DEFINING EMS PROVIDERS’ ROLE IN THE OPIOID EPIDEMIC

IN THIS ISSUE

6 strategies to protect first responders from fentanyl
PAGE 4

Combating the opioid epidemic: A quality improvement perspective
PAGE 6

Naloxone and the EMS conundrum: Public policy considerations
PAGE 12
The dangers of opioids are all too real.

Protect your patients—and yourself.

You’re on the frontlines of the opioid epidemic every day. When you arrive at the scene to save a patient from overdose death—you also need to protect yourself from opioid exposure with the right gloves.

As the largest privately held manufacturer and distributor of medical supplies, Medline is your direct source for quality EMS products at substantial savings.

Medline’s high visibility glove has been barrier tested against fentanyl for up to 240 minutes.¹

¹ Data on file.
Despite national recognition, widespread access to naloxone, and millions allocated to grants to combat the opioid epidemic, drug overdoses are the leading cause of accidental death in the United States, killing an estimated 60,000 people in 2016.

While naloxone is a resuscitation medication, and saves countless lives when administered by EMS or non-EMS providers alike, it is just the first step in countering the cycle of addiction.

Across the country, communities hit the hardest by opioids are pioneering programs pairing community paramedicine and mobile healthcare initiatives with EMS response to evolve from being a primarily resuscitation system to a recovery-oriented system of care.

In Pittsburgh, Pennsylvania, the Community Connect program post-overdose response team sends a community paramedic and a peer specialist after overdose-related 911 calls to discuss harm reduction and managing comorbidities with patients, and to navigate them into rehab if they’re willing.

In Florida, Palm Beach County Fire Rescue is testing an opioid medication assisted treatment program, following up in patients’ homes with MIH paramedics and peer counselors.

In Richmond, Virginia, the morning after a person has overdosed, a narcotics detective from the police department will knock on their front door and offer a ride to a drug treatment facility.

In this issue of Paramedic Chief, learn from the EMS pioneers piloting these programs and leading the charge for EMS in the post-overdose survival phase of the addiction cycle. Does your department have a unique approach to managing the opioid epidemic in your community? We want to hear from you. Share your strategies, successes and questions with editor@ems1.com.

Greg Friese, MS, NRP
Editor-in-Chief, EMS1.com
Media-hyped accounts of police officers or paramedics who are alleged to have been overcome by fentanyl after caring for a patient might be causing responders to worry about their own safety.

Panelists at a Bound Tree Medical-sponsored discussion at the 2017 EMS World Expo, including a Drug Enforcement Administration chemist and an EMS medical director, shared six strategies to protect first responders during an opioid-related response:

1. **Assess the scene for exposure risks and crime evidence.**
   Use dispatch information to assess the risk for fentanyl exposure through inhalation or contamination to skin or clothing. Use the scene size-up to make decisions about PPE usage and requesting additional resources.

   Every overdose incident is a potential crime scene. If EMTs, paramedics and firefighters arrive before law enforcement and notice evidence of drug use or paraphernalia, they should follow local protocols to request police response.

2. **Pre-plan and train for fentanyl recognition and exposure.**
   Because fentanyl derivatives are known to strongly bind with opioid receptors, responders are reporting an increasing need to stock more naloxone.
The InterAgency Board has recommended PPE use to prevent exposure to synthetic opioids after a detailed examination of available evidence.

3 **Respiratory PPE is best protection against aerosolized fentanyl.**

When powdered fentanyl or other drug powders are known or suspected of being aerosolized, respiratory PPE is important. Inhalation is the easiest route for accidental fentanyl exposure and mucosal absorption is 30 times faster than transdermal absorption.

4 **Use additional PPE for fentanyl overdose responses.**

In addition to a mask, the panel recommended nitrile, single-use examination gloves and safety glasses for most responses. When there are larger amounts of hazardous material or fire risk, the InterAgency board has additional recommendations for higher levels of protection.

It’s especially important to use simulation training to be proficient in opioid patient assessment and care with a mask, gloves and eye protection.

5 **Wash fentanyl-contaminated skin with soap and water.**

Responders should always wear gloves, but if their skin is exposed to fentanyl, they should first wipe the visible contamination from their skin. Next, wash skin thoroughly with soap and water, including a second water rinse.

Don’t use any alcohol-based sanitizers on fentanyl-contaminated skin. Alcohol increases the rate of transdermal transfer by 100 times.

6 **Recognize other threats, dangers.**

IV drug users regularly engage in other high-risk behaviors, so responders should keep the threat of hepatitis or HIV/AIDS in mind. Every organization has to have an exposure control plan.

**About the author**

Greg Friese, MS, NRP, is Editor-in-Chief of EMS1. He is an educator, author, paramedic and marathon runner. Ask questions or submit tip ideas to Greg by emailing him at greg.friese@ems1.com.
A quality improvement perspective

EMS can apply the four-lens foundation for the science of improvement to reducing opioid overdose deaths within their communities

By Mike Taigman

It's easy to get overwhelmed trying to figure out how you and your team can help stem the tide of deaths from the opioid crisis. It's hard to know where to start when the diverse group of people involved includes narcotics detectives, parents of addicts, hospitals that have been penalized for ineffectively managing pain, drug dealers and our EMS regulars.

Fortunately, the science of performance improvement provides a framework to help make sense of the complexity we face. The following four-lens system through which we can view this crisis was designed by quality guru W. Edwards Deming to help us make more effective interventions.

1. System appreciation

Normally we think of a system as a collection of interdependent processes aligned to accomplish the aim of the system. When I think about the opioid crisis from a systems perspective, it seems like there are competing processes, some designed to create addiction and others designed to treat it.

COMBATING THE OPIOID EPIDEMIC:

A quality improvement perspective

EMS can apply the four-lens foundation for the science of improvement to reducing opioid overdose deaths within their communities

By Mike Taigman

It's easy to get overwhelmed trying to figure out how you and your team can help stem the tide of deaths from the opioid crisis. It's hard to know where to start when the diverse group of people involved includes narcotics detectives, parents of addicts, hospitals that have been penalized for ineffectively managing pain, drug dealers and our EMS regulars.

Fortunately, the science of performance improvement provides a framework to help make sense of the complexity we face. The following four-lens system through which we can view this crisis was designed by quality guru W. Edwards Deming to help us make more effective interventions.

1. System appreciation

Normally we think of a system as a collection of interdependent processes aligned to accomplish the aim of the system. When I think about the opioid crisis from a systems perspective, it seems like there are competing processes, some designed to create addiction and others designed to treat it.
There are several opportunities to intervene at the earliest stage of the cycle – overprescribing of opioids and recreational opioid misuse – including:

- The Joint Commission on Healthcare Accreditation is revising its standards for the assessment and treatment of people with pain to include an assessment of their psycho/social situation, risk of becoming addicted and safe opioid use.
- Pharmacies and insurance providers limiting the number of pills per prescription for opioids. For example, CVS has instructed its pharmacists to contact physicians when a prescription comes through that is for more medication than appears necessary [1].
- Continued law enforcement efforts to identify and arrest drug dealers and rampantly-overprescribing physicians.
- Research and development of non-addictive pain medications.

The second stage is the opioid overdose. Obviously, EMS response with naloxone administration is the traditional intervention at this stage of the cycle. Other opportunities include:

- Widespread distribution of naloxone to law enforcement, family members, school officials, drug users and even drug dealers. Some communities are experimenting with naloxone distribution associated with clean needle exchange and safe consumption areas.
- Getting the word out when a new batch of strong overdose-causing drugs lands in the community. Using social media, street outreach, EMS, law enforcement, to let users know that there is a bad batch of drugs in town.

The post-overdose survival phase of this cycle is an area where innovative EMS systems are helping steer people to treatment and rehabilitation.
Treating addiction and overdose as a disease rather than as a crime. In Richmond, Virginia, the morning after a person has overdosed, a narcotics detective from the police department will pay them a visit. According to Rob Lawrence, the chief operating officer for the Richmond Ambulance Authority, having a detective show up at the door tends to get the full attention of people who are addicted. The detective is not there to arrest them. He or she is not there to search the house for drugs. He or she is there to offer a ride to a drug treatment facility. Their belief is that more people accept treatment from detectives than other professionals.

Some EMS systems are providing referral to treatment programs as part of their overdose management protocol.

Administering assessment tools like the Drug Abuse Screening Test or the Opioid Risk Tool to help identify patients who are at risk for future overdose.

2. Understanding variation

All processes have variation. When evaluating the data related to the opioid crisis, it's important to look at things in the natural time ordered sequence. This is the only way that you'll know if things are getting better, getting worse or staying the same. It's also the only way that you'll know if your efforts to intervene are having their intended impact.

For example, Ohio experienced a dramatic upward trend (defined as six or more continuously ascending or descending points) of opioid-related overdose deaths programs designed to address the problem.

Data shows programs to decrease opioid overdose deaths in Oregon have been effective at slowing the increase in deaths.

When it comes to tackling the opioid problem in your community, it’s powerful to have your key measures defined, a method of collecting the data, and a system to analyze it as close to real time as possible. It’s helpful to define outcomes like reduction in
opioid overdose deaths, reduction in overdoses, and number of addicted people who complete treatment and stay drug-free.

It’s also helpful to define some process measures that help produce these outcomes, like time from overdose to rehab admission, the percentage of overdose victims that enter rehabilitation, and the percentage of successful naloxone administrations by bystanders.

3. Theory of knowledge

The third lens in this improvement science view is called Theory of Knowledge. Historian Daniel J. Boorstin said, “The greatest obstacle to discovery is not ignorance – it is the illusion of knowledge.” If you spend a little time on your favorite search engine or social media site, you can discover many strongly held beliefs, some would call them theories, about how to deal with the opioid crisis. These include:

- Needle exchange programs encourage drug use.
- Needle exchange programs save lives.
- Providing naloxone to addicts encourages heroin use because there’s no consequence.
- Making naloxone widely available saves lives.
- Narcotics Anonymous is ineffective at dealing with addiction.
- Narcotics Anonymous works very well for many.
Statistician W. Edwards Deming said, “In god we trust, all others must bring data.” When it comes to performance improvement, it’s important to test your ideas – your theories of change – until there is enough evidence-based belief that implementing a change will produce the desired result with the least negative unintended consequences.

Before you start implementing improvements, it’s always good to see what scientific evidence exists. One good resource for the science on opioid addiction and treatment is the National Institute of Drug Abuse [2].

Once you’ve gathered the science, gathered baseline data on the scope of the opioid problem in your community and mapped the system, it’s helpful to gather system stakeholders to brainstorm ideas for addressing the problem. It will be different for each community, and here are a few folks that you might invite to help:

- EMS
- Fire
- Law enforcement, particularly narcotics division
- Addiction treatment specialists
- Hospital emergency medicine
- Social services
- Homeless services
- District attorney
- Community advocates
- Pharmacists
- Opioid addicts in recovery

One of the biggest leadership challenges in working with a diverse group is dealing with confirmation bias. With confirmation bias, we tend to latch on to
anecdotes or thin evidence that support our personal beliefs and ignore evidence to the contrary.

For example, in one group of EMS providers, a paramedic said with confidence, “If someone overdoses more than once, they are beyond help.” Instantly, the group started talking about plans to divert resources away from repeat overdoses despite the complete lack of evidence associated with her statement.

It’s a good practice to invite your colleagues to explore ideas that gain traction in your dialogue, “Is this idea really convincing based on the evidence or am I just happy that it aligns with what I already believe?”

Once you’ve brainstormed a list of possible interventions, it’s time to evaluate each option based on the evidence of its likely effectiveness. Always start by evaluating the science to see what objective evidence already exists for or against the ideas you’re considering. Then you can test the effectiveness of change ideas in your community by using small, fast plan-do-study-act style testing to help build evidence of the effectiveness of each theory.

4. Psychology

The fourth lens in this system is psychology. The opioid crisis involves a wide mix of people, from drug users, drug dealers, to police officers, paramedics and politicians. Everyone involved has their own fears, motivations, beliefs and biases. To effectively lead a community intervention to prevent death from overdoses, it’s essential to really understand the psychology of the people that you’re working with.

A politician may be driven by a desire for re-election to be seen as tough on crime. A new paramedic may not believe that addiction is a disease and be flabbergasted that people can’t see it’s just weak-willed people making bad choices. To help people get on board with making the changes needed, it’s helpful to start wherever they are.

Making changes happen in your community is challenging. Chances are you’ll be more successful if you work to decrease the fears associated with change and increase the motivation to move ahead.

Helping EMS providers see that helping someone who’s addicted to opioids into a treatment program is as lifesaving as good quality CPR and a quick defibrillation is likely to help with motivation. Showing data from communities that have widespread naloxone distribution that indicates a decrease in deaths without an increase in addiction can help decrease fear of laypeople giving this lifesaving drug. In any case, listening, learning and really getting to know the folks you’re working with increases the chance of success.

Deming called this four-lens system that forms the foundation for the science of improvement the System of Profound Knowledge, which is an awful name. He hoped that his followers would come up with something better, but several decades after his death, the name has stuck.

It is designed to be an approach to management, particularly management of improvement. The four components cannot be separated any more than a brain, kidney and heart can function on their own without being connected to each other in a system.

References

1. CVS to limit Opioid drug prescriptions amid national epidemic, by Nathan Bomey, USA Today September 20, 2017
2. the National Institute of Drug Abuse [2]. https://www.drugabuse.gov

About the author

Mike Taigman is the Improvement Guide for FirstWatch, a company which provides near-real-time monitoring and analysis of data along with performance improvement coaching for EMS agencies.

He holds a master’s degree in Organizational Systems and is an associate professor in the Emergency Health Services Management graduate program at the University of Maryland Baltimore County. He’s also the facilitator for the EMS Agenda 2050 project. He can be reached at mtaigman@firstwatch.net.
Is widespread naloxone administration by non-medically trained responders preventing overdose patients from reaching definitive care?

By Matt Zavadsky, MS-HSA, EMT

Epidemic. Saying the word out loud is enough to send chills down the spine of any healthcare provider. It’s a term that has been used often to describe the opioid crisis in our country.

One of the many responses to the opioid epidemic has been to equip what seems like virtually every member of society with naloxone to counter the life-threatening consequences of opioid overdose.

Naloxone is now available over the counter without a prescription in 45 out of 50 states in America [1]. Many law enforcement agencies have added naloxone to their repertoire for treatment of opioid overdose victims. And – as I recently found out during a ride-along in a large, mid-Atlantic city – many drug dealers are even providing naloxone auto-injectors to some of their best customers.

As healthcare providers, we first seek to do no harm. In headlines, grant applications and public meetings, arming as many community members as possible
with naloxone sounds like the right thing to do. It makes sense, since it’s true the early administration of naloxone for an overdose victim who is apneic could save a life, in the short term.

But, should there be a much larger discussion about the adverse outcomes from naloxone administration by non-medically trained responders?

**Two scenarios illustrate potential ramifications of non-EMS opioid treatment**

In the quiet hallways of health policy agencies and substance abuse treatment centers, there is another question being asked: Are we doing more harm than good with the proliferation of naloxone in the community?

Consider these scenarios:

**Scenario 1**

It’s 2 a.m. and you are responding to a 9-1-1 call for a possible overdose. You arrive on scene, where you find a male in his 30s whose very concerned family members inform you possibly overdosed on fentanyl. Your patient is apneic, with a stable heart rate and blood pressure. While you are effectively managing his airway with a BVM, your quick secondary survey confirms your index of suspicion that your patient may be experiencing potential opioid overdose.

You begin packaging the patient for transport, still effectively managing his airway. Following protocol, you titrate the administration of Narcan to the desired effect. During your non-lights and siren transport, the patient begins having spontaneous respirations, no longer requiring BVM assistance.

On arrival at the ED, the patient is slowly aroused to consciousness, where he is greeted by concerned and loving family members, and a well-trained substance abuse counselor. After listening to how close he came to death, and with the motivational interviewing skills of the substance abuse counselor, the patient consents to in-patient substance abuse treatment.

**Scenario 2**

It’s 2 a.m. and you are responding to a 9-1-1 call for a possible overdose. You arrive on scene, where you find a male in his 30s who is yelling, agitated, doubled over in pain and shaking. The patient is oriented to person, place, time and events.

The family tells you the patient has been addicted to carfentanil and they have been trying to get him into rehab for months, to no avail. Out of fear of a fatal overdose, they purchased OTC intra-nasal Narcan from their neighborhood pharmacy and have kept it handy for just such an emergency. The family administered the Narcan while you were responding and the patient woke up in this current state.

Despite the best efforts of you, the family and law enforcement on scene, the patient refuses all care, and signs an AMA. He tells his family to leave him alone, goes to his bedroom and locks the door. The following morning, the patient is unresponsive, and his family breaks open the door to find him obviously dead.

Are these scenarios too cut and dry? Perhaps, but the clarity of the scenarios helps pose the following difficult questions for EMS providers:

1. **Is the use of naloxone by non-medically trained personnel helping or hurting victims of an opioid overdose?**

Consider these realities:

- The average half-life of fentanyl is 219 minutes, while the average half-life of naloxone is 60-90 minutes [2]. This means that without follow-up care, although the risk is low, it is possible that the overdose victim will suffer another apnea event when the naloxone wears off [3].

- The sudden reversal of the overdose effects caused by naloxone results in the patient experiencing severe withdrawal symptoms, vomiting, irritability, severe body aches and greatly disturbed mood [4]. At best, this reaction triggers the patient to refuse transport to the hospital against medical advice, leading to a missed opportunity for further management and observation.
The above manifestations could also create scene safety risks for the patient, other responders and even bystanders.

During a recent night-shift ride along with the EMS battalion chief in a large East Coast city, we responded to five EMS calls in four hours. Three of them were reported overdose victims who were apneic. When we arrived, all three patients were conscious and alert, having been revived by a bystander with a Narcan auto injector. Not one of them agreed to allow EMS to transport them to an ED of their choice.

2. What is EMS role in helping communities navigate the myriad issues relating to the opioid crisis?

EMS agencies enjoy some of the highest community trust of any profession. People will listen to us. We are the experts. We often respond to calls related to the untoward effects of opioid addition. And, we are supposed to be patient advocates. This places us squarely in the community influencer role in the opioid crisis.

Think back to the second scenario. Does the outcome of that patient interaction seem to be in the best interest of the patient? Is there a difference between saving a life and preserving a life? Yes, the former is important and consistent with our core mission, but so is the latter.

The desired goal for overdose patients should be providing them an opportunity to engage with mental health and substance abuse professionals, generally in a hospital setting, who may be able to use motivational interviewing techniques to help the patient agree to a drug treatment program.

It’s possible patients fully revived by naloxone prior to EMS arrival may refuse transport against medical advice, making the connection to definitive substance abuse care more difficult.

Mobile integrated healthcare options for the opioid crisis

There are some EMS agencies taking very unique, if not controversial leadership roles in the opioid crisis. In Pittsburgh, the Community Connect program, led by Dan Swayze, the vice president and COO of the Center for Emergency Medicine of Western Pennsylvania, has received grant funding to create a post-overdose response team.

The program will send a community paramedic and a peer specialist out after 9-1-1 interactions (for police or EMS) related to overdoses. They will navigate people into rehab if they are ready to quit. If they are not willing to enter rehab, they will discuss harm-reduction strategies, and help the patient manage any comorbidities.

In Florida, Palm Beach County Fire Rescue (PBCFR), under the direction of Captain Houston Park and Division Chief of Medical Services Richard Ellis, pilot tested an opioid medication assisted treatment (MAT) program for 31 patients.

In this program, overdose patients were given an initial dose of Suboxone in the ED. After about an 8-12 hour ED stay, the patients were discharged. PBCFR MIH paramedics, along with a peer counselor from a local behavioral health network, provided follow-up care for the patients in their own homes for the next eight days, delivering a daily dose of Suboxone, as well as providing peer counseling.

After the eight days of follow-up, the patients were transitioned to the local healthcare district for further evaluation, administration of Suboxone and continued peer counseling, with the goal of eventually weaning off Suboxone.

Due to the expense and the limited number of patients the team was able to impact, the study was not renewed after the initial 31 patients. However, many people in the community have seen the benefits of MAT and there are several groups working on different ways to replicate the program with lower costs and a wider reach. Chief Ellis is confident a new program will start up within the next six months.

Transitioning to an integrated opioid response model

It would seem that if non-medical personnel are going to be equipped with naloxone, they should have the training and ability to be able to potentially
titrate the medication to the desired effect of spontaneous respiration.

Or, more radically, perhaps non-medical first responders should be provided training and equipment to effectively manage an airway through the use of a bag-valve-mask. That may be an intervention that is more patient centric, and – given that the price for OTC naloxone auto-injectors has increased by nearly 500 percent, it may be a more cost-effective solution [5].

Yes, the opioid crisis creates a significant conundrum for EMS agencies, balancing the lifesaving role with the responsibility to ensure a safe transition to definitive care (in this scenario, connection to a substance abuse treatment program).

Fully reviving patients who may not consent to transport becomes the pivot point that EMS should be actively involved in helping local communities navigate.

New EMS service models specifically designed to fill a targeted gap in substance abuse treatment resources may be a valuable role for EMS agencies that are able to make the transition from traditional EMS models, to a more integrated, community-based model.

References

About the author
Matt Zavadsky is the public affairs director at MedStar Mobile Healthcare, the exclusive emergency and non-emergency EMS/MIH provider for Fort Worth and 14 other cities in North Texas. He has 37 years of experience in EMS and holds a master’s degree in Health Service Administration with a graduate certificate in Healthcare Data Management.
Innovative community paramedicine programs may offer a strategy to evolve EMS response from resuscitation to a recovery-oriented system of care.

By Dan Swayze, DrPH, MBA, MEMS

Drug overdoses are the leading cause of accidental death in the United States, killing an estimated 60,000 people in 2016 [1]. The CDC now attributes most of the deaths from opioids to illicit synthetic opioids, such as fentanyl and its analogs, rather than traditional forms of heroin [2].

Not surprisingly, many EMS agencies are reporting record numbers of overdose-related 911 responses and unprecedented amounts of naloxone being administered during resuscitative efforts. Many systems are turning to new mobile integrated healthcare and community paramedicine approaches to help.

Here are five things community paramedics need to know about the opioid crisis to be effective:
The brain changes on opioids
Many people perceive drug use as nothing more than the result of poor life decisions. The inability to quit using the drug is often viewed as nothing more than a lack of willpower. However, the neurobiological changes that occur in the brain tell a very different story.

The part of the brain affected by drug use is called the nucleus accumbens, otherwise known as the brain’s pleasure center. Normally, that area is stimulated by either thinking about or engaging in important activities such as eating and sex.

Such thoughts and actions result in dopamine release in the area, which generates a slight feeling of euphoria. Once the person is fulfilled, the system normally responds by decreasing the dopamine, thereby decreasing the pleasure associated with the activity.

Compare this response to how most people feel before, during and after Thanksgiving dinner or when a holiday cookie tray is nearby. We tend to look forward to both (so long as we have enjoyed previous experiences). We feel happy while we eat, but soon reach a point where we simply cannot entertain the thought of eating another bite.

Heroin, fentanyl and other opioid derivatives cause a massive release of dopamine that is somewhere between two and 10 times the amount released during more natural activities [3]. As the amount of dopamine released is so much greater than the amount normally produced, the person is quickly overcome with an euphoria that is several times stronger and lasts much longer than even the most earth-shattering orgasmic experience.

Not surprisingly, people are often motivated to experience those feelings again. The physiologic rewards of drugs are so significant, that the system that normally encourages an individual to engage in essential behaviors suddenly creates an all-consuming compulsion that overrides any other priority. Eating, bathing and adhering to moral standards all take a back seat to the urge to use.

Addicts use to feel normal
Once highjacked by a maladaptive reward system, the body begins to crave the dopamine storm on a more frequent basis. The body adapts (or maladapts) to the new levels of dopamine in the circulation by increasing its tolerance to the drug. Higher tolerance means doses that were previously enough to elicit the euphoria are no longer sufficient. Increasingly higher quantities are needed to achieve the same effect.

As dopamine also works as a neurotransmitter in other anatomical systems, those other systems also adjust and become dependent on the higher levels of dopamine to function. When levels return to normal, the addict begins to experience debilitating withdrawal symptoms as quickly as six hours after their last use. Individuals who become “dope sick,” or dependent on the drug will tell you that they primarily use simply to avoid being sick.
Opioid use frequently starts with a prescription or with pain

Once an opioid is ingested, the pathophysiology of the body can wreak havoc on the person’s ability to control their drug use. Skeptics will argue that those symptoms are consequences of a poor choice to start using in the first place.

While partying is undeniably a potential starting point for addiction, coping is much more likely to be the original motivation. An estimated 75 percent of heroin addicts report that their first opioid use was prescription based [4].

Many believe that a combination of an overemphasis on pain as a vital sign, coupled with the fraudulent claim that Oxycontin was not as addictive as traditional opioids is largely responsible for the exponential increase in opioid abuse today.

Another significant predictor of opioid use is exposure to adverse childhood experiences. Exposure to each of the adverse childhood experiences listed in Table 1 results in a 27 percent increase in the likelihood that the individual will use illicit drugs [5]. Those exposed to five adverse experiences as a child are seven- to 10-times more likely to use in later life than those who were not exposed [6].

Using illicit drugs to self-medicate, be it for relief from physical or emotional pain, is likely to be the most common reason community paramedic patients become addicts.

Redefining ROSC

Despite efforts to make naloxone administration more timely and available through a wider distribution of the drug, the death rate from the crisis continues to rise. Some of our colleagues, fed-up with the growing number of overdose calls, are showing signs of burnout.

Whether out of frustration or concern, they display “tough-love” to their patients by belittling the patients’ drug use or the patient themselves, or emphasizing the consequences of the patients’ continued drug use in an attempt to get them to see the light and enroll in a rehabilitation program. What our brethren fail to realize is that what they view as tough-love is more likely to be a trigger for the patient to seek out more drugs.

Naloxone is a resuscitation medication, and countering the opioids to help our overdose patients to breathe is a critical step. However, naloxone administration is just the first step in helping our patients to quit. We need to bridge our resuscitation efforts with systems that are better designed to help our patients. Community paramedics offer an opportunity to evolve our limited EMS response from a system focused only on resuscitation to a recovery-oriented system of care (ROSC).

By partnering with those historically involved in rehabilitation services, like detox centers, treatment programs, government entities, payors and police, CP programs can develop a more effective option than simply transporting the patient to the local emergency department.

Mobile integrated healthcare designs may involve:

- resuscitating overdose patients and leaving naloxone behind for those who refuse transportation;
- simultaneously dispatching a specialty care team on overdoses that begin recovery efforts immediately after resuscitation; or
- post-overdose response teams that enroll patients after discharge from the emergency department, in-patient treatment facility or upon release from jail.

Post-overdose response teams

Stroke, STEMI and trauma patients benefit from designated facilities and specialized treatment teams, yet our only option for overdose treatment in traditional EMS models is to transport the patient to an emergency department that is unlikely to offer the type of recovery services the patient needs.

Community paramedic programs offer an opportunity to bridge traditional 9-1-1 care to more appropriate recovery-oriented services. Communities in Florida, Missouri, Ohio and Pennsylvania are using
Community paramedics teamed with recovery services to provide follow-up care for patients who have overdosed.

Pittsburgh’s program will partner a peer recovery specialist with a community paramedic to provide recovery oriented services following a 9-1-1 call for an overdose. If the patient is ready to quit, the team will provide navigation to the most appropriate treatment and support programs. If the patient is unwilling or unable to abstain from drug use, the team will focus on practical strategies to decrease the likelihood of a fatal overdose using a somewhat controversial and politically polarized style known as harm reduction.

Paramedics in Palm Beach, Florida, added recovery services with a clinical intervention by offering a mobile medication-assisted treatment program. Rather than waiting for placement in detox or rehab programs, buprenorphine was initiated in the emergency department and administered in the patient’s home for up to eight days after their emergency department visit to help the patient manage their withdrawal symptoms. The in-home program ended once the patient was enrolled in a more suitable rehabilitation service.

The opioid crisis represents a new challenge and a new opportunity for CP programs nationwide. Reframing the nature of addiction as a brain disorder rather than a behavioral or criminal problem may help the CP better respond to the challenges these patients face. While traditional response models continue to provide a lifesaving resuscitative role in the crisis, innovative CP programs may represent a more effective strategy to managing this public health crisis in the long run.

References

1. CDC. Opioid overdose. Available at: www.cdc.gov/drugoverdose/data/index.html
4. NIDA. Prescription Opioids and Heroin. Available at: www.drugabuse.gov/publications/research-reports/prescription-opioids-heroin

About the author

Dan Swayze is the vice president and chief operating officer of the Center for Emergency Medicine of Western Pennsylvania, Inc., and an adjunct instructor at the University of Pittsburgh. He has been involved in EMS since 1984, and is widely considered an early pioneer in the field of community paramedicine. Dr. Swayze offers consulting services for MIH and CP program development and runs a popular community paramedic training academy in Pittsburgh and other locations throughout the country. He can be reached at dswayne@statmedevac.com
How is the opioid epidemic impacting first responders?

A section chief from St. Louis considers the scope and impact of opioid response on EMS providers and the role they play in combating the crisis

By Kerri Hatt

More Americans now die from opioid overdose than from breast cancer. The epidemic costs more than $500 billion a year and is notably negatively impacting U.S. life expectancy.

As opioid overdose death rates rise across the nation, communities are implementing new strategies and collaborations. Widespread dissemination of naloxone – from local pharmacies, to families of overdose patients, to local distribution drives, has led to an increase in usage by non-EMS providers. Even insurance companies are waiving copays.

Some cities are impacted more than others. Figures from the National Council on Alcoholism and Drug Abuse indicate a dramatic increase in opioid-related overdose deaths in the St. Louis area. Overdose deaths increased nearly 20 percent in 2016.

David K. Tan, M.D., EMT-T, FAAEM, FAEMS, is EMS section chief, Division of Emergency Medicine, at Washington University School of Medicine in St. Louis. He recently shared his perspective on the impact of the opioid epidemic on first responders.

EMS1: Though experts advise the actual risks of fentanyl exposure are low, regular reports of exposure and resulting illness risk are spreading hysteria. What can EMS leaders do to better educate providers?
Dr. Tan: When reporting incidents of mysterious illness associated with possible exposure, we must always temper our comments with solid facts and avoid sensationalism. Remember the true opioid toxidrome:

- Altered mental status, including coma
- Respiratory depression, including apnea
- Pinpoint pupils

Many of the illnesses reported in the mass media do not fit these criteria. While the victims in these stories are probably suffering from some sort of exposure to a hazardous substance, the reactions don’t often fit the opiate profile. We should take every opportunity to remind EMS providers of the importance of basic scene size-up and the use of sensible PPE, given the sum totality of any circumstance. We can spread a consistent message of tempered vigilance with common sense.

**What’s the obligation of EMS directors to prepare their personnel for responding to an opioid incident?**

Our clinical educators must ensure all EMS personnel are properly trained on the opiate toxidrome and specific PPE that can and should be used on every call. Our EMTs and paramedics should be expert at listing routes of exposure and effective ways of protecting themselves from such exposure.

Again, it goes to common sense scene size-up, as well as being smart about knowing what’s in the community and raising awareness among all personnel about what the agency expects regarding response to overdose calls and what to do when encountering potential hazardous materials.

Most agencies also incorporate post-exposure prophylaxis protocols for incidents of hazardous materials exposure.

**How are first responders being specifically impacted by the opioid epidemic?**

The biggest risk to first responders is actually in responding to these calls. The National Highway Traffic Safety Administration released a report in April 2014 that provided an overview of the number...
of ambulance accidents in the United States. Key findings include:

• Over a 20-year period, there were an estimated 4,500 accidents involving ambulances each year.
• 35 percent of accidents resulted in injury or fatality to at least one occupant of a vehicle involved.
• An average of 29 fatal ambulance accidents produced 33 fatalities each year.

Opioid overdose patients often are not breathing or have already gone into cardiac arrest, making these emergencies a top priority for responders. But, just getting to the scene is risky.

Once there, additional risks ensue to include exposure to communicable diseases, contaminated needles, and occasionally violent patients and family members.

**Does the opioid epidemic pose a risk of compassion fatigue for front-line providers?**

Interestingly enough, compassion fatigue can mean caring too much or an inability to care any longer. Most researchers cite the former with Charles Figley, a pioneer in compassion fatigue research, defining compassion fatigue as “the stress resulting from helping or wanting to help a traumatized or suffering person.” Others use the term compassion fatigue to mean burnout with an almost apathetic approach to patients on every call.

Either way, both states are risks associated with first responders due to their immediate contact with the traumatic event. Sometimes, the difference between burnout and compassion fatigue is not as clear for emergency service personnel, and their daily exposure to the tragedies of the opioid epidemic begin to eat away at them. The impact is real, and while vehicles can be replaced for wear and tear, it isn’t as easy to replace people who see the grim reality of these overdoses daily – sometimes several times a day.

**What’s your biggest piece of advice for EMS providers combating the opioid epidemic?**

I would encourage EMS providers to make sure to look after one another. EMS is a difficult and often thankless role that can lead to job stresses that spill over into the home and family. This must be avoided. Making sure colleagues and other coworkers get the mental health assistance and support needed, if indicated, is essential to prevent first responders from becoming the second victim of the opioid epidemic.

**About the author**

Kerri Hatt is senior editor, EMS1, responsible for defining original editorial content, tracking industry trends, managing expert contributors and leading execution of special coverage efforts. Prior to joining Praetorian Digital, Kerri served as an editor for medical allied health B2B publications and communities. She can be reached at kerri.hatt@firerescue1.com.
REVOLUTIONIZE YOUR TRAINING PROGRAM ONLINE

THE MOST POWERFUL SOLUTION FOR EMS TRAINING

EMS1 Academy offers nearly 200 engaging courses and 225 hours of relevant CE on an easy-to-use learning platform.

- Streamline training assignments
- Create custom courses
- Track offline training
- Manage personnel credentials and licenses
- Run and build flexible reports
- Deliver policies for compliance
- Share files between agencies
- Meet state and national training requirements

To learn more, visit EMS1Academy.com or call 800.671.9411.
PRODUCT SHOWCASE

PROTECT YOURSELF AGAINST FENTANYL WITH CRITICAL RESPONSE GLOVES!

Critical Response resists permeation of fentanyl for up to 4 hours! Get your free box today!
LEARN MORE

- Request more information
- Visit Medline online

THE MOST POWERFUL SOLUTION FOR ONLINE EMS TRAINING

EMS1 Academy streamlines training operations while improving personnel performance and providing accurate reporting.
LEARN MORE

- Request more information
- Visit EMS1 Academy online
8 U.S. regions hit hardest by the opioid epidemic
Use the interactive map to see how your state has been affected by the opioid epidemic.

How to protect yourself from fentanyl exposure
A panel of experts tackles guidance on how to safely handle patients, avoid fentanyl exposure and manage a crime scene.

Cutting opioid overdose deaths in half

One paramedic’s campaign to tackle the opioid epidemic
Paramedic Lisa Cassidy took action after noting the amount of overdose calls the crew was running.

DIGITAL RESOURCE CENTER

Paramedic Chief eNews  Training Videos  Online Quizzes

MORE RESOURCES FROM THE WEB

IAB Opioid PPE Guidelines
The Interagency Board’s “Recommendations on Selection and Use of Personal Protective Equipment and Decontamination Products for First Responders Against Exposure Hazards to Synthetic Opioids, Including Fentanyl and Fentanyl Analogues”

Fentanyl Safety for First Responders
The White House official guide to safety in cases of fentanyl exposure includes actions first responders can take to protect themselves.

Preparing for Naloxone Distribution
The SAMHSA Center for the Application of Prevention Technologies tool presents resources prevention practitioners can use to prepare both professional and non-professional first responders to distribute and administer naloxone.

The Federal Response to the Opioid Crisis
HHS outlines its five-point Opioid Strategy, which provides the overarching framework to leverage the expertise and resources of HHS agencies in a strategic and coordinated effort to combat the opioid epidemic.