is also what the future of medicine looks like, says Makary, who oversees the Interventional Radiology Inpatient Service. Makary is leading the charge to advance resident training with radiologic diagnosis and treatments, which he says are “very effective, minimally invasive and cost-effective.”

Advanced technologies like the VIST G5 simulator (above) give residents a chance to improve not only their techniques, but their confidence, before performing complex procedures on real patients.

A perfect match

Advanced technologies like the VIST G5 simulator align with these goals.

Interventional radiology procedures involve making a very small cut to thread a catheter through the body to wherever treatment is needed. For the clinician, these endovascular approaches allow them to diagnose or treat a variety of conditions with minimal risk or harm to healthy tissues.

The benefits: Resulting wounds are so small they can often be closed using wound closure strips and patients have lower risks of complications and shorter stays in the hospital, Makary says. Sometimes a procedure using radiology is a good option for a patient who is not a good candidate for open surgery because of age or infirmity.

The VIST G5 simulator is a portable, high-fidelity endovascular simulator that recreates any number of patient scenarios, such as a coronary angiography or aortic valve implantation.

The trainee practices threading the catheter through the simulator, viewing the catheter's placement on one of two computer flat screens. The screen shows the radiologic outline of the patient's body part and the catheter as it travels to its proper placement.

"It's really cool to practice what would be, in real life, a high-risk procedure using the simulator," Chafitz says. "There's no risk to the patient, but you're getting practice doing wiring catheter exchanges and wiring catheter skills. So the first time we're dealing with these complex procedures is not in a real patient."

Makary emphasizes that the VIST G5 simulator isn't only for new residents; it can be helpful for experienced residents and practitioners as well and offers realistic and substantial feedback.

"In a patient, if we put a wire through a blockage, you get resistance. In the simulator you get the same resistance," he says.

The simulator has modules that range from straightforward, "easy" cases such as simple angiography to complex procedures, such as aortic aneurysm repair, which make it appropriate for training and education at all levels. Residents can also reserve time to use it for practice.

"The fidelity of the feedback you get, like moving your hand in the simulator versus the feedback in real life, it's pretty good, it's pretty realistic," Chafitz says.

Makary says radiology residents can't say enough about the opportunity to use the simulator. "They say it is really helpful, that it gives them confidence and they have less stress and anxiety before starting procedures on patients."

Tech tools for advanced training

The simulator is just one of a host of advanced technologies in the clinical skills center. Medical students and residents can practice suturing and prepare for various patient care scenarios with manikins and robots that talk and demonstrate clinical signs as actual patients do.

For example, specialized manikins can be used to practice how to respond to an adverse reaction to the contrast dye used in CT scans. While radiology procedures are relatively low risk, occasionally patients have complications.

"You can see exactly what's changing as you are interacting with the manikin, and the manikin realistically reacts to the medications and other things that you, as the provider, would do in these scenarios," Chafitz says.

Chafitz notes that the manikins' potential reactions even include blinking and sweating, which can be used to gauge a patient's reaction to a treatment. Since contrast dye is used relatively often in radiology procedures compared to other areas of medical care, it's particularly important to understand the symptoms of an allergic reaction to the dye and how to quickly respond.

"It's something we can encounter in the outpatient or inpatient setting," he says. "It's more apt to occur in radiology than some other areas, and it mimics the real situation pretty accurately."

The radiology residents have also used an iBooks curriculum developed by former residency director **Mark King '86 MD, '92 Res**, and faculty continue to update resources to the modules. Each resident has a tablet on which they can access cases, articles, slide presentations and summaries at any time. Residents reported that these modules improved their confidence and knowledge retention, since they could easily study and review materials throughout the day, wherever they happened to be.

King and Makary presented on this curriculum at a conference, published an article in *Academic Radiology* on the benefits of the system and advised other institutions that wanted to develop a similar program.

Makary and his colleagues, including Amit Gupta, MD, who leads the interventional radiology residency program at Ohio State, are now pioneering new methods to support and educate the next generation of radiology experts. These include interactive lectures enriched with real-time feedback and response systems, as well as 3D printing technology to create tailored models for training.

Ohio State radiology residents will continue to have access to a broad spectrum of opportunities to cultivate excellence in the evolving field of medicine. Chafitz appreciates the experiences he has had as a student and now a resident.

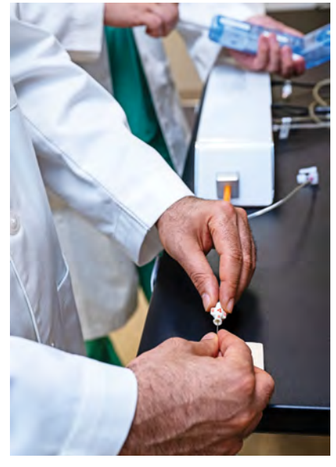
"Being here, getting to know everyone better as a resident has been very rewarding, and all the mentors I've developed over the years have made this a great learning institution."

Chafitz is already paying forward to the next student cohort.

"It's been cool to be on the other end, able to interact with students [who are] like me [from] five years ago. I can give them advice and lead them into the specialty that they want, and how to go about utilizing the resources that Ohio State has to offer.

"It has been rewarding to give back and be helpful."

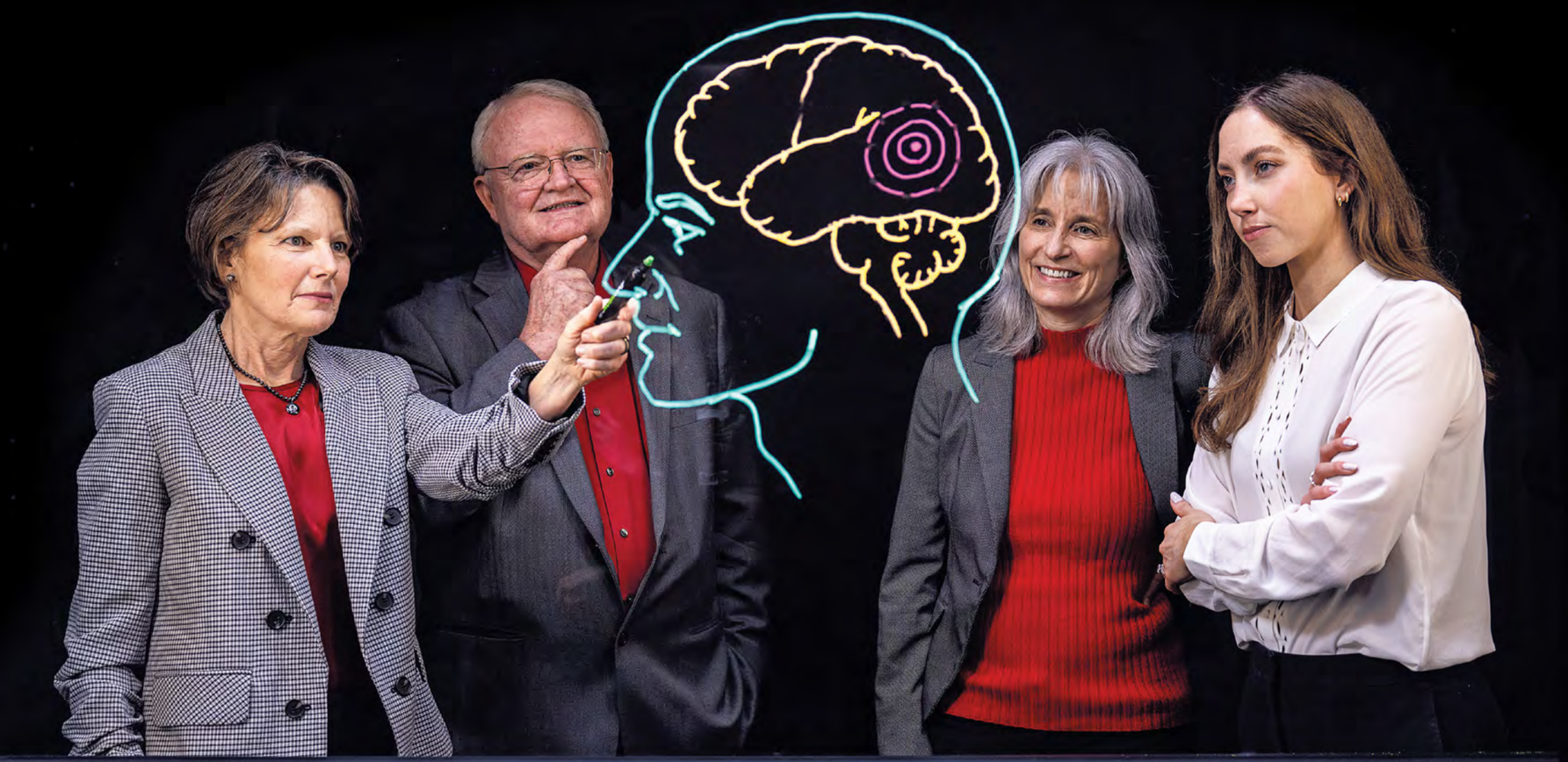
Emily Glenn is a writer with The Ohio State University Wexner Medical Center Development Communications.



Makary (below) says advances in resident education continue to prepare and support the next generation of radiology experts.

Leading TBI Treatment into the Future

Ohio State researchers are changing how clinicians think about brain injuries — and giving hope to those with traumatic brain injury and their families.



From left to right: Researchers Jennifer Bogner '89 PhD, John Corrigan '81 PhD, Cynthia Beaulieu '88 PhD, and Kathryn Hyzak '23 PhD, are excited about the evidence-based options to make neurologic-informed care a part of standardized health care.

By Diane Haddad

In the early 1990s, when **Jennifer Bogner '89 PhD, ABPP**, FACRM, first began working with traumatic brain injury (TBI) survivors, clinicians treating TBI thought their patients' potential for recovery maxed out at two years.

Today, 2.8 million Americans are treated every year for TBI. In Ohio, about one in four people has had a TBI. Car crashes, falls, physical violence, sports, military service — all are common causes. Some brain injuries have mild effects that let a person go back to work or school after a few days of rest and pain relievers. Others lead to permanent cognitive problems, physical disabilities and even death.

"Back then, we didn't have that much data about what was happening with [injured individuals] long term," says Bogner, a psychologist and the Bert C. Wiley Professor of Physical Medicine and Rehabilitation in the Department of Physical Medicine and Rehabilitation at The Ohio State University College of Medicine. "What we thought was that individuals who experience a moderate or severe TBI, once they hit the two-year mark, are going to hit a plateau and that's the way they're going to be for the rest of their life."

Thankfully, that belief has completely changed.

Decades worth of data gathered through the TBI Model Systems program, a network of 16 brain injury care centers across the country, reveals hopeful news for patients — and Ohio State is leading the way.

Gathering data

The TBI Model Systems program was established in 1987 with funding from the National Institute on Disability, Independent Living, and Rehabilitation Research. Ohio State's Department of Physical Medicine and Rehabilitation has been home to the Ohio Regional TBI Model System (ORTBIMS) since 1997.

Bogner and **John Corrigan '81 PhD**, ABPP, a professor emeritus in the Department of Physical Medicine and Rehabilitation and director of the Ohio Valley Center for Brain Injury Prevention and Rehabilitation, serve as co-principal investigators, directing ORTBIMS research.

Each injury care center in the system contacts its patients at one, two and five years, and thereafter every five years after their injury to learn about the long-term effects of moderate and severe TBIs. These surveys contribute to the trove of

longitudinal data at the Traumatic Brain Injury Model Systems National Data and Statistical Center at Craig Hospital in Englewood, Colorado.

"The TBI Model Systems is now following folks 35 years post-injury," Bogner says. "What we now know is that folks [with a history of TBI] continue to change throughout their lifetime. Some people will continue to improve well past the two-year mark. Some people will go up and down and other people will decline."

Corrigan offers the comparison of a broken leg — i.e., once your leg heals, it's stable and your doctor no longer keeps track of it. "But now we're recognizing brain injury is more like a chronic condition — like low back pain, not a broken leg," he says. "It's going to be either constant or recurring or have late-late-emerging effects."

And those effects can include cognitive and mood changes that impact how well patients understand their other health conditions, remember to take their medicine and follow their doctors' instructions.

Although having a chronic condition doesn't sound like a good thing, thinking of TBIs this way can be positive. Hopeful, even. "The message about being a chronic condition is that it's dynamic," Corrigan says. "And if it's dynamic, then you can do something about it."

Assessing for TBI

But doctors — and even patients themselves — are often unaware a TBI has occurred because screening isn't common. In the early 2000s, a growing understanding of the prevalence of TBI led Bogner and Corrigan to develop the Ohio State TBI-ID assessment. It's now considered a gold standard method to uncover a person's lifetime exposure to TBI.

"We knew that there were many individuals out in the community who had a history of exposure to TBI, but there were people providing care for them — such as behavioral management specialists — without the knowledge that these people had a history of TBI," Bogner says. "And if you had told them that a patient had a history of TBI, they would say they shouldn't be treating them, because they thought that wasn't within their realm of expertise."

Behavioral health treatment addresses issues like substance use disorder, mental health conditions and stress-related physical symptoms. These patients have often experienced situations that put them at high risk for TBI, such as incarceration, domestic violence and homelessness.

But just asking someone if they've had a TBI doesn't work, Bogner says. Most people don't know exactly what a TBI is or if they've had one. "The method we developed is a brief but comprehensive way of walking people back through their lifetime to look at events that could have been a TBI, and then narrowing it down to determine which ones were likely traumatic brain injuries." It's effective at revealing not just obvious TBIs that resulted in ambulance trips and hospital stays, but also more subtle injuries that went untreated.

"What we came to find out after using the Ohio State TBI-ID is that 50–80% of behavioral health clientele actually have a history of multiple TBIs," Bogner says.

The finding casts a new light on patients who might appear uncooperative. For example, someone with TBI who is inattentive during a two-hour group therapy session may not be able to maintain focus for that long and may need adjustments to be able to fully engage in their treatment.

Neurologic-informed care

A health care approach that takes into account the effects of TBI is what Corrigan calls "neurologic-informed care." He and other TBI experts defined the term last year in *The ASAM Criteria*, 4th ed., the American Society of Addiction Medicine's substance use disorder treatment guidelines.

"We were asked to write a chapter about cognitive impairment," he says. "In writing that, we introduced this concept of neurologic-informed care. Basically, it says that substance use disorder treatment providers need to be aware that not everybody has the same cognitive abilities, and that's because of differences in injury or other abilities."

GETTING BEST PRACTICES INTO PRACTICE

Just because researchers discover a new best practice doesn't mean that clinicians will immediately begin to use it. That's where implementation scientists come in.

"Implementation science as a field seeks to expedite the pace at which innovations are used in direct practice," says **Kathryn Hyzak '23 PhD**, an implementation scientist in the Department of Physical Medicine and Rehabilitation and a participant in the Provost's Tenure-Track Fellow to Faculty Program. Those innovations might be policies, guidelines, interventions, medical devices or medications.

Hyzak is a faculty affiliate in Ohio State's Chronic Brain Injury Program and in the Center for the Advancement of Team Science, Analytics, and Systems Thinking in Health Services and Implementation Science Research (CATALYST), a program that comprises 60 faculty members across five colleges at Ohio State.

Implementation science studies the methods that promote the use of evidence-based practices, treatments and policies into routine health care to improve public health. "We're always working with two different things in implementation science," Hyzak explains. "We have the clinical intervention that we're trying to get implemented, and we have the 'how' we get that implemented — the implementation strategy."

One example of an implementation strategy is when an organization (e.g., a community-based mental health clinic) uses a researcher, occupational therapist or other professional trained in external facilitation who can help the organization with its challenges and deliver a recommended intervention (e.g., TBI screening and accommodation), which the organization can adopt, use and ultimately sustain on its own.

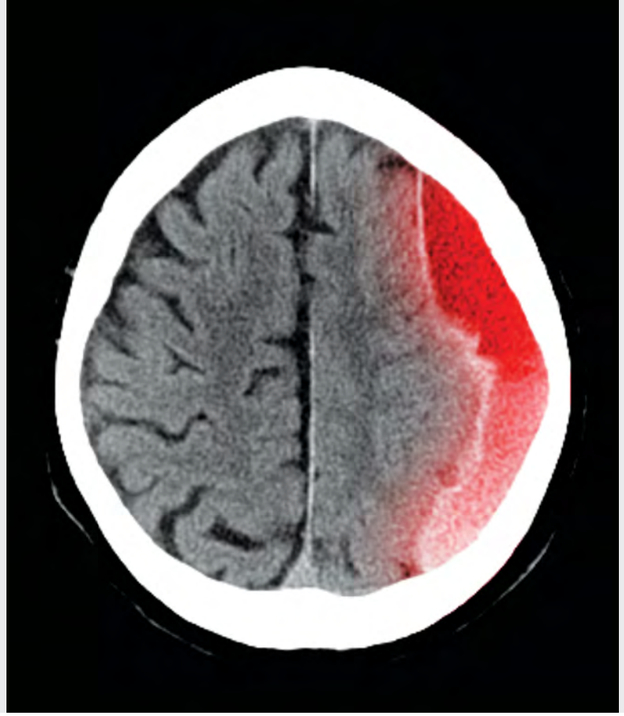
Another example is an implementation blueprint, which is a comprehensive plan that identifies specific goals, actionable steps to achieve those goals, key personnel responsible for each step and completion timelines. Blueprints are a strong tool for engaging leaders, front-line providers and clients to ensure that implementing the intervention is feasible, effective at producing change and useful for carrying out across similar settings.

For Hyzak and other implementation scientists who study these efforts, the goal is not to test the effectiveness of the clinical intervention, but rather to test whether the implementation strategy (e.g., the use of the trained support person) has been successful in promoting and sustaining the organization's intervention.

"Your implementation strategy should be working as hard as — if not harder than — your clinical intervention," she says.

In 2022, Hyzak, then a PhD student at Ohio State, secured one of the first implementation science grants ever funded by the National Institute of Neurological Disorders and Stroke, to study factors leading to the adoption of TBI screening in behavioral health care.

She's also researching an assessment that an organization can use to determine its readiness to implement neurologic-informed care, with a goal of getting organizations to discuss and figure out how to change their practices related to brain injury.



Establishing neurologic-informed care as the standard means that clinicians need to find out if their patients have TBI.

"I take the approach that everybody should be screened, because you're not going to know whether your client has a brain injury," says implementation scientist **Kathryn Hyzak '23 PhD**, a faculty affiliate in Ohio State's Chronic Brain Injury program in the Department of Physical Medicine and Rehabilitation.

Her research focuses on developing and testing the most effective ways to help health care organizations and professionals incorporate neurologic-informed care into routine practice.

"What we're trying to do is integrate a combination of screening for a history of brain injury, so providers can, first, know if this client has a history of brain injury, what their symptoms are and how the effects of the brain injury might be manifesting," she says.

"We can then direct our course of treatment differently to help improve the quality of care." (See more on implementation science at Ohio State at the top of this page.)

Using evidence-based treatment

Central to Ohio State's TBI Model Systems research is Care4TBI, a seven-year-long observational study involving approximately 1,600 patients at 14 model systems. The ORTBIMS is leading this exploration of using standardized electronic medical records (EMR) to document daily inpatient rehabilitation therapy, and investigating how effectively different treatment approaches help patients to become independent and participate in their communities.

"The entire first two years was devoted to figuring out not only what our primary rehab therapists — physical, occupational and speech — do on a day-to-day basis, but also how to capture that without putting undue burden on them," says **Cynthia Beaulieu '88 PhD**, a neuropsychologist and clinical associate professor of Physical Medicine and Rehabilitation.

Ohio State researchers then helped design EMRs with dropdown menus where rehabilitation therapists can easily record their interactions with TBI patients. This turns narrative information into numerical data that can be analyzed. "Every one of those encounters, they do things with the patients to promote their recovery, to promote their skill level, and so we are collecting all of that information that has been identified as critical, to analyze it and look at what's the most effective to produce better outcomes," Beaulieu says. "It allows us to also develop formulas to then help guide what's going on in this setting."

Eventually, Bogner says, therapists will be able to analyze individual patient data and quickly adjust care as needed. She's excited about the potential of Care4TBI and other TBI Model Systems research to create learning health care systems — research-partnered care networks that arm clinicians with data they can use to continuously improve treatment for TBI patients.

"It's really getting us to the point where we're using the information that we're learning from patients every day to improve their outcomes — and future patients' outcomes."

Diane Haddad is a writer and editor in West Chester, Ohio.

Hands-on Impact

Thanks to **Jessica Sciuva ’24 MD**, the Columbus Free Clinic’s expansive care for underserved adults continues to advance.

By Kelli Trinoskey

When you learn, teach. When you get, give.
— Maya Angelou

It’s easy to see why patients, medical students and medical supervisors might feel **Jessica Sciuva ’24 MD**, embodies this belief from one of America’s most celebrated authors.

Throughout her four years as a medical student at The Ohio State University College of Medicine, Sciuva spent countless hours as a volunteer at the student-run Columbus Free Clinic (CFC), which provides a full range of health care services to underinsured and underserved patients.

During that time, she strengthened and created programs to improve care for patients facing barriers to health care and mentored other students — all while tackling rigorous academic and clinical requirements.

As a former Steering Committee Volunteer coordinator and leadership liaison for CFC, and now a recent medical school graduate, Sciuva says she was constantly reminded why she chose to become a physician. And how the generosity of many mentors throughout her journey led her to where she is today, heading to the University of Pittsburgh Medical Center to begin her residency in Obstetrics and Gynecology.

While in medical school, **Jessica Sciuva ’24 MD** (left), now an Ob/Gyn resident, says her time spent volunteering in the student-run Columbus Free Clinic influenced what kind of doctor she wants to be.

The busyness of the free clinic means medical students are thinking on their feet, applying what they learn, but also learning how to better serve patients, says Sciuva (far right, with a patient).

"My time as a medical student working in the CFC — time spent learning and teaching — has been so impactful, from learning more about what the Columbus community and our patients' needs are, to creating a culture of kindness and support for both our patients and volunteers," Sciuva says.

Service impact

Clinic supervisors and patients say it's clear that Sciuva's efforts to go above and beyond expectations has had a critical impact on patient care and clinic operations.

Robert Cooper '10 MD, '13 Res, a clinical associate professor of Emergency Medicine at the Ohio State College of Medicine, oversees the CFC. He says Sciuva has volunteered hundreds of hours at the CFC as a clinician, leader and mentor. When Sciuva was a first-year medical student, she was selected to be on the 12-student steering committee, which runs every aspect of the clinic.

"She organized a busy clinic that saw 40 patients every Thursday night, including comprehensive lab, pharmacy and imaging services," Cooper says. "Jessica's patients love her because she spends the time to get to know them and to understand how their social situations affect their health."

Michelle Eliane and her 70-year-old mother, Antoinette, who have been patients of the clinic for the last four years, agree. Michelle says Sciuva's ability to continuously go above and beyond for others is what she loves most about her. And that she shows her heart.

"She takes time outside of our visits to the clinic and randomly calls and checks on us and asks if we need anything," Michelle says. "Because of that, my mother's health has improved tremendously."

Sciuva helped Michelle and her mother find prescribed medicine they didn't have in the clinic at another location, free of charge.

"I've learned from my patients how to provide care that involves them in decisions and considers their individual situations," Sciuva says.

Building relationships, improving clinic, lab management

Internal Medicine resident **Bryn Koehler '22 MD**, who oversees the M4 longitudinal program at the College of Medicine, has spent a lot of time working with and mentoring Sciuva. She has witnessed firsthand Sciuva's unique ability to build meaningful connections with patients, an ability she believes contributes to her exceptional patient support.

"This makes Jess stand out," Koehler says. "Her medical knowledge and skills are excellent, but I am truly impressed with her relationship building."

Koehler believes these same skills helped Sciuva excel in her administrative work at the clinic and in her constant search for ways the clinic can improve and better serve patients.

"She served on call, interpreting patient lab results, answering questions about patient care and triaging urgent patient conditions," Koehler says.

"And she was one of a few M4 students who saw an opportunity to improve lab result management and took extra time out of her schedule to arrange meetings with the steering committee and board members to both find and implement a solution."

Sciuva's CFC colleagues and volunteers understand the critical benefits of her work, particularly considering the clients they serve. The clinic provides walk-in primary and urgent care while also integrating social work services and behavioral health care into patient care. Many CFC clients present with health concerns caused by nonmedical factors that are influenced by where they live and work, including access to nutritious food — health disparities and health inequities that all play a crucial role in determining health outcomes.

The CFC's ability to provide health care regardless of income or insurance coverage is a lifeline for these individuals. CFC also relies on its partnerships with local organizations that share the clinic's values of meeting the health needs and addressing the well-being of every member of the community.

COLUMBUS FREE CLINIC YEAR AT-A-GLANCE*

1,020
Patients seen

2,348
free patient visits

45
Patients received care, avg. night

4,399
Laboratory tests performed

117
Women's health visits

64
Mammogram referrals

69
Colonoscopy visits

400
Volunteers

10,000+
Hours of volunteer service

** Fiscal year 2023*
Source: Columbus Free Clinic 2023 Annual Report

Services

- Primary care
- Pharmacy
- Lab & Imaging
- LGBTQ-affirming health care
- Ultrasound
- Social Work & Behavioral Health
- Longitudinal Programs (complex care needs and community health education)
- Specialty clinics (from acupuncture to gynecology and mammography)

Open: Thursdays, 5:45–10 p.m.

COLUMBUS FREE CLINIC RECEIVES NATIONAL AWARD

In August 2023, the Ohio State Columbus Free Clinic was a regional winner of the W.K. Kellogg Foundation Community Engagement Scholarship Award from the Association of Public and Land-grant Universities.

The award recognizes extraordinary community initiatives among public, four-year universities nationwide. It's the fifth time the clinic has received the award.

"Her medical knowledge and skills are excellent, but I am truly impressed with her relationship building."

BRYN KOEHLER '22 MD | INTERNAL MEDICINE RESIDENT, DIRECTOR, M4 LONGITUDINAL PROGRAM

Creating personalized care, structure for the future

In 2023, Sciuva took on the role of volunteer coordinator to ensure the clinic has enough help to provide patients with personalized care that will improve the management of their conditions. "This ensured there were four providers and between 10 to 15 student volunteers each week," she says.

"She was constantly recruiting volunteers and forming relationships with the different departments and colleges at Ohio State," Cooper says. "After her term on the Steering Committee, she continued to be a regular volunteer and lead our fourth-year primary care program and serve as our fourth-year leadership mentor."

In addition to being involved with the general clinic, Sciuva has also worked with CFC's Gynecology Clinic as a volunteer and preceptor for first-year medical students, further solidifying her decision to pursue a career in obstetrics and gynecology.

She also set her sights on increasing the scale and impact of care coordination for patients. In addition to seeing patients, she incorporated a dietitian into the clinic, restarted undergraduate shadowing following COVID-19 and focused on improved mentoring for younger medical students as they learn to run the CFC.

As time goes on, the support system she built at the CFC will continue to help medical students, volunteers and faculty care for patients with a variety of medical and social needs.

This dedication earned Sciuva the 2023 Charitable Healthcare Network (CHN) Free Clinic Volunteer of the Year Award. She was selected by many volunteers from CHN, which provides resources, education and advocacy to 53 member clinics delivering high-quality care to people in need. Each year, the CHN and the Ohio Department of Health recognize the accomplishments of Ohio's free clinics with award presentations. Sciuva is the first student from the college to receive this award from the organization.

Cooper says Sciuva's dedication and focus on patients' social and mental health care needs, along with their medical needs, underscored CFC volunteers' understanding of the many social contexts of health and well-being.

"Her compassion shows in the work she does and there is no one more deserving of this award," he says.

As Sciuva begins her residency training at the University of Pittsburgh Medical Center, she feels extremely prepared and excited to continue her love for teaching and mentoring in the academic space. She says she'll take what she has learned into this next chapter, while passing it on to those she mentors.

"This work has truly solidified my goals to collaborate with this patient population in the future," Sciuva says. "And to continue learning about inequities and barriers to health care and how we can address them."

While everyone, including patients and members of the CFC, fellow learners and faculty, are sad to see Sciuva leave for residency, they know her future patients are incredibly lucky to have the chance to work with her.

On their recent visit to the clinic and the last time Sciuva would see them, Michelle and her mother shed many tears.

"I will always brag about her because of the way she touched us," Michelle says. "She is going to save a lot of lives."

Internal medicine resident **Bryn Koehler '22 MD** (left, above), and director of the Ohio State College of Medicine M4 longitudinal program, says Sciuva's efforts to improve lab result management, care coordination and patient relationship building, make her a standout.

Kelli Trinoskey is associate director of Marketing and Communications at The Ohio State University College of Medicine.

ALUMNI NOTES

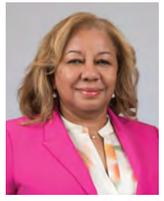
NEWS | IN MEMORIAM

Classes of 1970s

Helen Torok ’73 MD, co-owner of HH Science™ LLC, a skincare company in Medina, Ohio, secured, along with business partner Helen Funk, MD, the firm’s first patent for its Balanced Skin™ Clear Skin Vitamins™. Torok is a board-certified dermatologist and co-founder of the company.

Classes of 1980s

John Jakubek ’82 MD, and **Mike Corfias, MD ’98 Res**, were inducted into the 2024 Campbell City (Ohio) Schools Alumni Association Hall of Fame. Both have established scholarships at Campbell Memorial High School.



Tami Benton ’89 MD, was named the 36th president of the American Academy of Child and Adolescent Psychiatry (AACAP). Benton is psychiatrist-in-chief and executive director of the Department of Child and Adolescent Psychiatry and Behavioral Sciences at Children’s Hospital of Philadelphia. She has held numerous pivotal roles prior to her appointment, including AACAP’s president-elect, councilor-at-large, secretary and co-chair of the HIV issues committee, among others. Benton is also recognized for her leadership and guidance at the Children’s Hospital of Philadelphia in the behavioral and mental health space. Benton’s career resonates with her mission of nurturing diverse physician leaders and the next generation of experts in pediatric and mental health care.

Photo: Howard University Faculty Practice Plan

Classes of 1990s

Quinn Capers ’91 MD, was appointed professor and chair of the Department of Internal Medicine at Howard University College of Medicine. Capers’ many achievements include introducing the trans-radial artery technique of coronary stenting to the cardiac catheterization laboratory at Ohio State, identifying the presence and extent of implicit racial bias in medical school admissions, and serving as chair of the American College of Cardiology’s Diversity and Inclusion Committee since 2020, leading efforts to diversify the specialty of cardiology.

Shannon Miller ’92 MD, a board-certified psychiatrist in Dayton, Ohio, edited the 4th edition of The American Society of Addiction Medicine’s *Principles of Addiction Medicine* textbook.

Classes of 2000s

Photo: Nationwide Children’s Hospital

Anastasia Fischer ’01 MD, a sports medicine physician at Nationwide Children’s Hospital and clinical associate professor of Pediatrics at The Ohio State University College of Medicine, received the Springfield City (Ohio) School District Alumni of Distinction Award. Established by the Springfield Board of Education, the program recognizes former students who have distinguished themselves through professional success and community services.

Several Ohio State College of Medicine alumni were recognized as *Columbus Business First’s* 2024 Class of 40 under 40: **Christopher Esber ’13 MD, ’16 Res** (OhioHealth); **Hannah Hays, MD, ’11 Res, ’13 Fellow** (Nationwide Children’s Hospital); **Mina Makary ’13 MD, ’17 Res/’19 Res** (Ohio State Wexner Medical Center); and **Bethany Uhl ’13 MD** (Nationwide Children’s Hospital).

SHARE YOUR STORY

The Ohio State Medical Alumni Society wants to hear from you! Share your news, including wedding announcements — 80 words or less. Tag us on social media or email us at medalum@osumc.edu by October 16, 2024, for the Winter 2025 issue of *Ohio State Medicine Alumni* magazine.

In Memoriam

2024

March
Mark L. Wagar ’76 MD
Arlene C. Marx, MD, ’93 Fellow

February
Robert G. Fletcher ’63 MD
Edna M. Jones ’81 MD

January
Darell J. Smith ’57 MD
Eugene Lundy ’77 MD
Bruce L. Wilkoff ’79 MD
Joseph A. Buzogany ’92 MD

2023

December
Charles W. Zumpft ’60 MD
Robert H. Schwartz ’61 MD
John D. White ’65 MD
Ala B. Hamoudi ’68 MD
Michael D. Phillips ’69 MD
Robert J. Keck ’70 MD
Craig B. Linden ’72 MD
Royal D. Saunders ’85 PhD
Mark H. Elias, MD, ’61 Res

November
Richard F. Gehring ’56 MD
J. B. Jackson ’56 MD
Joseph W. Leonard ’57 MD
Bertram J. Spiwak ’59 MD
John E. Bakos ’62 MD
John E. Wagler ’62 MD
Quentin J. Spittler ’63 MD
Stephen J. Zaron ’64 MD
James E. Szymanowski ’73 MD
John F. Clement ’75 MD
Jann M. Ichida ’89 MS
Jayson T. Tappan ’01 MD
Louis T. Feldgoise, MD, Res
Doris A. Jesch, MD, Res
George R. Thompson, MD, Res

October
Roger L. Rian ’58 MD
Harry E. Guda ’62 MD
John F. Bodie ’63 MD
Frederick N. Klippert ’66 MD
Robert D. Wagner ’69 MD
Joseph H. Godman MD, ’76 Res
Thomas G. Schwarz ’80 MD
Kenneth C. Miller ’85 MD
Edwin R. Payne, MD, Res
Albert Franco, MD, Fellow

September
Warren J. Brown ’49 MD
Gertrude O. Busdiecker ’61 PhD
Anthony J. Gingo ’62 MD
Joseph E. Duty ’64 MD
John W. Wolf ’70 MD

August
Irwin H. Krakoff ’47 MD
Stella B. Kontras ’53 MD
Edmund M. Krigbaum ’54 MD
J. Daniel Timmons ’56 MD
James E. Mann ’60 MD
William D. McCrady ’60 MD
Henry L. Danaceau ’65 MD
Edward D. De Haas ’66 MD
William R. Moore ’75 MD
Bruce L. Hammond ’78 MD
Melissa W. Weaver ’78 MD
Clifford B. Maximo ’94 MD
Gayle L. Jackson ’81 PhD
Mary D. Miller ’80 PhD, ’80 MS
Shearwood J. McClelland, MD, Fellow

To view obituaries in full, please visit *go.osu.edu/notesandobits*.

Thomas Williams ’63 MD, ’71 Res, Retires

Thomas Williams ’63 MD ’71 Res, an associate professor Surgery in the Division of Cardiac Surgery, retired after 60 years of service to The Ohio State University College of Medicine and the Ohio State Wexner Medical Center.

At 88 years young, Williams contributed six decades of medical service to the central Ohio community. During his residency at the Ohio State College of Medicine, he also completed a Doctor of Industrial Engineering from Northwestern University. Post-residency, he became a clinical assistant professor of Surgery.

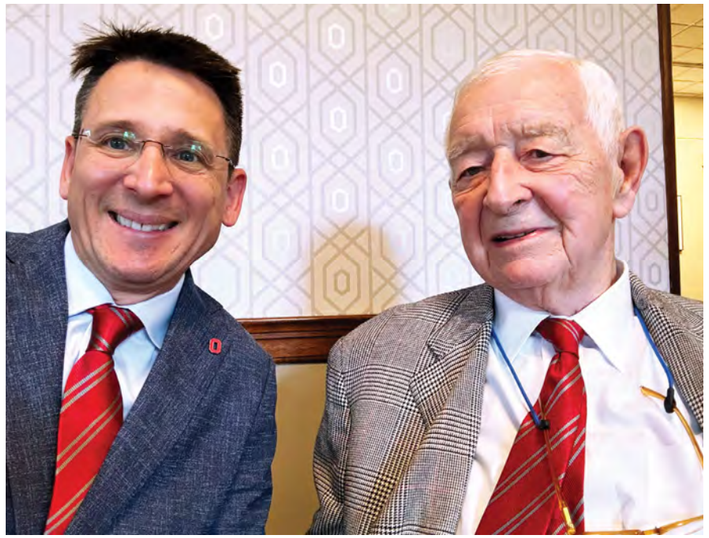
He was later promoted to clinical associate professor of Surgery in 1983 and also served as assistant medical director of Emergency Services at University Hospital for more than four years as well as chief of Cardiac Surgery.

A native of southern Ohio, Williams is recognized for his impactful career as a heart surgeon and medical educator, profoundly enhancing patient care, advancing medical innovations and improving access to education for medical students, as well as for his philanthropic giving.

He has been recognized numerous times for his leadership, teaching and mentorship, and went on several medical mission trips, including providing care in Rwanda, Cambodia and Malawi, among other global destinations.

He was also influential in starting the Summer Scholars Program in 2010, which exposes the surgical field to more women and medical students.

“Although his retirement signals the end of a brilliant surgical and academic medical career, Dr. Williams’ legacy and contributions will continue to benefit patients in the central Ohio community,” says Timothy Pawlik, MD, PhD, MPH, chair, Department of Surgery and Surgeon-in-Chief and The Urban F. Meyer III and Shelley M. Meyer Chair for Cancer Research.



Timothy Pawlik, MD, MPH (left), celebrates at the retirement of **Thomas Williams ’63 MD, ’71 Res.**

Allison Macerollo ’95 MD, named 2024 Family Medicine Educator of the Year

The Ohio Academy of Family Physicians (OAFP) has awarded **Allison Macerollo ’95 MD**, clinical associate professor of Family and Community Medicine at The Ohio State University College of Medicine, the 2024 Family Medicine Educator of the Year. The award recognizes educators who exhibit extraordinary, beyond-the-call-of-duty merit and encourage students to pursue the ideals of family medicine.

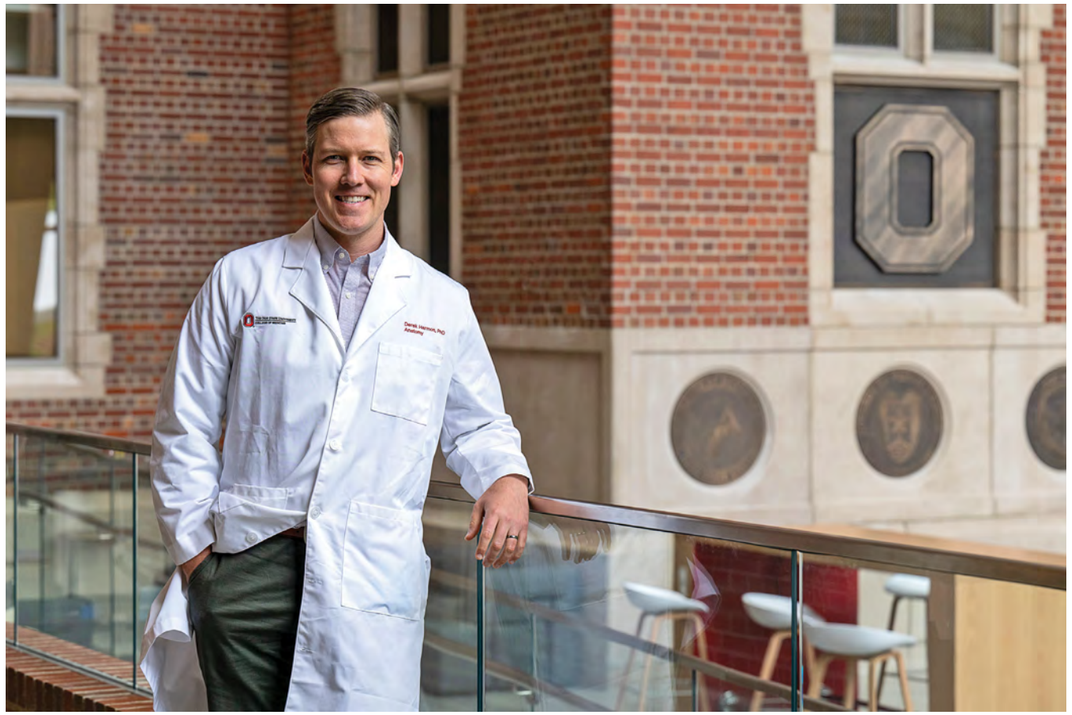
The OAFP award honors Macerollo’s outstanding role teaching medical students the art of medicine through effective communication skills and good decision making.

Macerollo, who specializes in women’s health, also serves as vice chair for Medical Education for her department. She credits her energy to her passion to continue the mission of family medicine education, noting that the interdisciplinary team she works with helps her be a better person and educator.

“I am enthusiastic about my work and helping all the people I encounter on the job – including patients, medical students and co-workers – to become their best selves,” she says.

In addition to her academic and leadership roles, Macerollo volunteers for La Clinica Latina, where she supervises students and provides care to the Spanish-speaking community. This work ensures she provides service to community members who need access to innovative care.

“I believe in listening to my patients and applying my critical thinking skills to advocate for their health in every situation,” Macerollo says.



Anatomy professor **Derek Harmon ’15 PhD**, believes medical professionals and computer scientists can create amazing solutions when they work together.

Solving Problems Together

By Derek Harmon ’15 PhD

MANY OF US WHO teach in the health sciences are constantly seeking new and innovative ways to improve our teaching. If we’re lucky, the journey can be exhilarating and inspiring.

I was fortunate to find that experience in 2011 during my second year in The Ohio State University Anatomy Graduate Program when I was developing my dissertation project. I had just completed the four anatomical subdisciplines core courses: gross anatomy, embryology, histology and neuroanatomy. During that same year, I began my role as a graduate teaching assistant to numerous health science programs, where these same subdisciplines are taught.

Like other medical schools nationwide, the Ohio State College of Medicine transitioned to an integrated curriculum to meet the accreditation requirements set by the Liaison Committee on Medical Education. For instance, when medical students take their cardiopulmonary block, in addition to learning about the anatomy of the heart and lungs they also learn about the physiology, histology, pathology, biochemistry and embryology of the heart and lung. Unfortunately, there were no resources that integrated the four anatomy subdisciplines to aid their learning, which made the integration process tedious and challenging for students, especially when preparing for exams.

Seeking efficiency

I wondered, how much more efficient would it be for learners if they had such a resource?

When clinicians diagnose a patient, they generally do not focus on just one discipline. They have to think about what’s wrong with the patient’s anatomy and what’s causing a defect in their physiology, which then determines what drug to prescribe, and so on.

For my dissertation, I decided to develop an app that integrates the four anatomy subdisciplines into one resource for the spinal cord. But I first needed to further my understanding of writing computer programs, so I took some basic programming courses. I discovered that fourth-year students in the Ohio State Department of Computer Science and Engineering must complete a Capstone project, where they create software to solve real-world problems.

In 2013, I submitted my integrated app as a Capstone contender and it was accepted. Five computer science students signed up for the project and in four months we had a prototype. I distributed the app to all first-year medical students during the neurological disorders block. The students gave the app glowing reviews, and many requested that the app be expanded to cover more organ systems and to integrate other disciplines.

While I was not able to find support to continue development of the app once I moved to California after earning my PhD, my enthusiasm for innovative educational technology and desire to collaborate with other like-minded problem solvers had only grown.

It was clear from my experience that technology can play a key role in closing the gap between medical professionals, who often seek solutions to problems in their educational, clinical or research work, and computer scientists, who want to solve problems. It was then that I conceived the idea of developing a competitive coding event to bring these two communities together.

Harmon's interest in creating educational apps, like this early prototype, led him to successfully launch the Ohio State College of Medicine's first-ever app competition.

Competing to innovate

After returning to Ohio State in July 2022, and with the College of Medicine's support and encouragement, I created the Ohio State College of Medicine App Development Competition — or App-A-Thon. The event solicited app idea proposals from principal investigators to improve patient care, communication and education. I modeled the event around a similar one I organized while at the University of California, San Francisco.

Of the 18 proposals submitted in the 2024 Ohio State College of Medicine App-A-Thon, five were chosen. Graduate and undergraduate computer science students were emailed the event information and project descriptions, including a sign-up sheet with 10 slots per team. Within 30 minutes, all 50 slots were filled. A kick-off event was held in February, and the five project teams had two weeks to develop their app.

The students presented the prototypes before three Ohio State innovation expert judges.

The judges chose three winners. First place was the *Lymphedema Scanner*, a smartphone 3D scanner that scans the face and neck to track swelling fluctuations over time; second place was *IVAlert*, which allows nurses and anesthesiologists to communicate 24/7 to streamline IV access; and third place was *ClearSkin*, which identifies and pinpoints acne and acne-like eruptions by using facial images to graphically display a patient's skin disease trajectory in relation to medications, diets and other holistic interventions.

It was an exciting experience for everyone and the momentum continues to build. Our goal is to run events twice a year, one in the fall and one in the spring. The fall 2024 event theme will be artificial intelligence.

I never thought when I began my journey as an anatomy educator how much innovation would connect myself and others to help improve our efforts in education, clinical care and research. Ohio State is a special place that has numerous experts in various fields who are always willing to collaborate.

You just have to start the conversation.

Derek Harmon '15 PhD, is a clinical associate professor in the Division of Anatomy in the Department of Biomedical Education and Anatomy at The Ohio State University College of Medicine. Contact Derek.Harmon@osumc.edu to learn more about the Ohio State College of Medicine App-A-Thon.

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