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INSIDE

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Emergency Providers Play a Pivotal Role in Suicide Prevention

Train emergency staff how to manage patients at risk for suicide, but beware scarce resources and watch for logistical barriers

With suicide rates rising, there is a new focus on what frontline providers can do to address the problem. It is well-known that patients at risk for suicide often present to the ED, so developing an effective way to take advantage of this opportunity could prevent many patients from taking their own lives.

However, with EDs already overwhelmed with other tasks, taking on suicide prevention can be challenging, especially when there is a dearth of mental health resources in the community. But the urgency of this problem — reflected in newly released data from the CDC, showing that suicide rates are up in every state with the exception of Nevada, where rates already were elevated — suggests that it is an issue that clearly requires more attention and new solutions.

(Editor's Note: Read more about the new CDC data later in this issue.)

What's pushing the suicide rates higher in this country? **Edwin Boudreaux**, PhD, a professor in the departments of emergency medicine, psychiatry, and quantitative health sciences at the University of Massachusetts Medical School, has been working on the issue for many years, and he suggests one of the biggest contributing factors is plain to see.

> "THE MENTAL HEALTH TREATMENT SYSTEM IN THE UNITED STATES IS BROKEN."

"The mental health treatment system in the United States is broken, so we have really poor access to high-quality behavioral healthcare," he says.

Thus, Boudreaux notes psychiatric patients who come to the ED often are boarded or "hung up" there at a much higher rate and for a much longer period than medical patients. "If you come into the ED, and you have a medical problem that requires hospital admission, you get into the

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hospital relatively quickly compared to psychiatric patients," he says. "The reason for that is there is no place to send psychiatric patients."

In fact, the scarcity of mental health resources extends from outpatient care to intensive inpatient care.

"If people can't readily access high-quality behavioral healthcare, then their behavioral health disorders go untreated ... and [they] are more likely to die by suicide," Boudreaux laments. "There is a clear problem with getting access to high-quality care that leaves people in the lurch, so they have no safety net and because of this, they end up dying by suicide."

Boudreaux acknowledges that it is difficult to prove this link, but he notes there are different bits of data that are revealing.

"We see the suicide rate increasing, but we also see the boarding rate in EDs increasing, and we see other data that suggest access to behavioral healthcare is problematic, with long delays and insufficient coverage," he says.

Another potential contributing factor to the rising suicide rate is the growing isolation of the modern tech era, Boudreaux offers.

"When all your friends are online, and there is an actual breakdown in community connectedness ... people become isolated, and they feel lonely and disconnected; they feel their lives have less meaning," he says. "When you have lonely, disconnected lives, people tend to resort to suicide more frequently."

Suicide prevention advocates also are concerned about the increasingly available access to information about highly lethal suicide methods.

"What we have seen is that when you can access on the internet information around exactly how [to commit suicide], including ways that are relatively painless and highly likely to be effective, then that information translates into action," Boudreaux says. "Where people may not have understood how to [commit suicide] in the past, and they have taken overdoses or used other non-lethal means and didn't die, now they are more often dying through their attempts because they are getting this information."

Indeed, in his own region, Boudreaux has observed people using different suicide methods than in the past, and the new methods tend to be more lethal. This is unfortunate because many people who get through a suicide crisis without dying will recover and be just fine, he says.

"A low-lethal suicide attempt doesn't mean the person will inevitably die by suicide, but if you have available lethal means, you don't get past it."

Emergency providers must be particularly attuned to the issue when high-profile instances of suicide are widely publicized, as they have been recently with the suicide deaths of designer Kate Spade and celebrity chef Anthony Bourdain.

"We know that high-profile suicide cases lead to other suicides," Boudreaux says. "Suicide contagion is a pretty well-studied phenomenon."

When news coverage of these cases goes viral and is shared repeatedly via social media in ways that were not available before, it becomes an omnipresent type of reminder and stimulus, Boudreaux adds.

"If a person is already feeling suicidal, and now they are not only seeing it on the news, but they are seeing it on Facebook and seeing it in tweets, and it is retweeted and reposted and emailed ... it becomes a stimulus that is difficult to avoid in

the way that in the past it could be avoided by just turning off the TV."

Employ Screening

Marian Betz, MD, MPH, an associate professor in the department of emergency medicine at the University of Colorado's Anschutz Medical Campus, notes that many aspects of the suicide problem are beyond the immediate control of emergency providers. These aspects include not maintaining enough psychiatric beds or not employing enough outpatient mental health providers. However, Betz recommends emergency providers advocate for additional resources in these areas, stressing that this is just a start.

"I think sometimes people get frustrated, thinking there is nothing they can do," she says. "But there is a lot that we can be doing within the ED to identify and then [intervene] with people who are at risk for suicide."

For example, Betz's ED, and a growing number of EDs across the country, have begun to implement universal screening for suicide risk. Typically, such screening takes place at triage or during the initial nursing assessment. The process involves asking patients a few questions regarding their thoughts about suicide or whether they have made any suicide attempts in the past. Such questions are embedded with queries about other risk factors such as domestic violence, smoking, and the like.

"The rationale for [suicide risk screening] is that prior estimates suggest that there is a decent proportion of people who are at risk for suicide who are seen in EDs and won't say anything unless you ask them about it," Betz says. "You don't pick up [the signs] unless you ask." While some EDs opt for targeted screening, which means they only screen patients in other high-risk groups such as those with substance use disorders or mental health conditions, that approach misses a group of patients at risk who have no presenting symptoms or obvious risk factors.

"That is why a lot of EDs have decided they will just screen everybody," Betz notes. "It is easier, and it has been estimated from prior research that about 10% of all adults in the ED have had recent suicide ideation or behaviors, but a lot of those people won't say anything unless you ask about it."

Establish Protocols

Of course, there is no point in screening for suicide risk unless there are protocols in place for addressing next steps if a patient is found to be at risk. "We do know some people feel some relief at being asked about the pain they are in, but certainly there should be a follow-up step to figure out what the person needs," Betz advises. "That is where it can get a little more difficult because we as emergency physicians practice in such varied locations. There are small, community, often rural EDs that don't have mental health specialists available, whereas I work in an urban, tertiary care center where we have 24/7 access to social workers within our ED to do our [follow-up] evaluations."

In Betz's ED, if a patient screens positive for suicide risk or presents with a complaint of feeling suicidal, the emergency physician will conduct an initial assessment. Many of these patients then will be seen by a licensed social worker, referred to as a behavioral health evaluator, for a more comprehensive assessment. "It is really helpful to have those specialists because of their training, but also because they have more time to sit with the patient and really talk through all of the risks and protective factors, and to formulate a more detailed evaluation," Betz shares.

EXECUTIVE SUMMARY

Experts point to insufficient mental healthcare resources in the United States as one of the key drivers of the rising suicide rate. However, these experts emphasize that emergency providers have a front-row seat to the problem, and can play an important role in prevention. To address the issue, a growing number of EDs are implementing universal screening to identify patients at risk for suicide. Such steps must be paired with effective protocols to connect at-risk patients with appropriate interventions.

- Experts suspect that increasing rates of ED boarding and insufficient mental healthcare coverage are related to the rising suicide rate.
- Emergency providers need to be particularly attuned to suicide risk when high-profile instances of suicide are publicized widely.
- Typically, in EDs, universal screening for suicide risk is deployed at triage or during an initial nursing assessment.
- Emergency providers need to develop the skills to manage patients at lower suicide risk levels, especially in settings in which such patients have limited access to behavioral healthcare providers.

For smaller hospitals or EDs that do not have access to such specialists, the follow-up piece is a bigger lift. However, Betz says these facilities can contract with an outside group that can send a specialist to the ED, or through a tele-psychiatry solution. "I also think it is important to point out that we as emergency providers should develop a skill base to be able to care for at least the lowest-risk individuals without behavioral health specialists," she says, noting that it is analogous to caring for patients with chest pain. "We don't call a cardiologist for everybody who has chest pain. As emergency providers, we know how to do the initial risk stratification and decide who needs further testing or who needs to see a specialist."

Similarly, Betz notes that emergency providers should learn the skills to care for a patient who has had some suicidal thoughts, but demonstrates no other risk factors. "We should be empowered to be able to care for those types of patients sometimes, even without a specialist," she says. "That is important because at places where behavioral health specialists are not available, you are faced with transferring patients or keeping them for hours in the ED, which is tricky."

Develop Competency

The array of skills Betz would like to see emergency providers acquire includes knowing what questions to ask and how to risk-stratify someone with suicide risk. "In my own training, and what I have seen since then, it often seems as though with psychiatric complaints, we hand off as opposed to owning some of that risk stratification," she says. "Some of this training should [be provided through] the development of better residency curricula and continuing medical education curricula."

Betz also would like to see guidance on how to help ED staff find ways to show empathy and connect with these patients. This can be difficult because, unfortunately, patients with suicide risk often get lumped with patients who have other behavioral disturbances that may make them very difficult to care for. Such patients may be intoxicated, violent, or verbally abusive to staff, Betz explains.

> IT IS IMPORTANT TO ASK ABOUT FIREARMS BECAUSE THEY ARE THE MOST LETHAL METHOD OF SUICIDE, BETZ NOTES.

"Such behaviors can make providers feel angry, upset, or jaded ... so I think they need to learn to recognize the spectrum of emotional and mental health disorders, and recognize that when someone is in the ED with suicide risk, that person is feeling very real pain too," Betz stresses. "It is emotional pain, but in the same way that we feel compassion for physical pain, we need to get better at knowing how to heal [these patients]."

Sometimes, this is as simple as helping people find hope, Betz observes. "Being able to connect [with people] and [help them] think about something worth living for, whether that is a child or a pet or something that is coming up that the patient is looking forward to," she says. "Emergency departments are not set up to be the most soothing or therapeutic places physically, so that is an added challenge."

Safety planning with patients found to be at risk for suicide is part of the equation, too. "This involves helping a patient develop problem-solving skills in identifying people they can turn to and activities that make them feel better," Betz explains. "They actually write these things down."

It is important to ask about firearms because they are the most lethal method of suicide, Betz notes. "Sure, you can ask about medications or access to hanging supplies. That may make people feel like you are not singling out guns, but it is really important that we talk about whether people have access to firearms, and if they do, how they can reduce that access at least temporarily," she says. "Some people say what does it matter? People [at risk of suicide] will just find another way. Some people, if they want to attempt suicide with a method that is not available, will substitute with something else, but actually most don't. Even if they substitute something else, it is less likely to kill them than a firearm."

Providers may ask: If a patient is suicidal, and they own a gun, does that mean the patient should be hospitalized? "The answer is no," Betz adds. "You need to problem-solve with them, but just having a gun at home is not the thing that determines the risk assessment."

Policymakers need to acknowledge that emergency providers have liability concerns, especially when they are performing tasks that they have not handled traditionally in a high-risk area, Betz says. "That's why we need guidelines, tools, and policies from our national organizations that we can cite and say that we are sending

a person home because that is in line with specific criteria and policies," she says. "That will make providers feel more comfortable that they are not out on a limb."

The Suicide Prevention Resource Center was developed to address some of these concerns. Funded by the Substance Abuse and Mental Health Services Administration, it includes a range of tools and guidance for emergency providers on how to assess for suicide risk as well as how to intervene when a patient is found to be at risk. *(Editor's Note: Readers can learn more information about these tools online at: https://bit.ly/2bIQgaP.)*

The site includes tools such as the Patient Safety Screener (PSS-3), a three-item instrument designed for use in the ED to assess for suicide risk *(https://bit.ly/2tBpBE8)*. There also is a safety planning guide that provides details about how to develop a safety plan for patients who are found to be at risk. *(https://bit.ly/2K8rZxi)*

Boudreaux, who worked with colleagues to develop many of these resources, explains that the idea behind the site is to make it easy for EDs to access information and training materials so that they can actively deploy the tools and strategies. "All of our resources related to the [PSS-3] and how to use it are all in one place now, which we didn't have before," Boudreaux notes.

In fact, Boudreaux says that his own ED has programmed the screening tool into the electronic medical record (EMR), and staff are working with several EMR providers to make the tool part of their standard systems. "We have made some progress with that, but we are not quite there yet," he says. Also in development is a second screening tool that could be used to risk-stratify patients further and gather more information about risk factors on patients who have screened positive on the PSS-3. "We are working on further building out decision support related to using the two tools together," Boudreaux reports.

In addition to these resources, Betz is working with a group within the American College of Emergency Physicians to develop a reference tool geared especially for emergency physicians who are working in a setting without access to mental health practitioners. "It will help them think through all the steps," she says, referring to the many issues that need to be addressed when managing a patient at risk for suicide. "We need tools like that to help providers because they can't remember everything. They need to have a resource to go to, and something to be able to cite to justify what they are doing," she says. The reference tool should be available later this year.

Handle Logistics

While new tools and guidance on dealing with suicide risk in the ED are released often, Boudreaux acknowledges that many emergency physicians are resistant to taking on additional tasks.

"It comes from a real place. Emergency physicians aren't trained to do this, and they are busy and have other priorities," he says. "That said, though, with suicide, we think we can train clinicians to do a better job of managing patients with lower-level risks. In fact, it is required because if we do a good job of screening, there is no way that we will have sufficient mental health resources to see and treat all of those patients. It's impossible."

When it comes to providing this training to emergency providers, the biggest obstacle that Boudreaux faces is logistics. "When clinicians are working, they can't be trained, and when they are not working, they don't want to come in on their off hours to get trained. There is no time to do it," he explains. "Coming up with innovative ways to train people and to reinforce those skills over time is really important, and right now we just don't have very good options. We do the best we can, but this is still an area that is evolving."

Emergency staff members need to be reminded continually that they can play an important role in preventing suicides, Betz explains.

"We know from some recent surveys that emergency physicians and nurses, just like the public, may be skeptical that suicide is even preventable. That is another challenge," she says. "We see people who are in crisis, but we don't necessarily hear about the successes. We don't hear about people getting better."

The nature of emergency personnel is such that providers miss the positive reinforcement of seeing patients whom they treated, and who got better, Betz notes.

"Now, it is two years later, and such patients may be thriving," she says. "We don't ever get that feedback." ■

SOURCES

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CDC: Suicide Rates Up By 30% in Some Areas

The problem of suicide in the United States remains a key concern of public health authorities, but new statistics unveiled by the CDC show that the problem is getting worse. In a teleconference with reporters on June 7, **Anne Schuchat**, MD, the CDC's principal deputy director, noted that in 2016 alone, 45,000 people committed suicide, and that suicide is one of only three leading causes of death that are increasing (Alzheimer's disease and drug overdoses are the other two).

Specifically, according to data from the National Vital Statistics System and the CDC's National Violent Death Reporting System, between 1999 and 2016, suicide rates increased among all age groups younger than 75 years of age, although the problem was most apparent among middle-aged adults.

"We're seeing middle-aged adults have higher rates of drug overdoses, and we're also seeing the so-called deaths of despair emerging in some of the social sciences literature," Schuchat said. "I can say that increases in suicide tend to correlate with economic downturns, and some of the economic downturns may have left some middle-aged populations really hard hit, but there are probably many factors that feed into the findings."

Schuchat also noted that nearly all states had increasing suicide rates between 1999 and 2016, and 25 states saw rate increases of more than 30%. Among the leading methods of suicide, the most common was firearms, followed by hanging, suffocation, and poisoning, which includes opioids, Schuchat explained.

"Opioids were present in 31% of the individuals who died by suicide and were considered the means of death," she said. "Firearms have shown up as [the method] for nearly half [of suicides] consistently over time."

While there may be some under-recognition of mental health conditions in the data regarding suicide, Schuchat stressed that it is clear that this is more than a mental health issue.

"We know we need improved access and treatment for mental health conditions and better recognition and diagnostics because there are still stigmas and still reasons that people don't present for care, but we think that a comprehensive approach to suicide is what's needed to ensure that we can prevent suicide and identify concerns earlier," she said. "If we only look at this as a mental health condition, or mental health issue, we won't make the proper diagnosis that we need."

Schuchat urged healthcare providers to be particularly attuned to significant transitions in their patients' lives. Whether this involves career changes, moving in or out of the military, or moving from one healthcare setting to another, such moves can be the source of considerable stress, she said.

"We think high-quality, ongoing care focused on patient safety and suicide prevention is important for health systems to build into their approaches, and [they need to] train providers in adopting proven treatments for patients at risk for suicide," Schuchat said.

To prioritize prevention, the CDC has developed Preventing Suicide: A Technical Package of Policy, Programs, and Practices that states and communities can use to strengthen their efforts in this area. *(Editor's Note: Readers can learn more information about this program online at: https://bit.ly/2AnZWRU.)*

Schuchat noted that health and behavioral healthcare providers play an important role to ensure that people at risk of suicide are identified and provided with appropriate interventions. "Policies and protocols that prioritize patient safety and that help get people into ongoing care, especially during care transitions, can help prevent suicide," she said. ■

Emergency Providers Sound Alarm on Persistent Critical Drug Shortages

Clinicians express frustration with the severe shortage of commonly used IV opioid analgesic drugs, worry about ED readiness

Drug shortages have become a fact of life for emergency physicians in recent years, but the problem has reached a point where many are saying that it is jeopardizing their ability to provide care.

In a poll conducted by the American College of Emergency Physicians (ACEP) between April 25 and May 6, 91% of emergency physicians reported experiencing shortages of a critical medication in the previous month, and 36% said drug shortages had negatively affected patient outcomes.

Further, 27% of survey respondents indicated that their EDs were not "completely ready" to respond to disaster-related surges, and 17% said their facilities were "not at all" ready.[1]

Other healthcare stakeholders are similarly concerned. The American Medical Association has declared the ongoing drug shortages an urgent health crisis, and the American Society of Health-System Pharmacists (ASHP) is calling on policymakers to address what they call the persistent shortages of critical medicines.

The news on this front isn't all dire. Experts note that there are fewer drug shortages today than there have been in other years.

However, they also acknowledge that some shortages, especially regarding commonly used injectable opioid drugs, are longer-lasting and more significant than other drug shortages providers have faced over the last decade.

Emergency providers echoed these sentiments to *ED Management*. They noted their frustration with a problem that should be eminently solvable. Nonetheless, clinicians are working with hospital pharmacists to conserve critical drugs for those patients most in need, and to find alternative therapies for drugs they have long relied on in their practice.

Establish Workarounds

Maryann Mazer-Amirshahi, PharmD, MD, MPH, is an emergency medicine physician at MedStar Washington Hospital Center who has worked as a registered pharmacist in both inpatient and outpatient settings for a decade.

She notes that while there may be fewer drugs on shortage than in other years, the current shortages she is experiencing in her emergency medicine practice are more severe, affecting patient care. For example, Mazer-Amirshahi notes that supplies of several IV opioid analgesic drugs have been running low, making it difficult for providers to access even second-line options for the

EXECUTIVE SUMMARY

There may be fewer drug shortages than in other recent years, but some shortages are more severe, according to experts. Emergency providers report these shortages are affecting patient care. In particular, emergency providers are struggling to deal with a shortage of IV opioid analgesic drugs that has been in effect since the end of 2017. They are working with hospital pharmacists to conserve such drugs for patients most in need and to find alternative therapies.

- In a recent poll conducted by the American College of Emergency Physicians, 91% of emergency providers reported experiencing shortages of critical medications in the previous month. More than half of respondents reported concerns about the readiness of their EDs to respond to a potential disaster.
- Emergency providers report there have been recent shortages of morphine, IV hydromorphone, and IV fentanyl, the top three injectable opioid pain relievers. Providers also have seen shortages of injectable anti-nausea medications.
- Using substitute medications heightens the potential for errors. Experts urge clinicians to prioritize patient safety when opting for alternative therapies to which they may not be accustomed.
- Experts advise hospitals and pharmacists to establish an ethical framework for distributing medications that are in short supply.

treatment of pain. "There have been shortages recently of IV morphine, IV hydromorphone, and IV fentanyl, so basically the top three injectable opioid pain relievers that we are using are out on shortage," Mazer-Amirshahi explains. "Before, when you would reach for an alternative, you actually had an alternative to reach for."

Susan Derry, MD, an emergency physician at Providence St. Peter Hospital in Olympia, WA, is experiencing similar challenges.

"The biggest shortages at my current facility are Dilaudid and morphine. Before I can give someone pain medication, I have to ask what do we have, and then I need to be more cognizant of side effects for medications because we are rationing Dilaudid for people only with renal failure," Derry explains. "We were supposed to use morphine [as an alternative], but then we ran out."

Derry observes that there is not much of a problem with drug-seeking behavior in her community ED. Washington has established a strong policy against treating chronic pain in the emergency setting.

"I don't think [drug seeking] is as bad here as in some other places I have worked, but when you are needing to treat someone's pain and you can't, that is problematic," she stresses.

Mazer-Amirshahi says that emergency providers have run into similar problems with shortages of injectable anti-nausea drugs.

"When you have drugs that you use for anti-nausea and vomiting, and both of the IV formulations of the most common medicines being used are out of stock, then you have to go to oral nausea medicines, which may not work as well, particularly if the patient is vomiting," she says.

Another problematic shortage involves the small-volume saline bags used so commonly in healthcare settings, explains **Michael Ganio**, PharmD, MS, BCPS, FASHP, director of pharmacy practice and quality at the ASHP.

"That was due to the hurricanes that hit Puerto Rico and knocked out some of the manufacturing ability for Baxter," he says. "That is where they made all of their products that were shipped to the United States. That left a lot of pharmacy departments and hospitals trying to find alternative ways of administering medicines that are typically in one of those small, piggyback bags."

Sterile water also has been in short supply lately, Ganio observes.

"This is used to reconstitute a lot of medicines like antibiotics," he says. "That may not have been a shortage that a lot of physicians or providers may have known about. A lot of times, pharmacies have a way to make those drugs without those products, but it was significant enough that it was having a national impact."

However, Ganio agrees that the most pressing current shortage for emergency providers involves injectable opioids. "Hydromorphone and fentanyl have all been on backorder and in short supply since the end of last year," he says. "We know that providers and pharmacists working together are developing recommendations to use non-opioid injectable alternatives, to use oral opioid alternatives, to use non-pharmacologic pain treatments when possible, and to really look at the entire patient to try to treat pain without primarily using hydromorphone or morphine."

In many cases, hospitals or health systems are putting restrictions on who can use these medications, Ganio notes. For example, hospitals might restrict the medications for use with patients suffering from burns or traumatic injuries. "They might have this type of restriction in place to conserve as much as they can for when they are really going to need the injectable opioids," Ganio offers.

Prioritize Safety

Pharmacy departments also will search a wholesaler's inventory to see if different strengths of a needed drug are available. These departments will stock that strength or dosage until they can obtain the dosage or strength that they normally use.

"They may be buying in larger sizes or multi-dose vials and then repackaging the dosages into syringes that are more appropriate for patient administration," says Ganio. "There is some compounding involved."

However, such strategies can heighten the potential for adverse consequences.

"Any time you deviate from your normal practice, you have a risk of a medication error," Ganio says. "We know that conversion among opioids can be dangerous. If a prescriber is used to ordering morphine, and the hospital is out of morphine, and they have to order hydromorphone, the physician and the pharmacist should make sure that the dose is converted correctly."

Ganio notes that back in 2010, there were two deaths associated with incorrect conversions between morphine and hydromorphone that were reported to the Institute for Safe Medication Practices.

"Communication among all the disciplines is very important. The

electronic medical record [EMR] over the last 10 years has become a really helpful tool in making sure that we can alert providers [to errors], even at the point of dispensing from an automated dispensing cabinet," Ganio says. "The technology has the ability to bring up an alert on the screen to remind the nurse or whatever provider is accessing the medicine that the medicine is a different strength than what he or she is used to administering."

Derry acknowledges that recalculating dosages and resorting to alternative therapies may offer the side benefit of strengthening a clinician's skills, but such tactics definitely elevate risks.

"We ran out of D50 [a formulation of dextrose], and we were trying to treat diabetic insulin overdoses or hypoglycemic episodes," she says. "When you don't have any D50, you are doing complex math to figure out how much D10 you need to give to an adult because you have D10."

Further, Derry notes that when clinicians cannot access the therapies they are accustomed to using and must go to an alternative, clinicians may be unfamiliar with the side effects or contraindications of the substitute.

"You are doing just so much more thinking. It removes you from what your standard practice was, and opens you up for making errors with patients," Derry says. "That is our biggest concern."

Anticipate Shortages

At MedStar Washington Hospital Center, Mazer-Amirshahi notes that pharmacists try to be proactive when they get word of potential shortages.

"The hospital pharmacists monitor the FDA's website and the other website provided through the ASHP that posts information about upcoming shortages," she says.[2,3] "One of the things they will do is send out information [to clinicians] that a drug is going to be on shortage in the near future and offer things we can do to conserve it."

For instance, in anticipation of IV pain medication shortages, clinicians will be advised to use oral medications when possible. Also, instead of keeping certain medications in the automatic dispensing machines, the hospital pharmacy might keep those drugs in a central location and distribute them more on an as-needed basis, Mazer-Amirshahi shares.

When the shortages are in effect, the pharmacists will send information to providers, letting them know what substitutes they have available and how the alternative medications should be used. This information includes detailed instructions

regarding dosage adjustments and intervals, potential side effects, contraindications, and recommendations for patient monitoring.

"We make sure that everybody is on the same page about how to use the alternative drugs, which some [clinicians] may not have used in a while," Mazer-Amirshahi says.

For example, during a recent shortage of IV Pepcid, the hospital pharmacists alerted clinicians that they were able to obtain an alternative medicine in the same class.

"The pharmacists did education about it so that all the nurses and physicians knew this was what we were going to be using so that we could use it safely," Mazer-Amirshahi says.

Use ED-based Pharmacists

Hospital pharmacists are engaged in similar activities at Providence St. Peter Hospital, Derry reports.

"I work for a pretty large hospital system. Pharmacists are working across hospitals to try and smooth the impact of shortages across facilities, and provide early warning of upcoming shortages so that we can ... try to modify what we are doing ahead of time," she says. "They will put hard stops [in the EMR] so we don't order and deliver a drug that we are trying to reserve for critically in-need patients."

The collaboration between hospital pharmacists and emergency physicians has been a huge asset, Derry asserts.

"We have a very strong ED-based pharmacist staff, along with the central pharmacy staff, largely because we have such huge advocacy for emergency medicine," she says. "We are at the forefront of the central pharmacy's mind because we have someone in our department with their finger on the problem."

For instance, when auto-injectors containing Narcan were recalled, the pharmacists prepared syringes of the drug so that clinicians would have a continuous supply ready to treat overdose patients.

NO ONE SOLUTION IS GOING TO ADDRESS THE RECURRING DRUG SHORTAGE ISSUE SUCCESSFULLY, MAZER-AMIRSHAHI ADVISES.

"They helped with that problem so that we weren't at the bedside trying to do math and remember how much Narcan to give," Derry recalls. "The pharmacists did that for us."

Derry adds that ED-based pharmacists can help emergency providers develop a deeper knowledge base on many therapies that can be used as alternatives when critical drugs are on shortage.

Boost Transparency

The FDA is working behind the scenes to prevent drug shortages from causing disasters, Ganio observes.

"The agency has a reporting process where manufactures can let the FDA know that they are anticipating a disruption in their supply," he says. "The FDA has the ability to reach out to other manufacturers of that product and let them know to increase production, although it doesn't have the ability to require anyone to make any product."

Ganio concurs with other healthcare professionals that not all drug shortages are created equal. He would like to receive more information from manufacturers about potential supply disruptions and when those situations will be resolved..

"We would like to see a little bit more authority granted to the FDA to allow more requirements around reporting estimated timelines of how long the supply is going to be disrupted. A little bit more transparency from the manufacturers would be helpful," Ganio offers. "We would also like to see manufacturers have emergency preparedness plans in place so if there is a national disaster or some other catastrophic event that shuts down their facility, there is a backup plan."

No one solution is going to address the recurring drug shortage issue successfully, Mazer-Amirshahi advises.

"The problem is multifactorial. There is the economic climate, and there is also concern about the quality and safety of production facilities," she says. "If a production facility gets cited for quality problems, I don't think we should be advocating for less quality assurance and oversight. I do think we need to be advocating on a national level ... to make sure we have redundancy in our [drug] manufacturing system."

Some drugs are only made at a

single plant. If there is a problem at that one manufacturing facility, that is going to precipitate a tremendous shortage, Mazer-Amirshahi laments.

"We need to advocate for more redundancy so that we have more of a backup."

Establish a Framework

On an institutional level, Mazer-Amirshahi suggests ED leadership ensure clinicians are informed about upcoming shortages. Further, she suggests leaders outline procedures for conserving valuable resources that will be in short supply. Also, clinical leaders need to work with hospital pharmacists to develop an ethical framework for distributing limited supplies of drugs and minimizing waste.

"Going back to pain medicines, if you have a patient who is able to take medicines by mouth, that is the type of patient who doesn't necessarily need IV medications as much as someone who has just had intestinal surgery," she says. "We try to have those protocols in place so that we are using the doses we have available in an efficient way and minimizing waste, but also prioritizing them for patients who need them the most."

Certainly, it is frustrating to have to resort to such strategies, but permanent solutions to the shortage problem will take time.

"We did not get here in one step, and it is going to take multiple steps [to fix the problem]," Mazer-Amirshahi predicts. "The biggest thing is we have to ensure patient safety by being proactive and really developing a framework to use limited resources."

Derry, who also serves as a co-chair of Physicians Against Drug Shortages, would like to see more emergency physicians educate themselves about safe harbor provisions. Enacted by Congress in 1987, these provisions exempt group purchasing organizations (GPOs) from criminal penalties for taking kickbacks from suppliers.

Derry believes these provisions are anti-competitive and a key contributing factor to the drug shortage problem. Of course, GPOs were created to enable hospitals to save money by buying supplies, such as pharmaceuticals, in bulk. Yet some analysts believe the safe harbor provisions have led to a reduction in the number of drug manufacturers, thereby dampening free market competition. It is a complex matter, but Derry believes emergency physicians should be wielding their influence to resolve the drug shortage problem.

"This is a national issue, but we are on the front lines of it. From a patient perspective, we are the face of it, so it is a little bit painful for us," she says. "We need to join together [on this] for patient safety." ■

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SOURCES

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CME/CE QUESTIONS

1. **Edwin Boudreaux, PhD, a professor in the departments of emergency medicine, psychiatry, and quantitative health sciences at the University of Massachusetts Medical School, believes that one of the key contributing factors to the rising suicide rate is:**

   a. urban violence.
   b. low education levels.
   c. poor primary care.
   d. a broken mental health treatment system.

2. **Typically, in an emergency setting, universal screening for suicide risk takes place:**

   a. at triage or during the initial nursing assessment.
   b. during the patient encounter with a physician.
   c. immediately following the physician-patient encounter.
   d. during discharge.

3. **Among the leading methods of suicide identified in new CDC statistics, the most common method was:**

   a. firearms.
   b. opioids.
   c. suffocation.
   d. None of the above

4. **On dealing with critical drug shortages, Maryann Mazer-Amirshahi, PharmD, MD, MPH, an emergency physician at MedStar Washington Hospital Center, says that clinical leaders need to work with hospital pharmacists to develop which of the following for distributing limited supplies of drugs and minimizing waste?**

   a. A list of priorities
   b. A first-come, first-serve process
   c. An ethical framework
   d. A disaster plan