Lakewood FD committed to participation in Firefighter Challenge.

In 2019, Lakewood firefighter Larry Artzner had his annual physical.

"I was about to turn 35, pretty into taking care of myself and had no symptoms of health issues but when the nurse put the 12-lead on me, she thought something was wrong with the machine," Artzner says. "She got another machine, then came back with a cardiologist. Two months later, I was having heart valve replacement surgery at Hillcrest."

But before that surgery, Artzner got permission from his cardiologist to compete in the Firefighter Challenge so he'd have a time on record as a goal he could work toward once he recovered.

According to Mary Sidell, RN, EMP-T, EMS-I, the EMS coordinator for Cleveland Clinic Lakewood Family Health Center who retired last year from Lakewood's medical rescue service, members of the department train continuously, competing in challenges since the 1990s.

Twelve weeks after surgery, Artzner was back at work. He planned to compete in the 2020 challenge, but COVID put a stop to that, and impacted how the 2021 competitions were done. In 2022, three weeks before he was due to compete, Artzner tore his bicep.

In April 2023, he and fellow Lakewood firefighters Patrick Linn and Pat Starcovic competed in Indianapolis. Linn ran the course in 1 minute, 47 seconds, the fastest time ever for a Lakewood FD member. Artzner's time was 5 seconds slower than his pre-surgery run in 2019 so he went to the May event in Virginia Beach where he beat his best time by 10 seconds.



Lakewood firefighters Mike Dobranski, Patrick Lynn and Larry Artzner participated in the 2019 Firefighter Challenge.

"Our department may not be competitive on the national level as a team, but we use the challenge as a way to continuously improve our fitness as it relates to the job. Our pre-shift workouts make for excellent camaraderie and guarantee that no matter what that day's shift may bring, we've already managed to get in a good workout," says Artzner.

The Firefighter Challenge started in 1975 with a U.S. Fire Administration grant to the University of Maryland to develop and validate a job-related physical performance exam for firefighters. That evolved into a competition that would highlight the fire service's heroic work while showcasing the talents and capabilities of firefighters. The first competition was held in 1991.

Each year, regional competitions are held across the U.S. followed by national and world championships. Wearing full bunker gear and SCBA, pairs of competitors race head-to-head as they simulate the physical demands of reallife firefighting by performing a linked series of five tasks including climbing the 5-story tower, hoisting, chopping, dragging hoses and rescuing a life-sized 175# "victim" as they race against themselves, their opponent and the clock.

"Absolutely phenomenal" response to stroke.

On April 26, a family member found a 74-year-old female on the floor and called 911. Euclid Fire Department's A Shift 1341 responded and immediately identified signs and symptoms of stroke including confusion, left-side weakness and gaze preference to the right. Squad members began prehospital care and activated a stroke alert during their report to Cleveland Clinic Hillcrest Hospital's emergency department.

"Euclid did their job really well. We were ready for the patient, who was evaluated within seconds of arrival by an ED provider, followed within minutes by a CT scan," says Christopher Randolph, DO, an emergency medicine physician at Hillcrest who also serves as the EMS medical director for Euclid FD.

With no bleed showing on the CT scan, the patient was administered tenecteplase (TNK). A subsequent CT angiogram revealed a large vessel occlusion. The patient was taken to an interventional radiology suite where an endovascular surgeon extracted the clot.

"Response time for this patient was one of the fastest we have on record," says Dr. Randolph. "Door to needle was 24 minutes, ahead of our goal of administering TNK within 30 minutes. And first device pass was performed at 73 minutes, ahead of our goal of 90 minutes."

Thanks to the fast-moving and extremely fluid care of all involved, the patient went from a score of twelve to zero on the NIH stroke scale.

"She could have been in a nursing home with very little functional ability for the rest of her life, but instead exhibited virtually no signs of having had a

stroke. The next day, she jokingly mentioned she was disappointed she'd miss her morning yoga class," says Dr. Randolph. "From the family member to Euclid FD to the stroke team at Hillcrest, everything lined up. The incredible response times are what led to this absolutely phenomenal outcome."





Amy Parker EMT-P, EMSI, RN, Fire Chief EMS Coordinator, Cleveland Clinic Mercy Hospital

The Changing Face of EMS

Have you ever asked yourself if your agency looks like you? Is your workplace a reflection of who you are and the world around you? Statistically speaking half of the US population is female. EMS speaking, 30 percent of our workforce is female; it is even lower if you are working for a combination Fire/ EMS Service where Firefighter Paramedics come in at a mere 15% female. Are you a promoted officer? The odds are even lower that those around you look like you do. Less than 6% of fire chiefs are female.

For those of us who are female, we know despite the fact that female emergency personnel go through the same schooling and strength tests as male personnel, handle the same calls and the same urgent situations, we are treated differently. We sometimes notice a lingering stigma around women in this field, and we must prove that we have the fortitude and the ability to get the job done well

So, what can we do about it? The answer is twofold. First, we can support the females around us. Have a new female employee? Mentor them, give them a hand, point out ways to make their job easier. It's also about connecting with the community you serve. For example, I love driving the large emergency vehicles in local parades. Nearly every time I do, at least one young girl in

Have a new female employee? Mentor them, give them a hand, point out ways to make their job easier.

—Amy Parker EMT-P, EMSI, RN

the crowd points me out to a family member and exclaims something like, "look, a girl is driving that one". This action is usually followed by a surprised look on the parent's face and a smile on the little girl's face which I can only interpret to mean, "WOW, girls really can do anything!"

Spotlight on Rocky River Fire Department.

Established in 1911 as a volunteer fire department, Rocky River FD hired its first full-time members in 1924.

Aaron Lenart is the current chief, a position to which he was promoted in 2015 after serving with the department since 1995 and working his way up the ranks.

His dad was a firefighter, mom a nurse. In college and unsure of his career path, Lenart watched local firefighters respond to a fire on campus and his decision was made. He became a part time firefighter in Geneva in 1990, then moved to Barberton FD before joining Rocky River. Lenart graduated from the Ohio Fire Chiefs' Association's fire executive program in 2019.

He recently talked with Siren about Rocky River FD.

- 4.5 square miles, population 22,000.
- Current staff of 29 (chief, fire prevention officer & three 9-member shifts)
- 3,582 calls in 2022 (861 fire-related; 2721 EMS)



What makes Rocky River FD unique?

Rocky River is surrounded by water on two sides – the Rocky River and Lake Erie. We've got Interstate 90 and Norfolk Southern train tracks, and we're impacted by the main flight pattern at Cleveland Hopkins airport.

This means we need to be ready for a variety of hazards ranging from whatever might be transported by planes, trains or vehicles to human trafficking and water-related incidents involving boaters, kayakers and paddleboarders as well as natural disasters like flooding.

We've done large scale training to be prepared for a potential water disaster on the river.

Share a memorable moment.

There are so many bad things that happen, so I'll share something a little lighter. On occasion, people who rent kayaks or paddleboards get overwhelmed on Lake Erie and end up along our cliffs. Our guys do rope rescues to bring them up off the lake. They're always very grateful!



Are there any special programs offered to the community?

We run a very widespread residential lockbox program, targeting primarily senior citizens. The lockboxes allow us to access their home in an emergency without damaging doors or windows. We also have a robust smoke detector program.

Tell us about the Rocky River team.

I ask just three things of them when they come to work.

- 1. Do a good job.
- 2. Provide great service to our citizens.
- 3. Go home safe.

They're always training, always preparing so they're ready to go when their service is needed to serve the city of Rocky River. They're very dedicated and I'm very proud.



First responder support team training continues in Medina County.

Since last fall, 52 first responders from Medina County have received training to help their colleagues who experience mental and emotional trauma. The first responder support team training is possible thanks to funding from the Medina Hospital Foundation and Akron General's philanthropy group.

The program has three areas of focus:

- Critical incident stress management debriefings.
- Peer support.
- Assistance with access to mental health care.

Recently, a group of police, firefighters, corrections officers and dispatchers attended two 3-day sessions which were presented by the International Critical Incident Stress Foundation.

"The training provides an avenue to take in terms of how one of your peers might respond to a stressful call. It gives you insight into how to get a conversation started, even if it's informal," says Dan Sparks, a captain with the Erhart/York Township Fire Department.

Along with attending the training sessions, Sparks has also been on the receiving end of some of that support from his peers. In one situation, it was more of a "diffusing" shortly after an incident took place, where those involved talked about what happened. In another, it was a formal debriefing after the incident.

"In one case, rumors were swirling, so it was good to get the facts from the perspective of all who were involved," says Sparks.

While Sparks may have been a bit skeptical prior



"The training provides an avenue to take in terms of how one of your peers might respond to a stressful call. It gives you insight into how to get a conversation started, even if it's informal."

—Dan Sparks, Captain with the Erhart/York Township Fire Department.

to attending the training sessions, he came away with much more than he expected.

"First responders are wired to want to be part of stressful situations. We're good at putting blinders on to separate ourselves from it," he says. "But after the call, after our shift, when reality sets in — that's when this training comes into play. I know every first responder is affected differently and some may not need this type of help, but it's good to know it's there if needed."

Additional funding is making it possible for another 3-day training session to be held for Medina County first responders in 2024. Watch for updates in future issues of *Siren*.

CARDIAC CORNER

MWWWMMWWWWWWWWWWMMMWWWW

Rhythm: Polymorphic ventricular tachycardia – Torsade de pointes "twisting of the points"

Characteristics: QRS axis twisting around the isoelectric line in the setting of a long QT interval

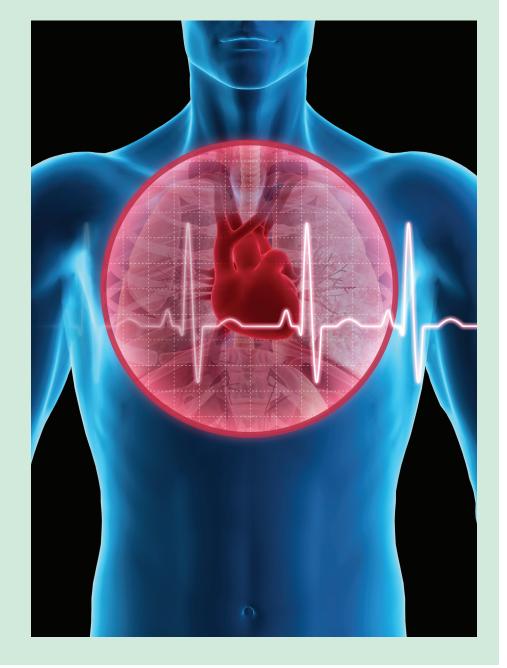
Causes: Occurs in the setting of a long QT interval, which can be congenital or caused by antiarrhythmic agents, antidepressants, antipsychotics, antimicrobials, opiate analgesics, advanced age, electrolyte disturbances, heart disease, and bradycardia.

Clinical significance: Can deteriorate into VF and sudden death

Symptoms: Palpitations, syncope, seizure-like activity, or sudden death

Treatment protocol: Unstable: SBP <90, no radial pulses, AMS, chest pain, or shock – immediate defibrillation (consider sedation). If defibrillation unsuccessful: repeat defibrillation in 1-2 minutes. Magnesium Sulfate 1-2 grams IV/IO over 5 minutes

Stable: Magnesium Sulfate 1-2 grams IV/IO over 5 to 10 minutes



Spotlight on Lyndhurst Fire Department.



Lyndhurst Fire Department was formed in the early part of the 20th century as a volunteer department, responding to less than 100 calls a year. Over time, calls increased, and the department became full time. It also played a key role in the formation of the first paramedic service in the Hillcrest Hospital area.

Michael Carroll has been chief since 2010, a position he worked his way up to since joining the department in 1994. His first exposure to the fire service was as a member of the cadet program at Russell FD, where he volunteered during high school. After attending EMT/paramedic school, he considered becoming a doctor, enrolling at Kent State. But studies and part-time work with four different fire departments became overwhelming so he switched his focus back to the fire service.

Chief Carroll recently shared information about Lyndhurst FD with Siren.

- 4.4 square mile service area, population approximately 14,000.
- 2,865 calls in 2022 (80% EMS).
- Current staff of 26.

Tell us about the area you serve.

We cover the Cedar/Brainard area of I-271. Brush High School, the Acacia Reservation of Cleveland Metroparks and Mayfield Country Club are all within our service area, as well as Legacy Village, the large retail/lifestyle center.

What are some of the department's memorable calls?

In March 2012, there was a large fire at Sherri Park Apartments when a construction company hit a gas line. About 100 firefighters from three counties responded. The apartment fire was a multimillion dollar loss, and there was just one minor injury to a civilian.

In 1995, three department members (including myself) responded to the bombing at the Alfred P. Murrah Federal Building in Oklahoma City. We were there for about 48 hours to help with the aftermath of this very tragic event.

Recent accomplishments?

After four years of planning, and at a cost of \$4.4 million, we opened our new fire station on September 11, 2021. It was a challenging project because construction started just before COVID hit. During construction, we stayed in the original station which was very small, and stored our fire apparatus in a tent after the bays were torn down.

We worked with the architects to design the new station, which has a single locker area with foot/dorm lockers and five gender neutral bathrooms so we have flexibility as to how we can use the space.

Any department member you'd like to recognize?

Everyone does a great job, so it's hard to call out one person, but firefighter Adam Bobinski noticed a gap a couple of years ago in our public education programs. He approached me about taking this on and has done a great job.

Among many other things, he took the lead on starting Lyndhurst's new safety town program.

What is the goal of Lyndhurst FD?

First and foremost, to serve the community by making decisions based on the best interests of the community and individual patients. Our members really go above and beyond on calls. It's all about community first.





Euclid FD patient is first to be transported via new MSTU.

In 2014, Cleveland Clinic was just the 4th in the world (2nd in the United States) to start a mobile stroke unit for pre-hospital stroke treatment with the introduction of a Mobile Stroke Treatment Unit (MSTU) to provide pre-hospital thrombolysis for acute ischemic stroke.

Staffed with an EMT, paramedic, RN and CT tech, the MSTU responds to about six 911 calls per day (300 patient transports per year) for strokes in the city of Cleveland and 13 surrounding suburbs via partnerships with those municipalities.

"When the local squad arrives on the scene, if they believe stroke is a concern, they can request the MSTU to come out. In the meantime, they manage the patient, including getting them on the cot and out of their residence, so when the MSTU arrives the patient can go directly into the unit," says Greg Ivanovics, MPH, EMT-P, EMS-I, the EMS coordinator for Cleveland Clinic Euclid Hospital.

A new MTSU vehicle equipped with the latest technology and a mobile CT scanner recently went into service, and the first transport came from the Euclid Fire Department on May 11, 2023. The patient had a large vessel occlusion (left ICA terminus occlusion) with a TICI3 successful recannulization and complete reperfusion of the downstream ischemic territory.

"When we arrived, the patient was already in the back of the Euclid squad. We pulled up, transferred the patient and conducted a CT scan – the unit has to be stationary for two minutes to complete the scan – then administered TNK and transported the patient to main campus where she went straight to the OR," says Dave Stein, paramedic, FP-C, of the Cleveland Clinic MSTU.

Along with on-scene treatment, the MSTU team connects with a Cleveland Clinic neurologist through a teledoc system, which allows the physician to watch while the patient is assessed and assist with medication and transport destination decisions.



"The destination is decided by imaging results, assessment findings, and level of treatment needed – comprehensive stroke center versus thrombectomy-capable stroke center versus primary stroke center," says Stein. "Our standard is to get the patient to the right hospital to receive the most appropriate treatment, while also trying to keep them within their healthcare system of choice to ensure continuity of care, unless the patient or family requests otherwise."

The goal of the MSTU, which functions as a mobile ED, is to cut out as much time as possible. The standard ED time for administration of medication is 45 minutes. With the MSTU, it's 20.

"The Euclid crew did an outstanding job and the patient is on her way to a full recovery," says Stein, who credits the long-standing relationship between Euclid FD and the MSTU for the positive outcome.

While there is currently only one MSTU in Northeast Ohio, if your department has interest in learning more, please reach out to the EMS medical director at the Cleveland Clinic location nearest you.



New attending physician brings well-rounded experience to Cleveland Clinic emergency medicine.



It's been quite a journey for Nick Srnick, MD, who will soon join Cleveland Clinic as an attending emergency medicine physician.

Nick's dad was a Cleveland firefighter for 25 years. His family lived in Lakewood, and when his

dad retired, they moved to Ashtabula County where Nick attended Grand Valley High School.

Growing up, Nick had limited awareness of what his dad's job entailed, but as he began preparing for college applications he started to volunteer with Orwell FD.

It was just a few months before the September 11, 2001 attacks.

"That was the moment for me. I saw what it was to be a first responder. I changed directions and decided that's what I wanted for my career," says Srnick.

He continued to volunteer, becoming a lieutenant at Orwell and serving on the water rescue dive team while attending the University of Akron to study fire science and emergency management. He also attended the fire academy and paramedic school and worked part-time for Mentor FD.

After graduation, he accepted a full-time job with Rocky River FD where an untimely injury changed his career path yet again.

"I underwent a lot of unexpected life changes and was ready for a new challenge, so I applied to Northeast Ohio Medical University," says Srnick. "In my initial interview they said I'd be a great fit and from that point on, I was all in."

Srnick completed a post-baccalaureate program at Cleveland State and began medical school. At the time, his son Nathan (now 9) was a toddler. Srnick

recalls being crushed by the sheer volume of information he had to learn and enduring many sleepless nights trying to get through it.

"I promised myself I'd always be a dad first, so for years I'd come home, spend time with him, then study once he was in bed. I wanted to be a good example and show my son that you can accomplish anything if you set your mind to it," says Srnick.

Srnick matched with the Cleveland Clinic/MetroHealth emergency



medicine residency program where he's worked as a resident physician for the past two years, and he will join Cleveland Clinic next summer.

"I'm lucky to have stayed in Northeast Ohio and to get to serve my community," he says. "I still have a passion for EMS and prehospital care, and I'm looking forward to bringing perspective from both sides to the table by helping EMS better understand what is done on the hospital side and sharing within the ED what it's like to be in the field."



Spotlight on Valley View Fire Department.

In 1978, thirty years after being established as a volunteer fire department, Valley View FD became a full-time department to serve a community which has evolved from its early days as a sleepy, cottage town.

The department's current chief, Ken Papesh, moved to Valley View when he was 14. His father, a Garfield Heights firefighter, passed away unexpectedly on Ken's first day of high school. He recalls members of the department stepping up to keep tabs on him and his family after that, and a local councilman contacting him about openings in the department.

"I was directly impacted by this department before I became a member of it, and that impact was very, very positive," says Papesh, who was named chief in 2017 of the first and only fire department he has worked for.

Chief Papesh recently talked with Siren about Valley View FD:

- 5.56 square mile coverage area.
- Large business/commercial/entertainment population (outnumbers residents significantly).
- Approximately 800 calls in 2022 (65% EMS, 35% fire).
- 13 full-time members (plus Chief Papesh), 17 part-time.

What makes Valley View FD unique?

We run the gamut of responsibilities here, from hazardous materials at businesses to the Cuyahoga Valley National Park property and everything in between. The Cuyahoga River runs through Valley View, as does the I-480 bridge.

We're fortunate to be well staffed in terms of the population we serve due to the large business community. We train a lot as we need to be prepared for anything. Each shift has a fire inspection district and we conduct inspections of every building at least once a year.

What can you tell us about River Watch?

The Cuyahoga River is a cause for much anxiety. New homes are built above flood level, but when we have flooding it impacts existing homes and I feel for those who are affected. Ready Notify is a system we have in place through Cuyahoga County





to notify residents of flood risk. It's hard to predict because flooding is different depending on which direction the storms come from, plus our weather is constantly changing. We try to only raise the alarm when it's absolutely necessary.

Is there an individual within the department you'd like to spotlight?

Our department is all about team first. In a combo department like ours, there can sometimes be a line in the sand. Not here. Some of our part-time guys have seen and experienced things that the full-time guys have not, and vise versa.

Every day, we have conversations about the shift before. What they did and how they did it. We learn from each other and support one another.

What are you most proud of?

I mentioned how Valley View FD helped me before I was ever part of the department. That stuck with me, and it's my job as chief to make sure everyone in our community gets that type of treatment. We do whatever it takes to make someone's really bad day better.

Our guys are the face of the department. They perform CPR and fire extinguisher training, CO and smoke detector installations, free blood pressure, blood sugar and car seat installation checks at the station and more – to help our residential and commercial neighbors. We receive hundreds of calls from people who need help, some who have nowhere else to turn. This community is extremely grateful for the members of our department, and I am very proud of how well we are represented.

Pharmacy Corner: Tranexamic Acid

Tranexamic acid (TXA) is an antifibrinolytic agent that is typically used for prevention or reduction of hemorrhage. It preserves the framework of existing clot structure, preventing clot breakdown. The use of TXA can be considered in non-traumatic bleeding, abdominal trauma, chest trauma, extremity trauma/amputation, maxillofacial trauma, and post-partum hemorrhage. Requirements for use include evidence of current or recent hemorrhage, being greater than 16 years old, a heart rate greater than 120 beats per minute and/or hypotension defined as a systolic blood pressure less than 90 mmHg. TXA should only be administered within 60 minutes from time of injury. Contraindications include previous hypersensitivity to TXA and concern for cerebral vascular accident, myocardial infarction, or pulmonary embolus. TXA should not be administered in non-hemorrhagic shock.

The onset of action of TXA is 5 to 15 minutes with a duration of 3 hours. Side effects include anaphylaxis, thrombosis, hypotension with infusion rate greater than 100 mg/minute, nausea, vomiting, diarrhea, and changes in vision.

TXA is supplied as 1 gram in either a 10 mL vial or 100 mL premixed infusion bag. It can



be administered through intravenous (IV) or intraosseous (IO) routes. For indicated adult trauma and post-partum patients, mix 2 grams (2000 mg) in 100 mL of D5W and administer over 10 minutes. For non-traumatic bleeding with shock, mix 1-2 grams in 100 mL of D5W and administer over 10 minutes. For epistaxis, gauze can be soaked with TXA then packed into the nostril. For indications in pediatric patients, 15

mg/kg (maximum dose: 1000 mg) is mixed in a 100 mL bag of either D5W or normal saline and administered over 10 minutes.

All recommendations are from the Northeast Ohio Regional EMS Protocol 2023 R1.2. Please refer to the specific treatment protocols for complete information.