

## Meet Northeast Ohio's Top Dogs EMS Squads Rely on Search and Rescue K9s to Sniff out Success

Timmy had Lassie. Rusty had Rin Tin Tin. And Dorothy had Toto. But none of these famous dogs could hold a paw over Northeast Ohio's search and rescue (SAR) dogs – a group of canines so well-trained and brave they make some superheroes look lame.

Local SAR dogs must meet comprehensive K9 SAR standards established by the Ohio Federation of K9 Search Teams. These standards help ensure that Ohio's law enforcement and emergency agencies have access to highly qualified search dogs when needed.

"We respond to requests by both fire departments and law enforcement, but about 70 percent of our call outs are EMS-related," says Will Rosch, president of the Big Creek Search Dog Team, which has become the second largest SAR dog team in Ohio since its formation in 2006.

Another area SAR team is the Ohio Search Dog Association. It is headed by Ellita Vedder, who says, "The tragedy of 9/11 inspired me to join a SAR team. I've been a member for 15 years and am now president of the organization. We're all volunteers from different backgrounds."

Vedder's background includes serving full-time as a lieutenant with the Warrensville Heights Fire Department and as captain



A certified search and rescue (SAR) dog poses amid all the gear it takes to go on a SAR mission.

at the Chagrin Falls Fire Department on a part-time, volunteer basis. "I get great pleasure out of working my dogs and finding closure for families of missing persons," she says.

Rescue teams rely heavily on SAR

dogs during missions involving natural disasters, mass casualty events, missing persons and wilderness scenarios. Typically worked by small teams on foot, the dogs can detect human scents

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from a distance of a quarter mile or more. Common breeds for SAR dogs are Shepherds, Border Collies, Labradors, Golden Retrievers and Springer Spaniels.

### Working without getting their dander up

The Big Creek SAR team never leaves people who call for help up a creek. Located in Painesville, the team has resources in Lake, Portage, Cuyahoga and Geauga counties, but responds to call outs anywhere in the state and out of state. The team conducts a two-hour continuing education course for fire/EMS and participates in training events.

A large-scale training event is set for

*"I get great pleasure in working my dogs and finding closure for families of missing persons."*

Ellita Vedder, RN, EMT-P, president of Ohio Search Dog Association

2017. "We're planning a mock search to take place on 735 acres in Portage County with four lakes," says Rosch. "The event will include 22 K9 teams from throughout Ohio and Pennsylvania and also will be open to mounted horse teams, so we incorporate everything."

The Big Creek team includes:

- 3 K9 evaluators certified by the National Association for Search and Rescue
- 3 instructors for the Fundamentals of



- Search and Rescue course
- 1 lead SARTECH II evaluator
  - Emergency response trailer, ATVs, boat for water recovery and underwater camera
- "Our team is part of the Ohio Search and Rescue Association, Ohio K9 Federation, State of Ohio K9 TAC team and the Child Abduction Response Team for Region 2 and 5," notes Rosch, who served as an EMT for 22 years for the Munson Fire Department and Tri-County Ambulance

and now works as a chef and dispatcher. Rosch's wife, Debbie, is a product development engineer. When she's not working at her full-time job, she assists the SAR team. "Members of our team spend 10 to 12 hours a week training their dogs, in addition to their full-time jobs," says Will Rosch. "Debbie and I have five German Shepherds certified in search and rescue, including Jordan, an exceptional dog who's certified in every SAR discipline.

## About the Ohio Federation of K9 Search Teams, Inc.

Made up of dedicated, trained, unpaid professional search teams and individuals located throughout the State of Ohio, the goal of this nonprofit corporation is to ensure that Ohio's law enforcement and emergency agencies have access to qualified search dog teams. The federation tries to accomplish this by encouraging communication and professionalism in the K9 search community.

The federation complies with national certifications from the North American Police Working Dog Association, the International Police Working Dog Association and

the National Association of Search and Rescue. Areas of certification include:

- Scent-specific trailing/tracking
- Area/wilderness (live find)
- Land human remains detection
- Water human remains detection (K9s that work from boats to locate drowning victims)
- Disaster (live)
- Disaster (HRD)
- Article Search



Ellita Vedder, RN, EMT-P, president of Ohio Search Dog Association, pauses during a training session with a couple of her search and rescue dogs.

*“Until you do it, you don’t realize how much time, effort and money is put into volunteering on a search and rescue dog team. We do it to help and to make a difference.”*

Will Rosch, EMT, president of Big Creek Search Dog Team

“Since our inception, we’ve had two live recoveries and 12 body recoveries,” he adds. “We don’t charge for what we do, and our team is solely funded by donations or by the individual K9 handler. At our house, for example, we go through 350 pounds of chicken necks every month to feed our dogs, and we converted our garage into five heated dog kennels.”

### Differentiating various scents

Training for SAR operations is a time-consuming and rigorous process for both dogs and handlers. Puppies typically begin training when they’re 8 to 10 weeks old, have their first certification test between 12 to 18 months of age and retire at 5 to 10 years, depending on the breed and individual dog. All SAR dogs are trained to avoid food.

The training process varies depending on

whether a dog searches for human scents or human remains, which may include entire bodies or body fragments like blood, tissue, hair or teeth. Cadaver dogs are useful in searching for missing persons who are no longer alive (since they’re drawn to rapidly deteriorating tissue), while human remains dogs find bones and teeth without tissue.

For Vedder, the most dramatic rescue mission she participated in occurred near Toledo a few years ago. “I responded to Katrina, but this was my first real disaster response locally,” she says. “The devastation made an impact on me. We found at least two lost souls, and I was proud of my two dogs I had there. We helped give closure to loved ones.”

Time and again, SAR dogs prove they are truly man’s best friend.



Training for search and rescue (SAR) operations is Spencer Rosch, 17, the youngest certified SAR K9 handler in Ohio and a junior at Riverside High School in Painesville.

*To donate to the Big Creek Search Dog Team, or for information about the team’s CEU class, contact Willis Rosch at [chefwee@hotmail.com](mailto:chefwee@hotmail.com).*

*For donations to the Ohio Search Dog Association, or for more information, contact Ellita Vedder at [ellitam@aol.com](mailto:ellitam@aol.com).*



## De-traumatizing Trauma

# Bone Up on Your Prehospital Orthopaedic Skills with Tips from Experts

As an EMS provider, you've probably seen fractures that are bad to the bone. These orthopaedic injuries are caused by excessive external forces. From simple wrist fractures to life-and-limb threatening pelvic and femur fractures, every type needs to be managed appropriately in the prehospital setting.

"EMS providers have to make quick assessments without the luxury to think about it," says William Kurtz, MD, a fellowship-trained orthopaedic trauma surgeon at Cleveland Clinic Akron General. "Despite being in a difficult spot, they do good work. Our jobs are pretty easy in comparison."

The American College of Surgeons reports that "more than 60 percent of injuries involve the musculoskeletal system and more than half of hospitalized trauma patients have at least one musculoskeletal injury that could be life threatening, limb threatening, or result in significant functional impairment."

To meet this demand for emergency orthopaedic care, Akron General's Level I Trauma Center has three fellowship-trained orthopaedic trauma surgeons, including Dr. Kurtz, Nicholas DiNicola, MD, and Gregory Vrabec, MD. These physicians treat a broad range of musculoskeletal injuries – from simple isolated fractures to complex broken bones and life-threatening fractures of the pelvis.

"When EMS providers bring trauma cases to us, they can rest assured that we'll definitively take care of their patients as soon as possible," says Dr. DiNicola. "We have surgeons available 24/7, and we operate around the clock. We stabilize orthopaedic injuries immediately and almost always fix the problem within 24 hours."

According to Dr. Kurtz, orthopaedic traumatology cases are challenging because they require caregivers to think on their feet and to come up with plans to deal with the most difficult situations. "If you're trained in this area, you can usually take care of whatever problems come your way," he says.



*"EMS providers have to make quick assessments without the luxury to think about it. Despite being in a difficult spot, they do good work. Our jobs are pretty easy in comparison."*

William Kurtz, MD, orthopaedic trauma surgeon, Cleveland Clinic Akron General

Given their backgrounds and expertise, we turned to Drs. Kurtz and DiNicola for tips on the prehospital care of orthopaedic trauma patients. Here are their suggestions:

Top 10 orthopaedic trauma tips for EMS:

- 1. Err on the safe side and immobilize.** If you have any suspicion of a fracture, immobilize it. It's best to take this precaution rather than risk further damage.
- 2. Hold fractures still.** While assessing a patient for injuries and preparing immobilization devices, keep suspected fractures motionless. This simple action can greatly relieve pain. In fact, up to 90 percent of pain relief comes from immobilization.
- 3. Protect open fractures.** Cover them with a sterile bandage or other dressing and keep them covered. "Resist the temptation to check on the wound," says Dr. DiNicola. "Every time you uncover a wound, you increase the risk of infection."
- 4. Assess pulses above and below fractures.** If there's no pulse, loosen bandaging or splints until circulation returns.
- 5. Perform thorough exams.** While dealing with the immediate pain and trauma of an extremity fracture (often referred to as a distracting injury), be on the lookout for underlying internal injuries that could be much more critical. By performing complete examinations, you may detect the subtle signs of more severe injury.

6. **Correct the anatomy of long bones.** Angulated (misaligned) fractures may seem intimidating, but you can be confident that returning a limb to its proper anatomy decreases pain and lessens the chance of further injury. “You can ‘eyeball it’ to achieve a rough anatomical correctness,” says Dr. DiNicola. “Straightening will resolve the entrapment of nerves and other potential problems.”
7. **Exhibit confidence.** When a patient is writhing in pain, it takes presence of mind and some courage to splint a fracture. Proceed with self-assurance, knowing that splinting can dramatically lessen bleeding and pain.
8. **Splint before moving.** Immobilize any suspected fractures before attempting to move a patient.
9. **Document non-accidental injuries.** As the first responder, you’re in the best position to notice subtle signs of abuse. Document the mechanism of injury and note exactly what people at the scene say. Oftentimes, stories change when repeated. Multiple versions are suspicious and should be investigated. “Always be alert to non-accidental bone breaks and report that information down the line,” says Dr. DiNicola. “At the hospital, we have resources and programs in place to help these people. Since we often don’t get information about abuse from patients, observing the home is an important part of what EMS does.”
10. **Don’t ignore knees, please.** Knee trauma warrants immediate recognition and evaluation because a delay in recognizing these injuries could result in potentially limb-threatening consequences – especially if you have a long transport time. Take care not to splint the leg fully extended. An ideal amount of flexion is roughly 10 degrees.



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Nicholas DiNicola, MD, orthopaedic trauma surgeon, Cleveland Clinic Akron General

Most orthopaedic surgeries at Akron General are performed as minimally invasive procedures. This even holds true for the restoration of segmental pieces of bone, such as those lost in a car accident. The majority of cases enter the hospital via the emergency department, but many are referred by primary care physicians, as well as by other orthopaedic surgeons who need another level of expertise to help care for their patients.

As time goes on, the care of orthopaedic injuries can only improve. At Kenneth Calhoun Research Laboratory, on Akron General’s main campus, experts conduct biomechanical testing on the plates, screws and implants used in fracture repair. Drs. Kurtz and DiNicola also conduct clinical research on new techniques, such as different ways to repair pelvic and neck fractures.

The future of orthopaedic trauma care looks promising, and you and your fellow EMS providers will undoubtedly be major players on the care team. No bones about it.



Orthopaedic trauma surgeons Nicholas DiNicola, MD, (left) and William Kurtz, MD, (right) join up with paramedic Matt Craddock of the Green Fire Department outside Akron General’s emergency department.



## Battling an Epidemic As Drug Addiction Escalates, EMS Hustle to Handle Overdoses

In the fight against opioid addiction, EMS providers are the first offensive line when overdoses occur. This is an intense, uphill battle, as underscored by the following facts reported by the Centers for Disease Control and Prevention (CDC):

- Between 2000 and 2014, opioid overdose deaths increased 200 percent, with nearly half a million people dying from overdoses.
- More people died from overdoses than motor vehicle collisions in 2014.
- In 2014, there were 47,055 drug overdose deaths in the U.S.
- Ohio had the fifth highest rate of drug overdose deaths in 2014.
- Between 2001 and 2014, nearly half a million people died from an overdose.
- About 78 Americans die each day from an opioid overdose.

These are sobering facts. What can we do to combat the problem, and when overdoses occur, how can we best recognize and handle them? The CDC recently stated: “There is a need for continued action to prevent opioid abuse, dependence and death, improve treatment capacity for opioid use disorders, and reduce the supply of illicit opioids, particularly heroin and illicit fentanyl.”

One expert at the frontlines of caring for drug overdoses is Joseph Lally, MD, EMS medical director at Fairview Hospital. “Whenever EMS providers respond to calls involving unresponsiveness, they should have a high level of suspicion for opioid overdoses,” he says. “Look for warning signs.”

Drug overdose warning signs include:

- Drug paraphernalia at the scene

- A history of drug use
- Information from bystanders
- Shallow, depressed respirations
- Pinpoint-sized pupils

“Narcan® (a brand name for naloxone) is very easy to use and has virtually no side effects,” Dr. Lally says. “The only thing it does is reverse drug overdoses. So it’s appropriate to try Narcan – no matter what – if you have any suspicion of a drug overdose.”

“Our thoughts are changing on diagnosing and treating drug overdoses because there are new and different drugs out there and the epidemic of drug use is growing,” he adds, noting that the management of overdoses is “incredibly simple.” It involves:

1. Reversing the overdose with Narcan, which is most commonly given as a nasal spray in dosages between 2 and 4 mg
2. Assisting the patient with breathing

“EMS may establish IV access to increase the Narcan dosage by 2 mg every two minutes until normal respirations and oxygen levels are achieved,” he recommends. “The goal is to restore respirations and prevent hypoxia. EMS are usually successful, and the patient seems completely fine and wants to go home.”

On the flip side are patients who have gone too long without adequate oxygen and develop brain injury. “Some end up as vegetables on a ventilator,” says Dr. Lally. “Unfortunately, the drug problem is very widespread across a spectrum of ages. Most overdoses seem to be among people in their 20s and 30s, but we also see a lot who are in their 50s and 60s.”

## Teaming up to attack the problem

Cleveland Clinic staff members have been meeting with local EMS communities to try to develop plans for preventing and treating excessive drug use. “We’ve been educating EMS on giving escalating doses of Narcan,” says Dr. Lally. “Part of the problem – especially in Ohio – is that people who are addicted to pain killers often turn to heroin because it’s cheaper and more available.

“One of the main problems with heroin is that it’s a street drug that’s unregulated and found in varying potencies,” he explains. “People are combining it with fentanyl, which is a super potent mixture that requires more and more Narcan to reverse.”

Leaders in the fight against the opioid epidemic realize there is a need to:



*“In addition to an awareness of the epidemic, emergency medical personnel need to understand that there are new combinations of drugs out there that are requiring higher doses of Narcan and increased assistance with ventilation.”*

Joseph Lally, MD, EMS medical director at Fairview Hospital

- Intensify efforts to make the prescribing of opioids safer. Opioid pain relief prescriptions have quadrupled since 1999, and their use parallels overdoses involving the most common opioid pain relievers.
- Change healthcare policy regarding reimbursement
- Develop strategies to protect dependent individuals from overdoses and other injuries. This includes expanding the use of naloxone and increasing access to treatment and behavioral therapies.
- Ensure access to prevention services, including syringe programs that could help prevent the spread of hepatitis C and human immunodeficiency virus infections.
- Increase collaboration among EMS, hospitals and law enforcement to improve the detection of outbreaks of drug overdose deaths involving illicit opioids (via improvements in investigations, testing, reporting and monitoring).
- Facilitate rapid and effective responses to address this major public health issue.
- Develop ways to distinguish the various drugs and drug combinations that contribute to overdoses.

“It’s a tough situation,” says Dr. Lally. “Much of the addiction problem is due to the overprescribing of pain medications. People require escalating doses of the medications and become desperate. Withdrawal is miserable, and people get caught in a vicious cycle that’s hard to reverse.

“One of the challenges at the hospital level is the fact that healthcare reimbursement is based on patient satisfaction scores,” he notes. “So there’s a conflict between wanting to avoid opioid addiction on the one hand and wanting to achieve good scores on the other. Patients come in wanting pain medications. If we don’t prescribe them, they review us negatively.

“We need to correct this cultural problem in medicine,” Dr. Lally says. “This means making changes in healthcare policy and educating both healthcare providers and patients. There are a lot of layers, and these changes need to happen at every level.”

## Watching out for complicating factors

As if basic opioid overdoses weren’t bad enough, EMS providers must be aware that many overdoses are not caused by a single, isolated opioid toxicity, but are due to multiple comorbidities and co-intoxications.

“In addition to an awareness of the epidemic, emergency medical personnel need to understand that there are new combinations of drugs out there that are requiring higher doses of Narcan and increased assistance with ventilation,” says Dr. Lally. “Squads may need to carry more Narcan than in the past.”

Opioid-related emergencies may involve a variety of patient conditions – from chronic pain management to illicit drug use and intentional overdose. When referring to overdoses,

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## Battling an Epidemic

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some practitioners prefer to use the term “opioid-associated resuscitative emergencies” rather than “opioid overdoses” because a patient’s critical condition is rarely due to opioids alone.

### Looking to the future

In the coming years, it’s possible that EMS providers won’t just have to deal with drugs addiction after they become emergencies. EMS may also have the chance to help prevent overdoses before they occur. Several innovative programs have demonstrated the effectiveness of partnerships between emergency care personnel and recovery and addiction specialists.

One of these pilot programs is taking place at RWJBarnabas Health in New Jersey. Called an “opioid overdose recovery program,” the two-year effort, which began in 2015, involves deploying certified recovery coaches to hospital emergency departments immediately upon notification of an opioid overdose patient who was treated with naloxone by law enforcement.

Patients are offered immediate access to an inpatient recovery unit. If the patient opts out of the inpatient facility, they are given eight weeks of long-term follow-up in the community. The recovery coaches are themselves recovering addicts.

As a result of the program, the health system has boosted its success rate of getting addicts into recovery from 20 to 80 percent. If both law enforcement and EMS providers reported opioid overdoses, the recovery rate would undoubtedly be even higher. EMS providers already play a significant role in fighting the drug epidemic, but their full potential may only be realized when other community sectors partner with EMS to make coordinated efforts.

“As healthcare personnel, law enforcement and the general public become increasingly aware of and educated about the opioid drug epidemic, it’s our hope that more collaboration will take place,” says Dr. Lally. “We need to make some major cultural changes to address this problem.”

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## What’s Your Story?

### *NEO Siren* welcomes your input

We always welcome your suggestions for newsletter articles. Please send them to Bill Sillasen, BSN, RN, EMS-I, regional EMS director, Cleveland Clinic, at [wisill@ccf.org](mailto:wisill@ccf.org).

## Check EMS website for educational offerings

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