

THE CEMS UPDATE

EMS PARTICIPATES IN FASTCAST™ RESEARCH TRIAL

The Clinton Township Division of Fire supported Kevin Martin, DO, associate professor of Orthopedics at The Ohio State University College of Medicine, on a research trial of his FastCast™ spray-on foam splinting technique. The team compared FastCast™ with other splinting techniques used in prehospital and military medicine by splinting and transporting cadaver limbs. Data was collected by sensors applied to the limbs and X-rays taken throughout the process. The results from the trial will be used to support larger FastCast™ studies.

FastCast™ is a spray-on foam splinting technique invented by Dr. Martin during military service. The military identifies safely splinting field injuries as a great challenge. We appreciate Clinton Township's participation and support of the trial.



The Clinton Township Division of Fire and Dr. Martin collaborating on the FastCast™ trial.

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THE CEMS UPDATE provides news related to The Ohio State University Wexner Medical Center and the Center for EMS, including Med Center updates, EMS training and event highlights, and topics of interest from our many clinical experts.

For content requests please contact the Center for EMS at centerforems@osumc.edu or 614-293-5102.



THE OHIO STATE UNIVERSITY

WEXNER MEDICAL CENTER

MEDICAL DIRECTOR UPDATE

Welcome to the Ohio State Wexner Medical Center's Center for EMS newsletter. Emergency Medical Services is a complex system that ranges from volunteer providers in rural areas to emergency, cardiac, trauma and pediatric specialists.

EMS is forever evolving and adapting to changes in technology, medical therapeutics and even rescue techniques. The therapies provided in the field today are quite different than when I started as an EMT in 1976. The basics have not changed — the “ABCs” are still priorities, though we may approach them differently. Those of us involved in EMS have adapted to changes in the care we provide. We have shifted to care for COVID-19 patients and other emerging pathogens. Planning and responding to mass shootings, opiate overdoses and aggressive infections are new areas of focus. The movement of EMS into prevention and providing home care and follow up are nontraditional arenas.

No matter what role you occupy in EMS, we are here to help. If you bring patients directly to either of

the emergency departments at OSUWMC, we will provide follow-up and answer questions you may have about their care. With our wide range of experts at all levels, we can provide education on virtually any topic, and offer many CE opportunities, including virtually, conferences and opportunities for hands-on education through simulation. Most importantly, if there is something you need, want or are wondering about, ask.



Michael Dick, MD, MSc
Medical Director,
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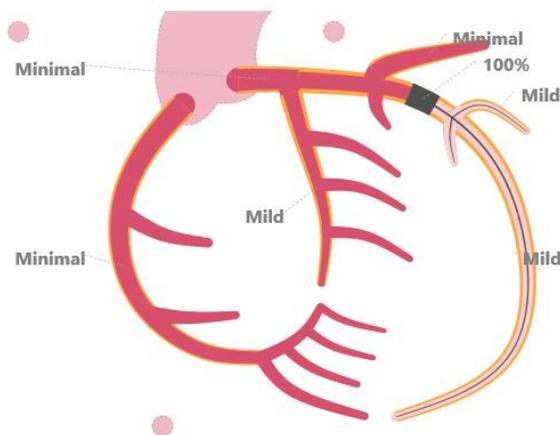
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100% thrombotic lesion to mid LAD.

GREAT CATCH!

Columbus Fire Medic 25 responded to a 54-year-old male who experienced chest pain at work. ECG revealed STEMI and patient was taken directly to The Ohio State University Wexner Medical Center Cath Lab.

Coronary angiography revealed 100% thrombotic lesion to the mid LAD. A drug eluting stent was placed with complete return of blood flow, and echo revealed normal EF. Patient discharged to home.

First medical contact to reperfusion = 54 minutes!

THE OHIO STATE COMPREHENSIVE BURN CENTER

The Ohio State Comprehensive Burn Center is the only adult ABA-verified Burn Center in central Ohio. Being an ABA-verified burn center provides a true mark of distinction for a burn center and is an indicator that the center provides high-quality patient care to burn patients from time of injury through rehabilitation. The American Burn Association (ABA) offers this program to verify that a burn center is meeting the highest current standards of care for the burn-injured patient.

We offer inpatient and outpatient services including:

- Advanced dressing options to minimize pain, scarring and other complications
- Wound care and complex wound management
- Comprehensive care team to address the needs of patients and their families, including the physical, mental, emotional and social aspects of burns
- Treatment for all burns, small to large, with special emphasis on:
 - Third-degree burns
 - Burns to the face, hands, feet, genitalia, perineum and joints
 - Electrical burns and lightning strikes
 - Chemical burns
 - Burns in patients with comorbid conditions
 - Scar management and reconstruction after burn recovery
 - Inhalation injury

Burn Center rehabilitation is provided at Dodd Rehabilitation Hospital, which has been ranked among the best in the country by *U.S. News & World Report*. Also part of the medical center's Level 1 Trauma Center, our burn center offers physical and occupational therapy, speech language therapy, social work, and psychological, spiritual and nutritional services.

For more information on trauma, critical care and burn, please visit:

medicine.osu.edu/departments/surgery/trauma-critical-care-burn.



Nicole Bernal, MD, FACS
Director, Burn Center
Professor of Surgery



OUTREACH HIGHLIGHTS

Carrie Valdez, MD, associate director of Trauma Medical, and Beth McGuire, RN, associate director of Burn, visited the Westerville Division of Fire to support burn treatment and recognition.

Thank you, Westerville, for having us out!

OHIO STATE EMERGENCY MEDICINE BRINGS STATE-OF-THE-ART RESEARCH TO COLUMBUS

The Ohio State Department of Emergency Medicine is a powerhouse among EM research units nationally. With 12 scientists and over \$3 million in annual funding, the division is one of the largest emergency research divisions in the nation and has witnessed explosive growth over the last two years. The division has expertise in the areas of resuscitation, heart failure, geriatrics and substance abuse disorders. New talent bolsters Ohio State's research ranks. Henry Wang, MD, MS, has joined the department as professor and vice chair for Research. Dr. Wang is internationally renowned for his work in prehospital airway management, most notably the Pragmatic Airway Resuscitation Trial. He joins a team of nationally recognized resuscitation scientists including Ashish Panchal, MD, PhD, Michelle Nassal, MD, PhD, and Travis Sharkey-Toppen, MD, PhD.

The resuscitation group's ongoing projects include leveraging capnography to guide resuscitation, application of artificial intelligence to transform 911 dispatching and efforts to design large-scale clinical trials for prehospital pediatric airway management and traumatic brain injury care. Dr. Panchal is co-lead of STOP-COVID, a cohort study of first responders' experiences in the COVID-19 pandemic. Drs. Wang and Nassal spearhead Ohio State's participation in the NIH ICECAP trial, which is testing different

durations of therapeutic hypothermia after cardiac arrest.

Other new arrivals include Ed Boyer, MD, PhD, professor; Michael Lyons, MD, professor; and Brittany Panches, RN, PhD, associate professor. Dr. Boyer is one of the world's most prominent toxicologists and an expert in leveraging technology to innovate medical care. Dr. Lyons and Panches spearhead HealthNow, a team dedicated to implementing innovative health screening and prevention interventions in the emergency department.



Henry Wang, MD
Professor and Vice Chair for Research
Department of Emergency Medicine



ON-CAMPUS HIGHLIGHTS

Finn is a Labrador Retriever born on Dec. 9, 2020, and part of our Buckeye Paws program. Buckeye Paws supports the mental and emotional health of medical center staff, with Finn specific to our Emergency Department. Look for Finn, and other Buckeye Paws, when you are in the ED and at on-campus events.

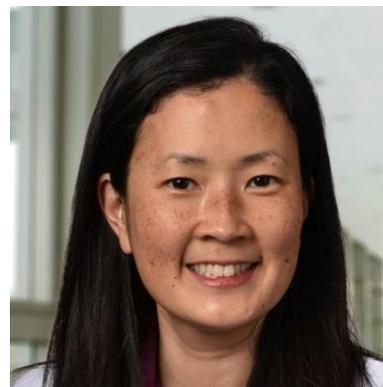
ISCHEMIC STROKE UPDATE FROM THE OHIO STATE COMPREHENSIVE STROKE CENTER

Ischemic stroke accounts for more than 80% of all strokes and occurs when a blood vessel supplying the brain is blocked. Acute ischemic stroke treatment options include IV medications (alteplase or tenecteplase) within a 4.5-hour window, as well as mechanical thrombectomy in a 24-hour window for strokes with large vessel occlusions. Acute ischemic stroke requires time sensitive treatment and this urgency for treatment emphasizes the importance of a multidisciplinary approach to stroke care. The basic principle is the sooner the treatment, the better chance of recovery, and thus prehospital care plays a significant part in management. The role of EMS in the care of a stroke patient is first to assess and manage ABCs, which may include monitoring BP, initiating cardiac monitor, providing oxygen, establishing IV access, and checking blood glucose and treating if needed.

Historically, EMS has done a great job of recognizing a stroke and many are now assessing for severity using the LAMS, RACE or other validated tools. For stroke patients, determining an accurate onset of symptoms or last known well is a critical piece of information that will affect treatment options. EMS providers should follow their established protocol for stroke recognition, treatment and transport. The Ohio Medical Transport Board recently published updated stroke guidelines, and these should be considered

when developing EMS stroke protocol. Timely triage and transport of patient to the nearest appropriate center is key and with prehospital notification to allow the stroke team to mobilize in advance. The role of EMS is incredibly impactful in a stroke patient's outcome.

For more details on prehospital EMS resources, please visit the AHA website: [stroke.org/en/professionals/stroke-resource-library/pre-hospitalems/prehospitalems-resources](https://www.stroke.org/en/professionals/stroke-resource-library/pre-hospitalems/prehospitalems-resources).

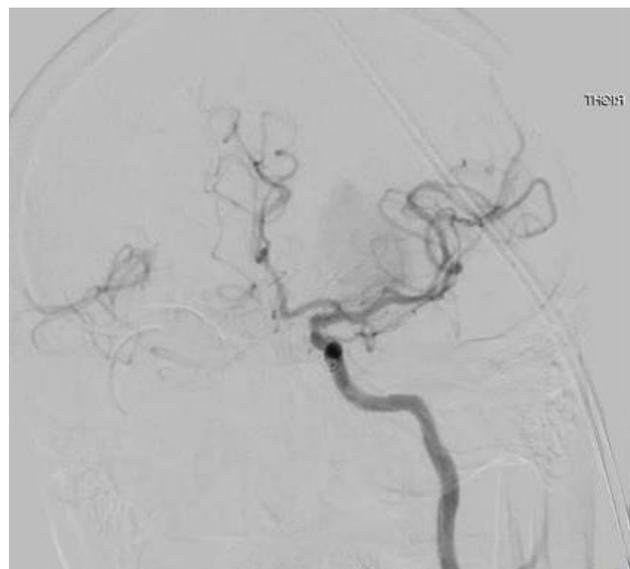


Vivien Lee, MD, FAAN
Medical Director, Comprehensive Stroke Center

FIELD-ACTIVATED STROKE ALERT

Columbus Fire Medic 20 transported an 80-year-old male with a LAMS of 4 to the Ohio State Wexner Medical Center as a field-activated stroke alert. The patient was taken directly to CT and had an NIHSS of 11. CT of the brain was negative, and he received IV thrombolysis 18 minutes after arrival. Additionally, CT angiogram revealed a large vessel occlusion. There was complete occlusion of the middle cerebral artery first branch. He was quickly taken to the OR for thrombectomy and achieved door-to-groin time of 43 minutes.

Great work, Medic 20!



Restored blood flow

UPCOMING EVENTS

Emergency Medicine Faculty Forum & Virtual Reality MCI Training October 24, 2022

Join us in the Biomedical Research Tower at The Ohio State University Wexner Medical Center for presentations and discussion with some of Ohio State's leading emergency medicine experts.

- Virtual reality MCI training available on a first-come, first-served basis
- Up to 5 hours of CE available for EMS and RNs
- Parking and lunch provided

Look for registration at centerforems.osu.edu.

Interested in training from Ohio State?

For education and training requests, please visit centerforems.osu.edu and submit an Education and Training Request.

EVENT HIGHLIGHTS



EMS Week 2022

THE CENTER FOR EMS

The Center for EMS (CEMS) at The Ohio State University Wexner Medical Center serves as an expert resource for all prehospital activity by conducting targeted outreach, providing expansive and comprehensive education, and finding innovative ways to improve quality in partnership with our emergency department, time critical disease clinical teams and local EMS.

Who is our CEMS Team?

Annette Kertesz, NR-P, has nearly 30 years of experience that includes fire service, private ambulance and MedFlight. Prior to joining the team, Annette served in multiple prehospital leadership roles and as a health system EMS coordinator. She brings considerable knowledge of central Ohio EMS and hospital operations, and is driven by her passion for helping and supporting those around her.

Logan Diehl, RN, BSN, EMT-P, brings nearly 20 years of experience, including emergency department nursing, EMS air medical services, firefighting and education. A registered nurse and paramedic, he holds a unique perspective of hospital and prehospital operations and leads innovation and collaborative environments to advance EMS care.



Annette Kertesz and Logan Diehl of The Ohio State University Wexner Medical Center, Center for EMS