

THE OHIO STATE UNIVERSITY COLLEGE OF MEDICINE

Emergency Medicine/ Internal Medicine Combined Residency Program



WEXNER MEDICAL CENTER

# **OUR DEPARTMENT VISION:**

Transforming Emergency Medicine Through Innovation

# DEPARTMENT OF EMERGENCY MEDICINE (EM)

A Message from Our Chair



It is my pleasure to welcome you to our Department of Emergency Medicine's Residency Programs at The Ohio State University and The Ohio State University Wexner Medical Center. Having been a part of the EM Categorical Program for the past 16 years, I've seen these programs grow from infancy into some of the strongest programs in the country. As the chair of the department, I'm excited about the innovation, energy and devotion of the residency leadership under the direction of Drs. Daniel Martin, Sorabh Khandelwal, Geremiha Emerson, Andrew King, Simiao Li-Sauerwine and David Wininger. The EM/Internal Medicine (IM) Residency Program is entering its 10th year and continues to provide our residents with outstanding career opportunities in academia and community medicine.

As a graduate of an EM/IM program myself, I understand the challenges and

opportunities faced by EM/IM residents. Ohio State's EM/IM program, in particular, benefits from the strengths of both residency programs, and its graduates have been highly successful as they leave the program. This is due in part to the excellent collaboration between the departments and the residency leadership.

The EM component of the residency is located within a strong academic department with nearly 60 faculty members who have a wealth of experience in clinical medicine, education and research. The expertise and national reputation of our faculty allow our residents the opportunities to become leaders in the field.

Our new Emergency Department opened in 2017 with nearly 110 beds, and includes several innovative care models, including oncologic emergencies, geriatric emergency care and observation medicine. We also offer excellent community experience at East Hospital and pediatrics experience through our partnership with Nationwide Children's Hospital.

We're dedicated and proud to provide the best possible patient care, while respecting the individual's background and needs. The department is strongly committed to diversity, equity and inclusion as is the institution. Our Diversity, Equity and Inclusion Committee is co-led by faculty and residents, and seeks to improve our workplace experience, the care we provide and our role in our community. The department is in the process of appointing a vice chair for Diversity, Equity and Inclusion who will be a strong leader of our efforts in these areas.

We seek to train the Emergency Medicine leaders of tomorrow and welcome you to Ohio State. Our goal is to provide you with the opportunity to excel and become a leader in your area of interest within Emergency Medicine. As a department, we continue to aspire to remain one of the top academic departments in the country and see our residency as one of the crown jewels in our department.

#### Jeffrey Caterino, MD, MPH

Professor and Chair Department of Emergency Medicine The Ohio State University College of Medicine The Ohio State University Wexner Medical Center

## DEPARTMENT OF INTERNAL MEDICINE (IM)

## A Message from Our Chair



The Department of Internal Medicine at The Ohio State University College of Medicine is the largest department in one of the nation's leading academic medical centers. We're proud to be leading the way in research, education and patient care. U.S. News & World Report named our institution to its 2022-23 list of "Best Hospitals." The Department of Internal Medicine is proud to be home to four of the nine nationally ranked specialties including Cancer (#24); Diabetes and

Endocrinology (#36); Cardiology and Heart Surgery (#36); and Gastroenterology and GI Surgery (#50).

We have a long-standing commitment to outstanding patient care, translational research and education, and we're a pioneering institution in the developing field of personalized medicine. Our residency was selected as one of the initial 17 Educational Innovation Project (EIP) programs in the nation that has been asked to explore innovative strategies to train competent physicians in our discipline. The focus of our educational innovation effort includes verifying competency, emphasizing teamwork in mastering skills, transition of care, and linking educational and clinical quality improvement.

Our mission is to improve the lives of people through innovation in research, education and patient care. Our vision is that, in working as a team, we will shape the future of medicine by creating, disseminating and applying new knowledge to meet the needs of each individual. Our total research funding exceeded \$111.15 million in FY21. Our extremely successful investigators strive to increase our research funding to make our vision become a reality. In working with The Ohio State University Center for Clinical and Translational Science, our experienced investigators are mentoring the next generation of physician-scientists.

Our pride in educating the next generation of superb clinicians is reflected in the placement of our senior medical students in outstanding residency programs, including our own. Our residents who enter subspecialty training are equally successful in securing positions in prestigious fellowship programs. We are very pleased that many also choose to pursue fellowship programs at Ohio State. For those entering the practice of internal medicine, as either a primary care physician or a hospitalist, we have been extremely gratified with the positive feedback on their educational experience. These individuals proudly join the traditional "long scarletand-gray line" of The Ohio State University's medical alumni.

We welcome your interest and your questions.

Sincerely,

#### Rama Mallampalli, MD

S. Robert Davis Chair of Medicine Professor and Chair, Department of Internal Medicine The Ohio State University Wexner Medical Center



## DEPARTMENTS OF EMERGENCY MEDICINE AND INTERNAL MEDICINE

### A Message from the Program Leadership

In developing our Emergency Medicine/Internal Medicine (EM/IM) Combined Residency Program, we've combined excellence in leadership, residency training, and academic and patient care opportunities.

Together, both departments provide more than 40 years of residency leadership experience and have graduated hundreds of individuals who have made an impact on both specialties. Our graduates have taken their careers in a number of directions based on their areas of interest, including academic subspecialty training, education and teaching activities, and clinical excellence. Many EM graduates have attained leadership positions in medical centers and academic organizations both regionally and nationally. Our Department of Internal Medicine has a number of nationally ranked *U.S. News & World Report* programs, while the Department of Emergency Medicine continues to be one of the most competitive training programs in the country.

The departments of Emergency Medicine and Internal Medicine have demonstrated academic and educational excellence. Both are among national leaders in research funding and have enjoyed increases in research support during the past several years. Although Internal Medicine is one of the leading contributors to the education of our medical students, Emergency Medicine has contributed more teaching hours per faculty member than any other department. Both departments have had many faculty members recognized for teaching excellence, and many have been voted "Professor of the Year," the highest recognition for teaching excellence from medical students. Both residency training programs continue to receive an increased number of highly qualified applications. The departments also have added fellowship programs while continuing to emphasize the importance and vital role of providing primary care. Both residency programs have steadily increased their residency size as well as the numbers and expertise of their educational faculty. Both have a track record of excellence regarding residency review-committee accreditation.

Common areas of emphasis and expertise include the treatment of critically ill patients with evidencebased medicine, simulation and ultrasonography. Our programs have benefited from a medical centerwide initiative to emphasize such key areas as patient satisfaction, professionalism, communication and patient safety. This has been accomplished through education, mentorship, feedback and innovation. Even more important to our success has been the establishment of a collaborative culture among departments in all of our mission areas.

Recruiting and developing leaders and scholars will ensure the success of our EM/IM program. Our graduates will provide a leadership impact ranging from their excellence in patient care to their participation in areas of organized medicine. Key leadership qualities include a vision for change and innovation and overwhelming optimism regarding future potential. Key scholarly qualities include an overwhelming desire to learn from scientific evidence and a desire to contribute to the development of future leaders and scholars.

We welcome your interest in our EM/IM residency training program.



**Daniel Martin, MD, MBA** Professor and Vice Chair of Education EM/IM Residency Program Director Departments of Emergency Medicine and Internal Medicine



**David Wininger, MD** Associate Professor of Internal Medicine Internal Medicine Residency Program Director



**Sorabh Khandelwal, MD** Samuel J. Kiehl III, MD Professor in Emergency Medicine Emergency Medicine Residency Program Director

## EMERGENCY MEDICINE/INTERNAL MEDICINE RESIDENCY FACULTY



#### **Daniel Martin, MD, MBA**

Professor and Vice Chair of Education Daniel Martin, MD, MBA, is a professor of Emergency Medicine and Internal Medicine at The Ohio State University Wexner Medical Center. He's the program director of the Emergency Medicine/Internal Medicine Residency Program, and the vice chair of Education for the Department of Emergency Medicine. Dr. Martin served as the program director for the Emergency

Medicine Categorical Program at Ohio State from 1990 to 2010. He received his medical degree from Indiana University School of Medicine, completed his Internal Medicine residency at University of Iowa Hospitals and Clinics, and completed an Emergency Medicine residency at the Medical College of Wisconsin, serving as chief resident during his final year. His clinical interests include the treatment of infectious diseases in the Emergency Department (ED), emergency medicine education and patient experience. Research interests include the ED treatment of infections, such as pneumonia and respiratory infections, medical education studies and leadership in medicine. Dr. Martin is an Ohio American College of Emergency Physicians (ACEP) board member and councilor. He also serves on a number of committees within EM, the College of Medicine and Ohio State Wexner Medical Center, along with being an active member in national organizations such as the Society for Academic Emergency Medicine (SAEM), the Council of Emergency Medicine Residency Directors (CORD), ACEP and the American Academy of Emergency Medicine (AAEM), to name a few. He's lectured as a visiting professor both regionally and nationally on such topics as respiratory infections, case studies of infectious emergencies, recognizing and reducing cognitive errors in medicine, and applying leadership literature to medicine.



#### Eric Adkins, MD, MSc

Associate Professor

Eric Adkins, MD, MSc, is an associate professor of Emergency Medicine, Internal Medicine and Critical Care at The Ohio State University Wexner Medical Center. He is the vice chair of clinical affairs in the Emergency Department. He received his medical degree from West Virginia University in 2002, and in 2007 he

completed a combined Emergency Medicine/Internal Medicine residency at Christiana Care Health Services in Delaware, where he served as chief

resident in his final year of training. He then completed a three-year fellowship training program in Pulmonary and Critical Care Medicine at The Ohio State University Wexner Medical Center in 2010, having served as chief fellow. He is board certified in all four specialties. He completed a master's degree in Medical Science at The Ohio State University in 2010. Dr. Adkins focuses his academic efforts on critical care and ultrasound in the Emergency Department. He divides his clinical time 75% in the Emergency Department and 25% in the Intensive Care Unit.

#### Jeffrey Caterino, MD, MPH



Professor and Chair of Emergency Medicine Jeffrey Caterino, MD, MPH, is a professor of Emergency Medicine and Internal Medicine, associate

dean for research, and chair for research in the Department of Emergency Medicine. He received his medical degree from Pennsylvania State University. Dr. Caterino completed a combined Emergency Medicine/Internal Medicine residency at Allegheny General Hospital, where he served as chief resident. He completed his Master of Public Health degree in Clinical and Translational Sciences at The Ohio State University. He is board certified in both Emergency and Internal Medicine, serves clinically as an attending physician in the ED and the observation unit, and has attended on the General Internal Medicine Hospitalist service. His primary research interest is in geriatric emergency medicine with a specific focus on diagnosis and treatment of geriatric infectious diseases. Dr. Caterino has been funded by the National Institutes of Health (NIH) for the past decade and is currently leading an R01 grant studying biomarkers to improve UTI diagnosis in older adults.

#### Greg Eisinger, MD, MSW



Clinical Assistant Professor Greg Eisinger, MD, MSW, is a clinical assistant professor with dual appointments in the Division of Pulmonary, Critical Care and Sleep Medicine and the Department of Emergency Medicine. He started his career in the behavioral sciences with a BA in psychology and a master's in clinical social work from the University of Tennessee, Knoxville followed by a masters in clinical social work from the same institution. He worked as a child and adolescent therapist at a community mental health center for five years before attending medical school at the Loyola University Chicago Stritch School of Medicine. He completed residency in Ohio State's combined emergency and internal medicine program and continued on at Ohio State for a fellowship in pulmonary/critical care. His clinical time is divided between pulmonary

medicine (both inpatient and outpatient), critical care and emergency medicine. Dr. Eisinger is a core faculty member for the emergency medicine residency and is passionate about the tripartite mission of academic medicine. His current research interests include biomarkers for early sepsis diagnosis and novel uses of ketamine, while his outpatient practice focuses on pulmonary sarcoidosis.



#### Jennah Morgan, MD

Assistant Professor of Emergency Medicine and Internal Medicine Jennah Morgan, MD, is an assistant professor of Emergency Medicine and Internal Medicine at The Ohio State University Wexner Medical Center. She received her medical degree from SUNY Downstate Health Sciences University in 2016, and she completed a combined Emergency Medicine/Internal Medicine Residency at SUNY Downstate Medical Center/Kings County Hospital in 2021. Dr. Morgan's academic interests include diversity and inclusion, social determinants of health and physician wellness. She divides her clinical time 60% in the Emergency Department and 40% as an inpatient hospitalist.



## INTRODUCTION

The Ohio State University Affiliated Emergency Medicine/Internal Medicine Residency is a fiveyear program (PGY 1, 2, 3, 4, 5) that provides education and experience in the clinical, educational, administrative and research aspects of emergency and internal medicine and its allied fields.

The clinical program is a cooperative endeavor of The Ohio State University Wexner Medical Center, East Hospital, Nationwide Children's Hospital (NCH) and OhioHealth Grant Medical Center.

The Ohio State University Wexner Medical Center is one of the largest university hospitals in the country. It serves as a tertiary referral center for the state of Ohio and neighboring states. It also delivers primary care to a large segment of central Ohio. Nationwide Children's Hospital is one of the largest children's hospitals in the country. It is the pediatric tertiary referral center of central Ohio. Both hospitals offer multiple subspecialty training programs and expertise in a variety of disciplines.

More than 180,000 patients are collectively treated at The Ohio State University Wexner Medical Center and Nationwide Children's Hospital emergency departments. Each hospital receives a representative share of critically ill medical and surgical patients.

## THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER EXPANSION

Ohio State is taking a major step forward with the development of a new hospital that, combined with modern educational space, will enhance a unified Ohio State Wexner Medical Center complex providing leadingedge research, outstanding clinical training and worldclass patient care. The 1.9 million-square-foot inpatient hospital will be the largest single facilities project ever undertaken at Ohio State with up to 820 beds in privateroom settings to elevate patient-centered care, safety and training for the next generation of physicians.

Scheduled to open in early 2026, planning is years in the making and advances the university's long-term planning vision, as well as the Ohio State Wexner Medical Center strategic plan.



At The Ohio State University Wexner Medical Center, we're proud to be celebrating our 30th consecutive year ranked in the U.S. News & World Report Best Hospitals list.

*U.S. News* consistently ranks Ohio State as the top hospital in Columbus.

## HEAR FROM OUR RESIDENTS

#### Class of 2023

#### Craig Laufenberg, MD

"I chose to pursue a combined Emergency and Internal Medicine program because I envision myself practicing as both an emergency physician and hospitalist. My aspiration is to become a teaching clinician in both fields. I firmly believe that the strong leadership and opportunities found in the EM and IM programs at OSU will empower me to achieve my career goals."

#### Jason Lyou, MD

"To the coldly calculating, I could say that I chose to rank OSU EM/IM highly because of the balanced strength of both IM and EM programs, or the abundance of research opportunities that are offered here, or even how much money I would save from parking reimbursement. But I didn't love this program because of a tally of made-up points at the bottom of a spreadsheet. After my interview day, I walked out of the hospital toward the parking lot already feeling warm and fevered with the hope that I would match here. It was that 'gut feeling' people talk about but rarely describe. It came from a sense that this place and this program would make me happy It came from the fun I had with the residents, the warmth of the PD and APD, and the invitation of a fun Midwest city that I overlooked at first. For all these reasons, I left OSU constantly imagining myself coming back. That must have been my 'gut feeling' – a love for a place that couldn't be tallied."

#### **Class of 2024**

#### Matthew Barraza, MD

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"I have always known that I want to teach. Part of what drew me to Ohio State is the strong commitment to education. Additionally, from the moment I learned about EM/IM, I knew I wanted to be an EM/IM physician. I believe understanding different perspectives and ways to approach problems will not only allow me to give better care to my patients, it will also allow me to understand multiple different learning styles to better support and teach my students. On top of all of this, Columbus is a great city! There are multiple climbing gyms to climb at and I keep finding awesome hiking spots nearby. I also love to eat and there are tons of great restaurants all around. I could not have asked for more!"

#### Meghana Moodabagil, MD

"I couples matched with my fiance and we are so happy to be living in a great city like Columbus. I came to OSU because of the amazing training I knew I would get in both EM and IM. I hope to pursue a pulmonary/critical care fellowship and eventually dual practice in the ICU and the ED. I would also be interested in practicing both hospitalist medicine and emergency medicine one day. Lastly, I chose EM/IM because it offers a phenomenal path toward a career in academia. The resident leadership here is a dedicated and supportive team, and I know I will be set for the future under their guidance."

#### Class of 2025

#### Jonathan Henricks, MD

"I always believed that combining high-acuity EM training with the broad-sweeping knowledge base of general medicine training would position me to offer my patients the best possible care. Having worked alongside my more senior EM/ IM residents at OSU, I know that I have much to aspire to, and that with my training at OSU, I will be able to pursue my dream of split EM-hospitalist or EM-intensivist practice in the future. Besides the phenomenal clinical experience at OSU, and the amazing family of residents/mentors, Columbus offers plenty of fun places to hike, bike, get your sport on (mine is volleyball), and grab a bite to eat or drink! (Did I mention that an attending owns a brewery?)"

#### Matthew Wilson, MD

"When considering what type of residency to pursue, EM/IM stood out to me as a truly unique opportunity to train in two of the most interesting, exciting and complementary medical specialties. The program here at OSU stood out specifically for its exceptional strong and highly regarded programs in both disciplines. Ohio State Wexner Medical Center is a large and highly resourced tertiary referral center with the full spectrum of medical specialties and patients with every type of pathology. It also serves as the primary source of medical care for patients from every walk of life with diverse health care needs and often a high burden of medical comorbidity. The volume and acuity of patients, on the EM side particularly, is second to none. The programs and people here have been incredibly welcoming, friendly and extremely supportive. What ultimately sealed the deal for me, however, was Columbus itself. It has been such a fun place to live and get to know. There is an inexhaustible supply of new and fun things to do here, all in a widely diverse city that is safe and easy to live in. For me, OSU's EM/IM program is the ideal combination of unique and world-class medical training in an environment optimized for you to thrive."

#### **Class of 2026**

#### Katerina Flamm, MD

"I chose to pursue a combined residency in emergency medicine and internal medicine because after residency I would like to continue my training with a pulmonary medicine and critical care fellowship. My hope is to one day have a clinical practice consisting of both emergency medicine and intensive care. In preparation for this, I sought a residency program that offered equal and strong training in both emergency medicine and internal medicine, and one that would also facilitate preparation for my anticipated fellowship application later in my training. Having attended The Ohio State University College of Medicine for medical school, I became well acquainted with both the EM/IM residency program and the residents within the program. I ultimately felt that the residency program was an excellent match for my professional goals, and that the culture of the program was what I was looking for in a residency program as well."

#### Farha Khan, MD

"I chose EM/IM because I wanted a residency that would prepare me for a career in global health, a realm that requires an understanding of the amplification of chronic diseases by acute illness and vice versa. My career goal is to work in a mix of clinical settings and administration, ideally in disaster preparedness. When I interviewed at OSU, I was immediately impressed by the sheer breadth of opportunities available to me - journal clubs, interest groups, the EM/IM mini-fellowship - that would prepare me for working in a mix of settings. What cinched my decision, however, was how obvious it is that the residents here truly care about each other. During resident hangouts, they would razz each other through the Zoom chat, but both parties would come out laughing. Now that I've been here a few months, it's obvious that the care for each other is genuine: our seniors are great at checking in with interns and being a wonderful support system for us. I'm so happy I made this choice and I can only hope that I can pass these feelings of happiness and belonging on to my future peers."

#### Zachary Smith, MD

"As a graduate of The Ohio State University College of Medicine, staying here for the emergency medicine-internal medicine residency was the easiest choice of my life. Throughout my training, I have been treated with respect and kindness at all levels — from the hospital and program leadership to my fellow residents and other clinical staff on the floors. Furthermore, Ohio State is an amazing place to learn how to be a world-class physician while also enjoying opportunities to develop and strengthen interests outside of medicine. Personally, I hope to pursue a career in hospital leadership and administration. The program has offered many opportunities for me to explore these interests, and I know that because of this training, I will graduate as a well-rounded physician."

#### **Class of 2027**

#### **Gurveer Deol, DO**

"I really wanted to walk out of residency training and feel prepared to handle any situation. Naturally, I also wanted to train in a field at an institution that could help me achieve that goal. The vast procedural competency, high-acuity management and medical stabilization of EM training, combined with the broad-sweeping scope of IM training, will certainly provide me with the skill set to offer my patients the best possible care. In addition, combined training gives you a vast understanding of the spectrum of medicine from the outpatient setting all the way to the ICU.

"I wanted to go to an institution that had a strong commitment toward medical education and had equally strong training in Emergency Medicine and Internal Medicine. I could also see the comradery and love in the Ohio State program. This is a place where people have your back, and you can count on them to pick you up when you get knocked down.

"I feel like residency is a chance to grow clinically, but it also offers a time to grow as a person. Living in a wonderful city like Columbus with tons of food, activities, sporting events and places to explore while going through training is just the cherry on top. I am so thankful for this opportunity to be part of the EM/IM family at the renowned Ohio State Wexner Medical Center — a program and place that will make me into the best person/clinician I can be."

EMERGENCY MEDICINE/INTERNAL MEDICINE BLOCK CURRICULUM 2022-2023

BLOCK	1	2	3	4	5	6	7	8	9	10	11	12	13
	EM OSU		Inpatient	General		Anesthesia/		General				Children's EM	
PGY-1	Orientation	IM Clinic	Cardiology Service	Medicine Service	EM OSU Main	Ultrasound	Orthopedics	Medicine Night Float	MICU	IM Clinic	EM OSU East	(NCH)	EM OSU Main
					1								
PGY-2	EM OSU Main, East,	Grant Trauma/	EM OSU Main, East,	General Medicine	Subspecialty Medicine	IM Clinic	EM OSU Main, East,	OB/	EM OSU Main, East,	IM Clinic	MICU	IM Consults	NICU/ Neurocritical
	NCH	SICU	NCH	Service	Service		NCH	Toxicology	NCH				Care
		1											
PGY-3	Inpatient Cardiology Service	IM Clinic	Subspecialty Medicine Service	EM OSU Main, East, NCH	Ultrasound/EMS	EM OSU Main, East, NCH	General Medicine Service	IM Clinic	MICU Night Float	EM OSU Main, East, NCH w/ Elective	OSU SICU	EM OSU Main, East, NCH	Mt. Carmel EM or CT-ICU
PGY-4	EM OSU Main, East, NCH	EM Hawaii	EM OSU Main, East, NCH	MICU	IM Clinic	IM Consults	EM OSU Main, East, NCH	EM OSU Main, East, NCH	IM Elective/ DM Consults	Mini-Fellowship	Mini-Fellowship	Mini-Fellowship	Infectious Disease Consults
PGY-5	IM Consults	Medical Consultant	Ross (Heart) Night Float	EM OSU Main, East, NCH	EM OSU Main, East, NCH	EM or IM Elective	IM Clinic	IM Consults	MICU	EM Elective	EM OSU Main, East, NCH	IM Consults	IM Elective

Subspecialty Medicine Services include Hematology, Oncology, Hepatobiliary, Transplant Medicine and an Undifferentiated Malignancy Diagnosis service.

Inpatient Cardiology Services include General Cardiology, Acute Coronary, Heart Failure and Ross Float (an admission and procedure heavy-service without inpatient rounding).

IM Clinic refers to continuity-based practice combined with a subspecialty clinic experience, which includes options such as Pulmonology, Geriatrics, Endocrinology, Palliative Medicines, Allergy/ Immunology, Cardiology, Complementary Medicine, Dermatology, Gastroenterology, Hepatology, Infectious Disease, Nephrology, Oncology, Hematology, Surgical Subspecialties, Women's Health and Wound Care. The continuity practice clinic may also be paired with a career development experience, which includes options such as research, quality improvement and medical education. IM Consult options include Cardiology, Dermatology, Gastroenterology, Electrophysiology, Hepatology, Hematology, Oncology, Geriatrics, Endocrinology (Diabetes and Non-Diabetes), Pulmonology, Nephrology, Palliative Medicine, Psychiatry and Infectious Disease. IM Electives include Bone Marrow Transplant, Radiology, Inpatient Airway/Advanced Anesthesiology, Hematologic Malignancy Treatment and Hospital Medicine. EM Elective options include Disaster Medicine, Otolaryngology, Pediatric Orthopedics, Oral Surgery, Ophthalmology, Administration, Research, Medical Education, Simulation, Sports Medicine, Wilderness Medicine, Pediatric Anesthesia, EKG and Observation Medicine.

## AREAS OF FOCUS FOR MINI-FELLOWSHIPS INCLUDE:

- 1. Basic science or clinical research
- 2. Ultrasound training working toward certification as a registered diagnostic medical sonographer
- 3. Administration
- 4. Medical education
- 5. Community medicine (e.g., free clinics, EMS)
- 6. International medicine
- 7. Scholarly activity involved in medical writing, possibly related to case reports or review articles or original research
- 8. Opportunity to initiate graduate-level classwork toward a master's-level degree in a program approved by the program director

## EMERGENCY MEDICINE/ INTERNAL MEDICINE RESIDENCY CURRICULUM

#### Mini-Fellowships

This portion of the curriculum is meant to allow the trainee the opportunity to develop a unique interest or skill set and occurs during the fourth postgraduate year. It's a continuous 12-week block of time in which the resident will be supported by a mentor or adviser who will work closely with them. It will also afford the trainee the opportunity to explore possible interest in subspecialty training.

Approximately three months prior to the start of this period, the residents will be asked to supply a one-page summary indicating what they plan to do over the 12-week period to develop their specific interest. It will include a list of measurable objectives and goals and will require approval by the program directors. Trainees will work with a mentor or adviser on the topic of their choice. Ideally, this will allow for development of skills that will promote an academic career.

During this 12-week block, the trainees will remain involved with their continuity clinic. If the resident chooses not to be involved in the Mini-Fellowship portion of the curriculum, it will be filled with other elective rotations.

#### First Postgraduate Year

The orientation curriculum in the first block is designed to familiarize and orient new residents with Nationwide Children's Hospital and Ohio State Wexner Medical Center emergency departments and the Department of Internal Medicine, to offer an intensive didactic experience highlighting management of emergent and inpatient conditions, and to provide experience and certification in Advanced Cardiac Life Support (ACLS), Advanced Trauma Life Support (ATLS) and Pediatric Advanced Life Support (PALS). During the first year of the program, the resident will gain experience in a variety of disciplines relevant to emergency medicine and internal medicine. The resident also gains formal training in emergency ultrasound and will choose from several ambulatory elective opportunities to personalize his or her residency experience. In general, residents will alternate between EM and IM experiences roughly every three months.

#### Second and Third Postgraduate Years

The second and third years are similar to the second years of the EM and IM categorical years. The second year focuses on development of progressive autonomy in patient management. In addition, the resident obtains experience in a variety of subspecialties, including trauma and surgical critical care. As a member of the trauma team, the resident plays an integral role in major trauma resuscitations. In the Surgical Intensive Care Unit, the resident provides management for the most critically ill surgical and trauma patients. During this year, the Cardiology CHF service, the MICU, SICU and Trauma months represent significant exposure to ICU care.

The resident gains further experience and expertise in performing procedures such as placement of central lines, airway management and emergency ultrasound.

During the second and third year of the program, the resident is provided with the opportunity to accept responsibility for managing many patients simultaneously while supervising and teaching junior-level house officers and students in the emergency department and on the inpatient floors of Ohio State Wexner Medical Center and Nationwide Children's Hospital. This graded responsibility helps the resident to gain independence and expertise in managing the emergency department and inpatient units. The resident will receive experience in emergency department administration and management of emergency medical service systems as well as additional ultrasound training. The resident will choose from several subspecialty ward opportunities to personalize his or her residency experience.



"Throughout my residency, the quality of training in Emergency Medicine and Internal Medicine at Ohio State exceeded my expectations and has well-prepared me for fellowship in Pulmonary and Critical Care medicine. One aspect of the culture at Ohio State that I found unique was the faculty's focus on resident and medical student education. Ohio State has put an emphasis on hiring faculty who are excellent teachers, and the results have really elevated the residency programs, producing well-trained physicians who have taken on leadership roles in their respective fields. Not only did my clinical experience provide the training necessary for success in fellowship, but I also found it easy to become involved in research, which is a valuable experience regardless of your future career plans, but especially when planning to do a fellowship. I am very thankful for the training I received at Ohio State as I feel well prepared for whatever career path I choose."

- Alexis "Ali" Hausfeld Wolfe, MD Alumna, class of 2018 and the program's first graduate

#### Fourth and Fifth Postgraduate Years

The fourth and fifth years are similar to both the Emergency Medicine and Internal Medicine third years. During these years, emphasis is placed on enhancing patient care through resident education. Three strategies employed include focusing on continuous quality improvement, instilling the commitment and skills to demonstrate competency, and providing concrete experiences to help residents become masters of effective teamwork and enhance their ability to plan and manage care transitions inherent in today's health care environment. The residents will also choose from several selective opportunities to personalize their residency experience.

The fourth and fifth years of the program provide the senior resident with the opportunity to accept responsibility for managing many patients in different settings. Supervision of all levels of EM and IM residents occurs during this year. The resident also participates in MICU End-of-Life Discussion training during this year.

There are also many elective possibilities in both Emergency Medicine and Internal Medicine. Although unlimited possibilities exist, popular electives include Community Emergency Medicine in Hawaii, Sports Medicine, Hyperbaric Medicine, Aeromedical Transport, Plastic Surgery, Radiology, Otolaryngology, Ophthalmology, Critical Care, Oral Surgery, Dermatology, Trauma Surgery, Disaster Medicine and EMS. The mini-fellowship occurs during the fourth postgraduate year. The residents can also participate in extensive research in both departments.



## PEDIATRIC EMERGENCY MEDICINE

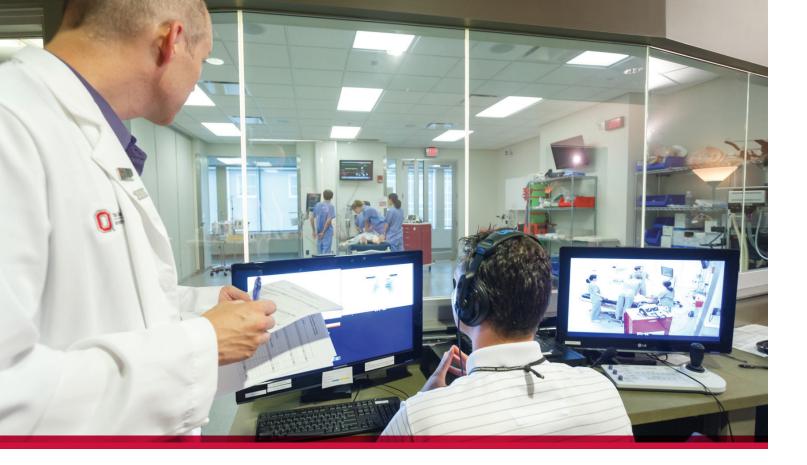
Nationwide Children's Hospital Emergency Department is part of a tertiary care pediatric center and a Level I trauma center. This ED has an annual census of more than 90,000 patients. The Pediatric EM rotation offers an outstanding clinical experience, extensive bedside teaching and allotted time for pediatric and adult Emergency Medicine resident conferences. Nationwide Children's Hospital has a very active pediatric emergency medicine training program, and the pediatric faculty are also Ohio State faculty members.

## **OBSERVATION MEDICINE**

The Clinical Decision Unit (CDU) in the Emergency Department at Ohio State Wexner Medical Center is a 20-bed unit that specializes in the efficient treatment of certain patient populations whose care dictates an extended stay for either diagnostic or therapeutic reasons. There are more than 30 active patient observation protocols, and the unit is staffed by advanced practitioners and attending physicians who specialize in ED-based observation care.

## NATIONAL CONFERENCES

The residency provides funds and time off for each resident to attend three EM national conferences. This conference time has proved to be both educational and enjoyable. Many residents value the bonding experience with co-residents, the dedicated educational experience and the opportunity to become involved in emergency medicine at a regional and national level. EM/IM residents will usually attend two national meetings, most commonly Society for Academic Emergency Medicine (SAEM) and American College of Emergency Physicians (ACEP), with their CME funds. Additional support is available for conferences where the resident presents scholarship.



## ELECTIVES

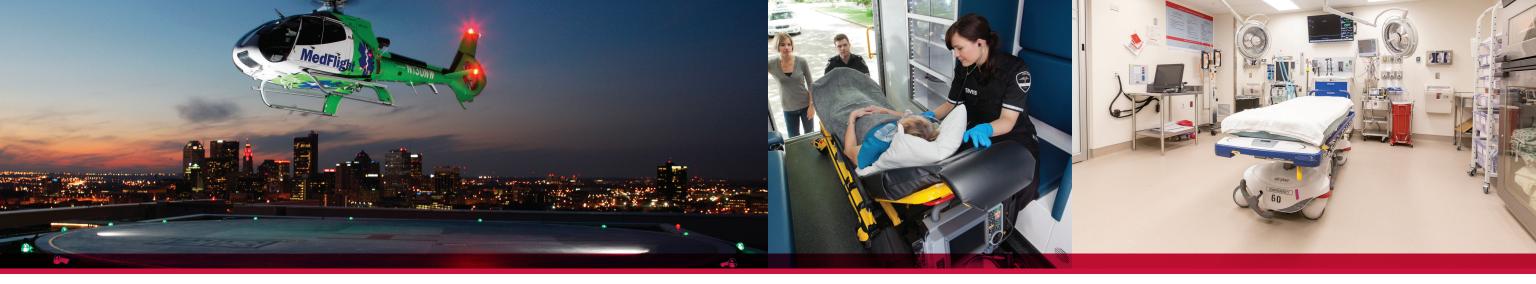
Elective rotations provide the opportunity for our residents to tailor their education to their individual career path. Numerous opportunities are available for residents to increase their exposure to content areas of interest to them, both within and outside the departments of Emergency Medicine and Internal Medicine.

Some electives occur exclusively in either the inpatient or outpatient environment, while others have clinical opportunities that are in both environments. Popular Emergency Medicine electives include Community Emergency Medicine in Hawaii, Sports Medicine, Hyperbaric Medicine, Aeromedical Transport, Plastic Surgery, Radiology, Otolaryngology, Ophthalmology, Critical Care, Oral Surgery, Dermatology, Trauma Surgery, Disaster Medicine or EMS. However, options are nearly limitless, so residents are encouraged to pursue other electives if they more closely align with individual goals and interests.



## Internal Medicine electives are listed below.

Inpatient Electives	Outpatient Electives		
Acute Leukemia Service	Aeromedical Transport	Geriatrics	Radiology
Airway Management	Advanced Hepatology	Hawaii ED	Rheumatology
Bone Marrow Transplant	Advanced Pulmonary	Hematology/Medical Oncology	Sports Medicine
Cardiology Consults – UH and East	Allergy	Infectious Disease	Toxicology
Diabetes Consults	Burn Surgical Service	Independent Research	Trauma Surgery
Electrophysiology	Cardiology	Medical Education	Ultrasound
Endocrinology Consults	Complementary Medicine	Mount Carmel Hospital ED	Women's Health
Gastroenterology Consults	Critical Care	Nephrology	Wound Clinic/Hyperbaric Oxygen
General Medicine Consults	Dental	Ophthalmology	
Hematology/Oncology Consults	Dermatology	Otolaryngology	
Hospital Medicine	Disaster Medicine	Pediatric Orthopedic	
ID Consults – UH and East	Endocrinology	Plastic Surgery	
Nephrology Consults	EMS	Preventive Cardiology	
Neurology Consults	ENT	Primary Care/Surgical Subspecialty	
Pain/Palliative Consults	Gastroenterology	Pulmonary/Sleep Medicine	
Pulmonary Consults – UH and East	General Medicine	Quality Improvement	



## EMERGENCY MEDICAL SERVICE (EMS) EXPERIENCE

Prehospital care is emphasized throughout the residency program. In addition to accompanying paramedic teams on emergency calls, residents will be directly involved in the planning and operation of the EMS systems.

Since 2004, the Center for EMS at The Ohio State University Wexner Medical Center has been dedicated to improving outcomes for cardiac arrest, trauma and other patients in our community. A cooperative effort between the Department of Emergency Medicine and the Center for EMS (CEMS) at the Ohio State Wexner Medical Center seeks to provide an educational and research resource to the central Ohio EMS community. By uniting the efforts of the prehospital provider with the hospital-based team, the CEMS is dedicated to providing everyone in the community the best opportunity for survival and improved quality of life.

MedFlight is the critical care transport service serving central Ohio and operated by the Ohio State Wexner Medical Center and OhioHealth. Online medical control for the helicopter and mobile ICU is provided by the Emergency Department at Ohio State Wexner Medical Center. Residents may also elect to participate in patient transports with the crew of MedFlight and will participate in physician medical direction of the program.

## MEDICAL EDUCATION

The Medical Education two-week elective exposes residents to the variety of educational activities common to medical educators at academic centers. Residents can also complete an elective in Medical Education. Residents learn curriculum development, participate in peer review of teaching for faculty and residents, develop skills in web-based education and can initiate an educational scholarship project.

## ULTRASOUND

The Ohio State University Wexner Medical Center's Department of Emergency Medicine has a nationally recognized ultrasound program, and ultrasound has been part of our residency for more than 15 years. The ultrasound division has 10 members, many of whom serve on national committees and in leadership roles. The program has an active emergency medicine ultrasound fellowship and a wonderful relationship and newly created primary care ultrasound fellowship, with the Pediatric Emergency Medicine program at Nationwide Children's Hospital. As leaders in ultrasound education, our faculty lecture internationally and are highly involved in national ultrasound organizations.

With the goal of creating leaders in the field, all residents will receive cutting-edge education in emergency point-of-care ultrasound, spending six weeks during residency on ultrasound rotations, with the option of more time as an elective. In addition to the core curricular experience, nearly a third of our residents opt into the ultrasound track, providing a mini-fellowship experience with teaching time, advanced scans and extra research opportunities. Residents may also elect to gain fellowship-level education and mentorship through an advanced ultrasound track program.

## TRAUMA SERVICES

The Ohio State University Wexner Medical Center has an active trauma service with a Level I trauma center designation. We've also been designated by the American College of Emergency Physicians as a Level 1 Geriatric Emergency Department, providing the most comprehensive care to vulnerable older adults in the emergency department. Emergency Medicine residents are an integral part of the trauma team in all trauma resuscitations. PGY2 through PGY5 residents in the emergency department participate in management of trauma resuscitations both as trauma team leaders and airway managers.



## **RESIDENT CONFERENCES**

Emergency Medicine conferences take place every Wednesday morning and include four to five hours of small-group discussions, morbidity and mortality sessions focusing on cognitive errors, simulation and procedure sessions, lectures and case conferences. The format of this educational setting is specifically designed to be innovative and interactive.

Emergency Medicine conferences are attended by education faculty and are considered protected time for residents working in the emergency department and in nearly all off-service rotations. Conferences promote self-directed learning using a "flipped classroom" model. In preparation for the weekly smallgroup discussions, residents review various educational resources pertaining to the topics being covered. Small-group sessions, which are evidence-based, are led by both Emergency Medicine faculty and senior residents. Teaching faculty attempt to maximize the use of technology in both the clinical and didactic settings. Asynchronous learning opportunities are also present with online modules and a question bank provided to each resident.

Visiting professors of national prominence are invited to share their expertise in specific areas of Emergency Medicine.

On Tuesdays, the Department of Internal Medicine hosts school sessions, as well as conferences that include a mixture of didactics, simulation-based training, and morbidity and mortality sessions. The department's world-class subspecialty faculty routinely teach for two to three hours. Lunch is provided and residents enjoy time together. Some conferences are recorded, and an option of day-synchronous off-site or delayed viewing is available for this education content.

# CLINICAL SKILLS EDUCATION AND ASSESSMENT CENTER

The changing nature of medical practice and the national demand for accountability in medical education highlight the need for a leading-edge clinical skills center like the one at The Ohio State University Wexner Medical Center. National accrediting bodies are challenging medical education institutions to demonstrate that medical students and residents possess the requisite knowledge, skills and attitudes essential to the practice of medicine. Emergency Medicine residents participate in weekly simulation and procedural sessions to review high-risk, low-frequency pathologies and procedures pertinent to Emergency Medicine.

The Clinical Skills Education and Assessment Center (CSEAC) at The Ohio State University Wexner Medical Center is a state-of-the-art training center simulating actual patient care experiences. The facility features patient encounter rooms, patient models, standardized patients, high-tech patient simulators and electronic monitoring stations. This offers simulated ICU and ED cases, as well as dedicated space for ultrasound training and hands-on procedural training. The center provides exciting opportunities for comprehensive interdisciplinary education. We anticipate continued acquisition of high-fidelity simulators to meet a broad range of education needs.



"Our partnership with CSEAC allows for a comprehensive and innovative emergency medicine simulation curriculum. We focus on refining leadership, communication, situational awareness and crisis resource management skills. From disaster preparedness to wilderness medicine day, simulation competitions to multidisciplinary in situ scenarios, we prioritize providing our residents with the tools they need to succeed."

– **Jennifer Yee, DO** Emergency Medicine Simulation Director



## **RESEARCH AND** SCHOLARLY ACTIVITY

Residents are required to participate in at least one scholarly activity during the course of their training. Most residents complete multiple projects. This may be a basic science project, a clinical or epidemiological study, a case report or a collective clinical review. Elective time and Mini-Fellowship time may also be used to supplement this experience.

The purpose of the requirement is to introduce the resident to the critical evaluation of the biomedical literature and research methodology. The Emergency Medicine and Internal Medicine faculty are active in all facets of research and scholarly activity and serve to guide residents through this requirement. Residents are encouraged to publish and present at regional and national meetings during their training. All Emergency Medicine residents have protected time to attend or present at monthly journal clubs under supervision by our research faculty. This provides excellent training in critical review of current literature in Emergency Medicine.

The Department of Internal Medicine is involved in biomedical research, including basic mechanisms of disease, translational studies and clinical trials. Because of our wealth of diverse patients and our referral patterns, we have had significant impact in the areas of translational and clinical research. The Ohio State University Comprehensive Cancer Center - Arthur G. James Cancer Hospital and Richard

J. Solove Research Institute are good examples of this, applying the bench-to-bedside philosophy and bringing new cancer therapeutics to clinical trials.

The theme of experimental therapeutics bridges many disciplines, including those within The Ohio State University Heart and Vascular Center, with its expertise in devices to improve or sustain myocardial function, the Center for Microbial Interface Biology in new antibiotic development and the Ohio SLE Study investigating new immunomodulators for patients with lupus and lupus nephritis.

This work is facilitated by state-of-the-art research facilities such as Ohio State's Biomedical Research Tower and Dorothy M. Davis Heart and Lung Research Institute. All of the departments' work is helped by the university's nationally funded Center for Clinical and Translational Science, which provides a number of resources for investigators.

In addition to department programs, the investigators in Internal Medicine work on multidisciplinary projects. An example of this is the collaboration between Ohio State's Diabetes Center and the Comprehensive Transplant Center to bring islet transplantation for diabetes to a clinical reality.

The vibrant, active and internationally known faculty in the Department of Internal Medicine at the Ohio State Wexner Medical Center are very excited about involving trainees in their ongoing projects to expose future physicians to academic medicine.

Please inquire with the department's leadership if you would like to pursue specific research activities.

## **EM/IM ALUMNI**





Alexis Hausfeld Wolfe, MD Northwestern University Fellowship, Pulmonary Critical Care



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Matthew Huang, MD The Ohio State University Fellowship, Pulmonary Critical Care





Paul DeJulio. MD Medical Center



The Ohio State University



Northwestern University





Serena Hua, MD Stanford University Fellowship, Critical Care



**Gregory Eisinger, MD, MSW** The Ohio State University

Kushal Nandam, MD Emory University Fellowship, Pulmonary Critical Care Faculty, Hospital Medicine and Care Emergency Medicine



Caleb Taylor, MD The Ohio State University Fellowship, Pulmonary Critical Care Fellowship, Pulmonary Critical Care

#### Divyesh Mehta, MD

The University of North Carolina-Chapel Hill Fellowship, Pulmonary Critical Care

EMERGENCY MEDICINE AND INTERNAL MEDICINE | 27



"The patients, the people and the passions! The patients at Ohio State are very sick, as they are at any tertiary care center. The people (residents and attendings and support staff) you work with make a difference, and I have yet to meet someone at Ohio State who isn't dedicated to being exemplary. Most importantly, the passions. People at Ohio State are driven by a passion for excellence. No matter what your interests, Ohio State has a faculty member who is passionate about it as well and can get you involved. They are also passionate about residents here, so if you don't find what you are looking for, they will give you the opportunity to make an experience all on your own in your area of interest." - Caleb Taylor, MD Alumnus and chief resident, class of 2020

## A DIVERSE AND SUPPORTIVE I FARNING ENVIRONMENT

The Ohio State University Medical Center, and in particular the Department of Emergency Medicine, recognizes and celebrates the importance of diversity. We strive to support a diverse, talented workforce that is inclusive of all individuals, regardless of ancestry, ethnicity, sex, gender identity, sexual orientation or disability. We recognize and celebrate the opportunity to benefit from broad perspectives, characteristics and life experiences, and we strive to create working and learning environments where we will benefit and thrive from our differences.

The department's Diversity, Equity and Inclusion Committee (DEIC), a resident- and faculty-led committee, strives to support, promote and improve the diversity within our department and medical center. Primary programs and initiatives driven by this committee include:

#### **Community Outreach and Engagement**

Aligning with current medical center and community initiatives to address youth trauma and gun violence; giving back together through the "ED Volunteers" group; supporting Black-owned businesses; creating impact pipelines for high school and undergraduate students; providing medical advice at monthly community outreach dinners.

#### **Focused Data Collection**

Patient/community- and staff-centered needs assessments to identify equity gaps in patient care and resident training; providing paid summer research awards for medical students to study equity gaps in the ED.

#### Increasing Department Diversity

Active participation by leadership in DEI organizations; recruitment and retention of residents and faculty who are underrepresented in medicine; recruitment of a vice chair for Diversity and Inclusion; away rotation scholarship for medical students from underrepresented groups.

#### **Department** Culture

Mentorship for underrepresented residents; creating safe work environments by offering on-shift support, resident empowerment and safe reporting systems; and creating avenues for providing honest feedback on culture.



## **RESIDENT HAPPINESS**

We understand that work-life integration is essential to physician wellness. We're proud of our Kiehl Resident Wellness Endowment and curriculum, which has been highlighted by the National Academy of Medicine as a model for promoting resident wellness. We promote a healthy balance in all facets of well-being including occupational, emotional, physical, financial, intellectual and social wellness. The wellness program features year-round education in these areas and works to create events/programs to reinforce these domains. Some of the wellness offerings include:

- Longitudinal Wellness Curriculum
- Wellness Family Events
- Annual Wellness Retreats
- Faculty-Hosted Dinners
- All-Resident Outings
- Community Supported Agriculture (fresh fruits and vegetables)
- Class Night Out
- Resident Advocates for Wellness Peer-Support Program
- Women in EM Mentorship and Professional Development Curriculum

One privilege of our Kiehl Resident Wellness Endowment is our Professional Development Grants Program, recognizing that professional development and work engagement is critical for career longevity and happiness. These grants support residents in pursuing additional opportunities to grow their careers. Recent awardees have used grant funds for training programs for certificates such as medical education and wilderness medicine, travel for committee and advocacy work, and funding to attend national and international conferences.

## **OPPORTUNITIES FOR ADVANCED STUDY**

At The Ohio State University Wexner Medical Center, both the Department of Emergency Medicine and the Department of Internal Medicine offer numerous fellowships. Training varies from one to three years, with master's degrees possible in many of the fellowships. Programs are supported and facilitated by faculty members nationally known for their expertise. Clinical experiences abound with excellent supervision and teaching opportunities. All fellowships have scholarship potential.

For a complete listing of possible fellowships, please visit internalmedicine.osu.edu/ education/fellowships and go.osu.edu/EMfellowship.



## COLUMBUS UNEXPECTED

We understand that moving is a big deal and you're interested in what life will look like beyond the hospital walls. You're in luck. It's likely that Columbus has more than you expected.

## THE OHIO STATE UNIVERSITY

The Ohio State University provides a wide range of athletic, entertainment and advanced education opportunities. Numerous athletic events, including the excitement of Big Ten football and basketball, are available throughout the year. Residents may use the nearby, nationally ranked Ohio State athletic facilities. Participation in intramural sports is also available.

Other regular events at The Ohio State University include numerous concerts, and local and Broadway theatrical performances, as well as a wide variety of cultural events at on-campus venues, including the Wexner Center for the Arts and the Schottenstein Center.

Excellent opportunities exist for continuing education courses in all academic disciplines for physicians, spouses and dependents, along with other benefits.

## JUST THE FACTS

Not to brag, but here are a few facts and figures to convince you that Columbus is indeed one of America's premier cities:

We're big. Ohio's state capital is the 14th largest city in the United States. That makes us bigger than cities such as Charlotte, Seattle, Denver, Boston, Nashville and Baltimore seriously, Google it. And when you factor in the entire Columbus metropolitan area, our population increases to more than 2 million.

We're affordable. The cost of living in Columbus is 10% below the national average.

### "...Ohio's capital is the city others want to be." – Delta Sky Magazine



We're accessible. Columbus is within 550 miles of nearly half the nation's population. Easy day trips and nearby weekend getaways abound, and from John Glenn Columbus International Airport you can catch daily nonstop flights to about 50 different airports. During the work week, the average Columbus commute remains below the national average.

## We're a microcosm of America.

Our diverse population makes us a top test market. More than 109 languages are represented in Columbus.

We're smart. In addition to being named a "Top7 Intelligent Communities of the Year" by the Intelligent Community Forum, we have more PhDs than the national average and the largest concentration in the Midwest. There are more than 50 college and university campuses within the Columbus region.

For more information, visit **go.osumc.edu/em-im-residency** 



WEXNER MEDICAL CENTER