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INSIDE

As opioid overdose deaths reach record highs, call for systematic changes grows louder

New prescribing guidelines ask providers to think twice before prescribing opioids, consider alternatives for pain relief

It has been a stubborn issue for years, but there is now a growing consensus among most stakeholders that nothing short of systematic change will be successful in curbing the misuse of opioid drugs and the growing number of deaths attributed to such overdoses. New data suggest it's a problem that has reached epidemic proportions, and that it is leaving few areas unscathed.

Perhaps most troubling to providers, the Centers for Disease Control and Prevention (CDC) reports that overdose deaths related to prescription opioids reached an all-time high in 2014, nearing the 19,000 mark. The figure represents an increase of 16% over 2013, according to the National Center for Health Statistics.

While deaths from heroin reached 10,574 in 2014, three times the number of overdose deaths from heroin reported in 2010, the CDC notes the sharpest increases in overdose deaths resulted from the use of synthetic opioids such as oxycodone and hydrocodone. The CDC adds that deaths resulting, at least in part, from these drugs reached 5500 in 2014, nearly double the figure reported in 2013. Overall, the agency reports that drug overdose deaths reached 47,055 in 2014, up from 43,982 the year before, and more than half of these deaths (61%) involved the use of opioids.

Consider draft guidelines

There is no question that stemming this dangerous tide will be complicated. Officials note that while physicians are prescribing fewer opioids than they have in the past, the result is that many patients are turning to illicit sources. Indeed, the CDC reports that misuse of prescription opioids is the most reliable predictor of heroin abuse. (*See: "Study: Opioid-naive patients at higher risk of becoming opioid abusers when prescribed opioids upon hospital discharge," page 16.*)

What can emergency providers and other healthcare professionals do

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to make a dent in this problem? There is no shortage of suggestions. For instance, the CDC has issued draft recommendations, suggesting that physicians turn to non-opioid alternatives, such as physical therapy and non-opioid analgesics, to treat chronic pain — at least before considering more powerful pain relievers. Further, when opioids must be used, the recommendations direct prescribers to select shorter-acting rather than extended-release versions and to prescribe the lowest possible dose for shorter terms.

In another, perhaps more controversial, suggestion, the recommendations call for physicians to ask patients to take urine tests before prescribing opioids and to continue requiring urine tests at least once per year if patients continue taking the drugs. This is to make sure that patients are not taking other opioids or illegal substances in addition to their prescribed dosage.

The CDC notes that opioid abuse frequently begins with treatment for acute pain, and that three or fewer days on the drugs is usually enough for non-traumatic pain that is not related to major surgery. When prescribing opioids, the agency said that physicians should incorporate strategies to mitigate risk. In particular, the draft guidelines suggest offering naloxone — a drug that can quickly reverse the effects of an opioid overdose — to patients who are on high doses of opioids, have had overdoses in the past, or have a history of substance abuse.

When releasing the draft guidelines in the federal register for review in mid-December, CDC Director **Tom Frieden**, MD, MPH, said the agency wants physicians to understand that starting a patient on an opioid is a "momentous decision." He added that while the benefits are unproven, the risks include addiction and death. To view or comment on the draft guidelines, open the docket in the federal register through this link: *Regulations.gov (docket # CDC-2015-0112)*.

Recognize scope of the problem

In a research letter published in *JAMA Internal Medicine* in mid-December, **Jonathan Chen**, MD, PhD, an instructor in the Department of Medicine at Stanford University, and colleagues made the case that the prescription drug abuse problem is not a matter of a few healthcare professionals prescribing too many drugs. Rather, the researchers found that a broad section of medical professionals prescribe opioids, including nurse practitioners, physician assistants, and dentists, as well as physicians. The authors said that the over-prescribing of opioids is a problem many healthcare professionals share. Consequently, the authors made the case that fixing the problem will require large-scale changes in the way providers prescribe these powerful drugs.[1]

Chen and colleagues based their findings on an examination of Medicare claims from 2013 to see which providers were prescribing opioids as well as how many prescriptions they were writing. While previous research has suggested a small group of providers write most opioid prescriptions, Chen and colleagues found that 57% of the prescriptions are written by 10% of physicians, nurse practitioners, physician assistants, and dentists.

The authors noted that this figure is in line with prescriptions for other types of drugs. They noted that 10% of physicians are generally responsible for 63% of prescriptions

overall. What this told the researchers, according to Chen, is that there is "nothing special about opioids," and that addressing the problem will require public health initiatives that focus on all providers as opposed to a small subset of providers.

Choose evidence-based solutions

Even before the CDC unveiled its draft guidelines for providers, a panel of experts, led by researchers from the Johns Hopkins Bloomberg School of Public Health, unveiled a sweeping report on the prescription opioid epidemic, calling for changes on multiple levels. The report, "The Prescription Opioid Epidemic: An Evidence-based Approach," recommends improvements in the way opioids are prescribed and dispensed as well as in the way patients with addictions or overdoses are identified and managed in the healthcare system. (*The full report is available at: http://www.jhsph.edu/research/centers-and-institutes/center-for-drug-safety-and-effectiveness/opioid-epidemic-town-hall-2015/2015-prescription-opioid-epidemic-report.pdf.*)

"Drug overdose deaths in the United States outnumber deaths from firearms and motor vehicle crashes. Gunshot deaths, vehicle crashes, and opioid overdoses are all preventable injuries, but only one — the prescription opioid problem — originates in the healthcare system," noted **Michael Botticelli**, MEd, director of the White House Office of National Drug Control Policy, at a forum to discuss the new report on Nov. 17, 2015.

"We know the opioid crisis is far from over," Botticelli continued. "We also know that the public health consequences of this crisis stretch beyond overdoses and include new cases of substance use disorders requiring treatment, babies born exposed to opioids and requiring treatment for withdrawal in the neonatal intensive care unit, and outbreaks of injection-related infections, including HIV and hepatitis C."

Shannon Frattaroli, PhD, MPH, the editor of the report and an associate professor at the Johns Hopkins Bloomberg School of Public Health, notes that in formulating the recommendations, the authors wanted to make sure that research findings were translated into actionable recommendations and policies.

"We agreed on three guiding principles to take us forward that included making sure that we respected and recognized the need for people who are in chronic pain to have safe access to these drugs," she says. "We wanted to make sure that our efforts were comprehensive in nature so that we could take a full approach to the problem. We also wanted to make sure that we came away from this process with some real, actionable recommendations so that the science could inform how policymakers, community members, and stakeholders in this process could act to stem the tide."

Frattaroli adds that in injury prevention, researchers and policymakers have had a number of successes with intervening in problems that cause injury and death across the population.

"We are very focused on understanding the problem, identifying interventions, and bringing those

EXECUTIVE SUMMARY

With deaths from opioid overdoses up sharply, a number of organizations are calling for systematic changes to curb the prescription of opioids while also making it easier for patients with addiction problems to access evidence-based treatment. New data from the National Center for Health Statistics underscore the scope of the problem: Deaths related to prescription overdoses reached an all-time high in 2014, nearing the 19,000 mark. Deaths linked to heroin reached 10,574, a three-fold increase from 2010.

- In response to the opioid problem, the CDC has unveiled draft guidelines directing physicians to consider alternative treatments for pain before turning to opioids. When opioids must be used, the guidelines encourage physicians to opt for shorter-acting versions rather than extended-release forms, and they suggest that physicians incorporate strategies to mitigate the risk of overdose, such as offering naloxone to patients in specific high-risk groups.
- The draft guidelines also call for physicians to ask patients to take urine tests before prescribing opioids, and to continue requiring the urine tests at least once per year if patients continue on the drugs. This is to identify patients who may be supplementing their prescribed dosages.
- New research reported in *JAMA Internal Medicine* suggests that the over-prescribing of opioids is a problem shared by a broad cross-section of health professionals, not a small subset, as some have suggested.
- A new report, led by researchers at the Johns Hopkins School of Public Health, recommends significant improvements in the way opioids are prescribed and dispensed as well as in the way patients with addictions or overdoses are identified and managed in the healthcare system.

interventions to the population," she says. "It is an approach that starts at the manufacturing stage and ends at the community stage with everything in between, a comprehensive approach to figuring out how the science can best inform solutions to some of our most pressing public health problems."

The report offers 37 specific recommendations that are broken down into seven categories, including:

- prescribing guidelines;
- prescription drug monitoring programs (PDMP);
- pharmacy benefit managers and pharmacies;
- engineering strategies;
- overdose education and naloxone distribution programs;
- addiction treatment;
- community-based prevention strategies.

Consider alternative treatments

Of particular importance to providers, the report calls for the repeal of existing "permissive and lax prescription laws and rules." It also calls for the oversight of pain treatment and for physician training in both pain management as well as opioid prescribing in particular. In addition, the report recommends the creation of a residency in pain medicine for medical school graduates.

The authors stated that the use of PDMPs should be mandated, and that PDMP data should be accessible to licensing boards and law enforcement when investigating "high-risk prescribers and dispensers."

Christopher Jones, PharmD, MPH, the director of science policy in the U.S. Department of Health and Human Services (HHS) in Washington, DC, notes that while the recommendations represent a comprehensive approach to the prescription opioid problem, the suggested changes focused on access to addiction treatment align most forcefully with HHS initiatives.

"We have an evidence-based modality that is not being provided and historically has not been pursued in the same way that we have pursued

Opioid-naive patients at high risk

New research suggests that opioid-naive patients who receive opioid prescriptions upon discharge from the hospital are five times more likely to become chronic opioid users than patients who are not given opioids upon discharge.[1] Investigators from the University of Colorado's Anschutz Medical Campus reached these findings after reviewing the records of more than 6600 patients who were prescribed opioids when they were discharged from the hospital. None of these patients had received a prescription for opioids in the previous year. However, 1688 patients obtained a refill of their prescribed opioids within 72 hours of discharge.

While investigators looked at both medical and surgical patients who received opioids when they were discharged, the medical patients were more likely to become chronic users of opioids after one year, although both groups showed increased risk of chronic opioid use. Further, in the study population, hydrocodone and oxycodone were the most frequently prescribed opioids.

In an announcement about the study findings, **Susan Calcaterra**, MD, MPH, the lead author and an assistant professor of medicine at the University of Colorado School of Medicine, noted that these patients were more likely to become chronic opioid users and had an increased number of opioid refills one year after discharge when compared to patients who did not receive opioids at discharge.

Calcaterra observed that one contributing factor to the findings is the fact that hospital patients are typically not cared for by their family physicians while in the hospital. She stated that a person's primary care provider is more likely to be aware of any past substance use issues and whether he or she might be susceptible to an opioid abuse problem.

In light of these findings, the authors suggested that clinicians need to screen patients for risk factors, including previous or current substance abuse, heavy alcohol use, or mental health diagnoses that are not under control before discharging patients. They also advise clinicians to consider whether alternative pain relievers might be a better option for certain patients.

Another step that would be helpful is linking electronic medical records to prescription drug monitoring programs, according to Calcaterra. This would enable physicians to evaluate what medications patients have received from other providers. ■

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other evidence-based treatments," he says, referring to medication-assisted treatment. "Part of that is the stigma issue, part of it is providers understanding what it is, and part of it is patients understanding what it is."

Jones observes that the report spells out a number of recommendations that address these issues, including a call to educate both prescribers and pharmacists on how to prevent, identify, and treat opioid addiction, and a suggestion to develop and disseminate a public education campaign to boost awareness about the role of treatment in addressing opioid addiction.

"Certainly there is a fundamental lack of education around appropriate pain management — not just in the use of opiates, but in multidisciplinary care [and] the use of non-pharmacological interventions or non-opioid interventions," Jones says, noting that federal funds are going toward the development of curricula on pain management. "It has to happen in concert with the work that we are doing around opioid prescribing guidelines that the CDC has been working on."

Jones adds that clinicians need to be provided with the education and tools to make informed prescribing decisions. "The data reflect that some people who have plenty of access to opioids have not received quality pain management. It is really about what is the right modality or modalities for a particular patient," he says. "In some cases that may be opioids; in some cases it may be taking [the patients] off opioids and putting them on a therapy that may be better for them."

Botticelli observes that the report's recommendations strike a good balance between emphasizing the need for physicians to consider alternatives to opioids while also recognizing that patients need appropriate access to an array of pain management strategies.

"We need to be careful that the pendulum doesn't swing in the opposite direction," he adds.

Providers also need to do a better job of communicating with patients about why they are receiving a particular treatment for pain, what they can expect from the treatment, and what the risks are, Jones says. For instance, he explains that patients need to know what other conditions or drugs they have that could contribute to their risk of experiencing an overdose, and they need direction on how to store and dispose of the drugs properly. Further, he stresses that patients need to understand the importance of not sharing their drugs with friends or family members.

> "WHEN WE LOOK AT WHO IS DYING, A SIGNIFICANT FRACTION OF THOSE PEOPLE HAVE AN UNDERLYING SUBSTANCE USE DISORDER. WE KNOW FROM THE DATA THAT PROVIDING TREATMENT FOR THOSE PATIENTS CAN REDUCE THEIR OVERDOSE RISK, AND IT IS NOT BEING DONE."

"That [practice] certainly is contributing to the public health problem," he adds.

Joshua Sharfstein, MD, the associate dean for public health practice and training at the Johns Hopkins Bloomberg School of Public Health and a signatory to the report, adds that providers also need to specify to patients when it is time to stop taking their drugs, noting that this point is not always clear.

Facilitate treatment

Under the category of addiction treatment, the report recommends investments in the surveillance of opioid addiction, the expansion of access to buprenorphine treatment, more treatment funding for communities with high rates of opioid addiction, and a requirement that federally funded treatment programs provide patients with access to buprenorphine or methadone.

"When we look at who is dying, a significant fraction of those people have an underlying substance use disorder. We know from the data that providing medication-assisted treatment for those patients can reduce their overdose risk, and it is not being done," Jones says.

Botticelli echoes these sentiments, noting that buprenorphine and methadone were designed to be delivered in primary care settings, not in specialty clinics.

"Unfortunately, we have too few physicians who have taken up prescribing these [drugs]," he says.

Consequently, Botticelli says HHS is exploring how best to increase the number of providers who are able to prescribe these drugs as well as

increasing the capacity within the primary healthcare system — especially within community health centers.

Sharfstein acknowledges that he has interacted with many physicians who were initially reluctant to involve themselves in addiction treatment or to take the steps necessary to prescribe buprenorphine or methadone.

"But they find it very satisfying because they are really helping their patients. Also, it is easier to treat the underlying condition," he says. "There is evidence that you can treat HIV, chronic liver disease, and other conditions better if the person is also in effective addiction treatment."

Botticelli agrees with this point, noting that many people with substance use disorders have comorbid medical conditions as well, particularly HIV and viral hepatitis.

"Being able to get holistic, integrated care in one setting becomes really important because we know that to get good outcomes in any one of those domains you have to be looking at good treatment across domains," he explains.

Sharfstein observes that while PDMPs enable providers to find out whether patients are doctor shopping or potentially misusing prescription opioids, the information is not necessarily used to help patients access needed treatment for addiction problems. Jones agrees, noting that as a pharmacist, he is pretty good at identifying people who are misusing drugs, and that PDMPs can help with that, but his formal training did not prepare him on how to proceed from there.

"Education is fundamental in what we do next. We certainly know that discharging patients from a practice if they have an addiction doesn't change the fact that they have an addiction, and certainly it doesn't get them into treatment," Jones notes. "It does public health no good just to say [to a patient] that [he or she] is out of your practice. It doesn't solve the problem. It perpetuates the problem."

Jones adds that education initiatives need to offer providers information on how to leverage the information they receive from PDMPs most effectively and how to connect patients with the care they need. He further points out that providers need to know the treatment resources in their communities, and that more providers need to be data-waived to provide buprenorphine.

"WHILE WE KNOW WE HAVE TO DIMINISH THE SUPPLY AND THE PRESCRIBING, WE ALSO HAVE TO MAKE SURE PEOPLE HAVE ACCESS TO CARE AND TREATMENT. WE DON'T WANT PEOPLE MOVING TO HEROIN BECAUSE IT IS CHEAP AND READILY AVAILABLE."

"There are opportunities to link the upstream concerns around prescribing with connecting patients into treatment," he says.

Botticelli agrees that providers are missing multiple intervention points with people who have misused prescription pain medications, but he observes that there are some innovative programs at the state and local levels through which pharmacists and providers who identify people with a problem are able to refer them into treatment programs.

"They have cemented that relationship between prescribers and treatment programs to accelerate and increase the probability that someone is getting into care," he offers. "Part of what we know about the increase in heroin use is that four-fifths of newer users to heroin started by misusing a pain medication. While we know we need to diminish the supply and the prescribing, we also have to make sure people have access to care and treatment. We don't want people moving to heroin because it is cheap and readily available in many parts of the country."

Make naloxone accessible, affordable

With respect to naloxone, the report calls on developers to design formulations of the drug that are both easier to use by non-medical personnel and less expensive to deliver, and it recommends better coverage for naloxone products. The authors also called for the development of consensus guidelines on the co-prescription of naloxone with prescription opioids.

"One of the recommendations that the report makes is to look at the co-prescription of naloxone with certain opioids at certain doses," Frattaroli says. "It is one of those areas we can get very specific about where this resource should be targeted to specific populations who are receiving these very high doses of opioids."

Jones adds that there is, in fact, a

general consensus that certain types of patients should be receiving naloxone, including people who have experienced a previous overdose and people leaving EDs following treatment for an overdose.

"A previous overdose is probably the strongest predictor of a future overdose," he says.

However, Jones also acknowledges that the high cost of naloxone remains a significant barrier.

"One of the things we have been trying to do at the federal level is to make sure that either existing grant programs or new grant streams are available for naloxone purchase at the community level," he says. "We do have some limited money and part of the president's budget proposal in fiscal year 2016 will continue to look at additional dollars for naloxone purchases."

The experts speaking at the forum agreed that patients with an addiction problem often require a number of different treatments or services.

"[They] often have many co-occurring conditions, so giving them buprenorphine, methadone, or naltrexone is going to address one side of it and potentially stabilize them to address the other issues," Jones notes. "It is important to consider counseling and other diversion mitigation measures as well … to make sure high quality care is being offered. The data show that there is clearly a benefit of providing buprenorphine or methadone or naltrexone, but we get the most robust response, and a holistic patient response, when we have additional behavioral health and medical measures." ■

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Crowded EDs leaving proven strategies for improving patient flow on the table

Investigators acknowledge there are no easy fixes to the problem and that culture change, hospital-wide interventions may be needed to make progress at many facilities

Despite the fact that ED crowding is associated with a range of concerning outcomes, including higher mortality rates, higher rates of complications, and increased errors, there is new evidence many EDs are leaving proven strategies for improvement in this area on the table. In a study looking at crowding at U.S. hospitals from 2007-2010, researchers found that while the adoption of interventions to reduce crowding has increased, some of the most crowded EDs have failed to take advantage of approaches that have been shown to work.[1]

Leah Honigman Warner, MD, MPH, an attending physician in the Department of Emergency Medicine at Long Island Jewish Medical Center in New Hyde Park, NY, and the lead author of the study, notes that the data suggest ED crowding is still not a priority at many hospitals.

"ED crowding has become increasingly commonplace and I worry that a crowded ED is now the new status quo, which reduces the incentive to change," she explains. "Additionally, since the influx of patients to the ED cannot be easily controlled, on first glance ED crowding might seem difficult to change. However, many [interventions] actually affect the efficiency by which patients are cared for in the ED or reduce the amount of time admitted patients are kept in the ED."

Researchers evaluated the adoption of both ED-based and hospital-level interventions. The ED-level tactics reviewed included:

- bedside registration;
- use of an electronic tracking system or dashboard;
- computer-assisted triage, which

involves using algorithms to improve the reliability of triage decisions;

• zone nursing, which ensures that all of a nurse's patients are in one area;

• establishment of a fast-track area for patients with minor illnesses or injuries;

• increasing the number of ED beds;

• physically expanding ED space;

• establishment of an ED-based observation unit;

• radio frequency identification (RFID) tracking, in which patients receive tags so that their physical location can be tracked and monitored throughout their ED stay.

The hospital-level tactics reviewed included:

• bed census availability or a system that lets staff know the number and type of beds that are available;

• avoiding elective admissions during ambulance diversion;

• pooled nursing or maintaining supplemental staff who work on a flexible schedule based on patient volume;

• use of a bed czar whose job is to manage beds hospital-wide and to ensure the efficient transfer of ED patients to inpatient beds;

• full-capacity protocol, in which admitted ED patients are moved to inpatient areas so that the burden of patient boarding is not borne entirely by ED staff;

• transfer of boarded patients to inpatient hallways, similar to full-capacity protocol;

• establishment of a separate operating room for ED patients;

• surgical schedule smoothing, which involves planning surgical procedures over six or seven days to match the availability of inpatient beds.

Take a multidisciplinary approach

Investigators found that the average number of interventions adopted increased during the four-year study period from 5.2% to 6.6%. However, while the most crowded EDs increased their implementation of crowding interventions, their adoption of interventions that have been shown to work was still lacking. For instance, researchers found that 19% of the most crowded EDs did not use bedside registration and that 94% did not adopt surgical schedule smoothing. (*See also: "Focused effort boosts throughput, efficiency in two-thirds of participants in 42-hospital collaborative," page 21.*)

Why wouldn't hospitals take advantage of proven strategies? The reasons most likely vary, but investigators acknowledge that addressing a problem like crowding is not an easy process for a hospital.

"It involves putting together a multidisciplinary team that needs longitudinally to conduct quality improvement interventions. Sometimes it involves buying technology to try to facilitate some of the interventions, which can involve costs. It is not something that has an easy fix," explains **Jesse Pines**, MD, MBA, director of the Office of Clinical Practice Innovation and a professor of emergency medicine and health policy at the George Washington University School of Medicine and Health Sciences and a co-author of the study. "It requires both considerable staff time and often trying to change the culture of how people operate within the hospital. The reason a lot of hospitals haven't done it is because although there are evidence-based fixes out there, they are hard to achieve and they involve a lot of time and energy."

However, Pines adds that it is clear some hospitals have prioritized crowding while others have not.

"What we found in the study is that many of the hospitals that were most crowded really had not implemented a lot of these interventions that are easier to do," he says.

For example, Pines notes that bedside registration, in which registrars enter the ED so that they can register patients right from their beds,

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While there is a plethora of proven strategies to address crowding, some of the most crowded EDs have failed to take full advantage of these tactics, according to a new study that examined the adoption of a range of both ED-based and hospital-wide interventions at hospitals between 2007 and 2010. The investigators are calling for a national strategy to address crowding as well as the implementation of new measures. They also say that more steps need to be taken so that hospital leaders are held accountable for ED crowding.

• Researchers found that the average number of interventions adopted to reduce crowding increased during the study period from 5.2% to 6.6%, but that some of the most crowded facilities failed to adopt interventions that have been proven to work well.

• For instance, 19% of the most crowded EDs did not use bedside registration and 94% did not adopt surgical schedule smoothing, an intervention that can be adopted at little or no cost.

• Investigators note that the hospitals that have been successful at addressing ED crowding are those that embrace systemic solutions.

thereby eliminating a step from the process, is not particularly difficult to implement, but he notes that many hospitals have not moved to implement this intervention.

Embrace systemic solutions

Investigators note that some hospitals have failed to implement two proven interventions that can be implemented at little or no cost: surgical schedule smoothing and full capacity protocol. But Pines acknowledges that while these interventions require little in the way of resources, they are not necessarily easy fixes.

"With the full capacity protocol, [for example], you've got to work with both the ED and other departments at the hospital and come to an agreement of what the hospital is going to do when the ED is overrun with patients, and that is even harder than getting stakeholders in the ED to agree on making a change," he explains. "There is still in many hospitals a silo mentality where everyone is trying to protect their own units — the ORs, the ED, the ICU, and the hospital floors — and there is not a great priority to improve flow throughout the hospital."

However, while many of these units or floors have a fixed capacity, the ED has no top-off valve, Pines observes.

"People will continue to come to the ED regardless of whether there is space, so that tends to really disadvantage EDs because there is no right of refusal in the ED," he says.

Another issue that can come into play is economics, according to Pines. That may, for example, be why hospitals may continue to perform elective procedures even while their ED is on diversion.

Focused effort boosts throughput, efficiency

During an 18-month period, 42 hospitals in 16 communities worked collaboratively to improve patient flow, and the results are encouraging. Investigators reported that two-thirds of the participating hospitals showed improvement on at least one of four measures:

- discharged length-of-stay (LOS);
- admitted LOS;
- boarding time;
- left without being seen (LWBS) rate.[1]

The hospitals were invited to participate through the Aligning Forces for Quality (AF4Q) program, an initiative of the Princeton, NJ-based Robert Wood Johnson Foundation. Each hospital identified one or more interventions that they intended to implement to improve patient flow, and then submitted data on the four measures. In addition, the hospitals regularly provided reports about any challenges they encountered and solutions to these challenges. Investigators reported that the 42 hospitals implemented a total of 172 interventions between October 2010 and March 2012. Among the two-thirds of participants that showed improvement, the average reduction in discharged LOS was 26 minutes, the average reduction in admitted LOS was 36.5 minutes, average reduction in boarding time was 20.9 minutes, and LWBS rates declined by 1.4 percentage points. While most participants demonstrated improvement during the collaborative, investigators reported that 14 hospitals did not make any progress on patient flow.

Jesse Pines, MD, MBA, a study co-author, observes that it is clear that to be successful in any type of quality improvement (QI), several ingredients are necessary. "You need a local leader who can be a champion. You need the support from management over time where it is really a priority and where whatever unit is trying to make a change gets the resources they need. You need the ability to look at data. You really need staying power over time so that [the QI effort] is not just a flash in the pan that is important for a couple of weeks and then goes away," Pines says. "You really do need a sustained effort to keep things going. There is a tendency to slide back to the old way of doing things and you see this in many examples of quality improvement."

Pines explains that, not unexpectedly, investigators traced improvement to these four key ingredients in the 42-hospital collaborative. "The hospitals that were not able to really have a champion, engaged leadership, and sustained power over time were not able to improve their ED flow in any real way and sustain it over time," he says. However, Pines observes that collaborative efforts, through which participants regularly share solutions and ideas with each other, are very effective at keeping people engaged so that successful interventions can be sustained. "When there is peer-to-peer coaching, and you can hear the lessons from other people who are trying to do something similar … that can be very effective at [helping people] conceptualize how to do things locally," he says. ■

REFERENCE

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"Elective procedures tend to have higher margins than patients who are admitted through the ED, so despite losing the influx of low-margin patients, hospitals make the economic decision to maintain the inflow of high-margin patients because they are more profitable," he explains.

Economics also may have something to do with the finding that the number of ED-based observation units actually declined during the study period, although Pines acknowledges that he was surprised by this decline.

"ED observation units can be very effective, particularly at reducing admissions for patients who just need short-term hospital care," he explains, noting that patients with such conditions as chest pain, cellulitis, or asthma are often treated in observation units. "The fact is that you can bill more for an inpatient bed than for an observation bed in the ED, so in a world where you think you can fill beds with patients who will have a full admission to the hospital, it would make sense to focus on creating more inpatient beds."

Warner observes that the hospitals that have been successful at addressing ED crowding are those that embrace systemic solutions.

"ED leaders should collaborate with hospital leadership to develop solutions to reduce crowding. There are many evidence-based interventions, both which we evaluated as well as others, that should be considered," she says. "Some would simply require a change in protocol [inpatient boarding through a full capacity protocol], while others would require changes in staffing [pooled nursing and surgical schedule smoothing]. Other interventions require more capital investment, such as upgraded technology or the creation of new treatment space [observation units or fast tracks]."

Warner adds that once ED crowding is recognized as an issue that affects the entire hospital, it should be easier to find successful solutions.

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Hold leaders accountable

Pines is calling for a national strategy to hold hospitals accountable for flow in the ED. He notes this has already begun with new measures for patient flow, and he hopes to see the issue gain more prominence in pay-for-performance initiatives.

Pines would also like to see the United States follow the lead of other countries in adopting limits for how long a patient can remain in the ED, with hospital leaders held accountable for their performance in adhering to such limits.

"The United Kingdom, back in 2003, implemented what is called the four-hour rule where patients could only be in the ED for up to four hours. Beyond that was unacceptable, and hospital leaders would be held responsible," he explains. "Since then, the rule has been relaxed, but there are still major priorities for ED flow in the United Kingdom."

Similarly, Pines notes that Australia's rule does not allow patients to spend more than eight hours in an ED.

"Personally, I think that is a more reasonable target, given the complexity of patients that are seen in the ED, and the time it actually takes to sort out whether they need to be admitted," Pines observes. ■

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SOURCES

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In wake of terrorist attacks, hospitals scrutinize protection plans and procedures

With much of the country on edge after the terrorist attacks in Paris and the ISIS-inspired mass shooting in San Bernardino, CA, hospital security plans are under added scrutiny. After the Paris attacks, both the Department of Homeland Security (DHS) and U.S. Department of Health and Human Services directed healthcare providers to review their emergency plans and design drills that incorporate scenarios that are informed by recent events.

Federal officials also called on providers to review their processes and procedures for active shooters and the reporting of suspicious activity, and to scrutinize their preparedness to deal with improvised explosive devices. Further, DHS noted that training and awareness initiatives should be reviewed along with the mechanisms providers have in place to conduct safety briefings. The DHS added that officials need to ensure that all emergency communications equipment is functioning properly and that regular tests of the equipment are being conducted.

While hospitals are understandably reluctant to share details about their specific security practices, officials acknowledge that the potential for such threats is a serious concern.

"The safety and security of Mayo Clinic's patients, visitors, and employees has always been and will always be a top priority," stresses **Roger Hofer**, MD, the medical director of security at the Mayo Clinic in Rochester, MN. "Because of recent events in the world and regionally, awareness is heightened, but training and preparation have always been part of our security practice."

Hofer adds that the Mayo Clinic uses DHS's training program "Run, Hide, Fight" as the basis for its general staff education, and that patients, visitors, and staff are strongly encouraged to be vigilant and to report any suspicious activities or behaviors.

Officials at Grady Memorial Hospital in Atlanta are similarly tight-lipped regarding their specific security practices, but note that they are ready to adapt and change to keep patients and staff safe.

"We have close working relationships with federal, state, and local law enforcement and emergency preparedness agencies who keep us abreast of current local and regional threats," explains **Lori Wood**, the director of emergency management at the Grady Health System. "We use this information to provide situational awareness for hospital leadership and to modify hospital emergency plans when needed."

The DHS stresses that early recognition and reporting of suspicious activity is "the first line of defense" in defending against terrorist acts, and it offers a range of resources for healthcare organizations to use in training staff to come forward with any such concerns. These include:

- Materials and recommendations for promoting the "If you see something, say something" campaign: *http://www.dhs.gov/see-something-say-something*.
- Training on how to recognize and report suspicious activity in healthcare settings: *https://nsi.ncirc.gov/hsptregistration/health/?AspxAutoDetectCookieSupport=1*.
- A list of suspicious indicators and behaviors that should be reported: *https://nsi.ncirc.gov/documents/SAR_for_Public_Health_and_Health_Care_Partners_and_Indicators.pdf*.
- A critical infrastructure page where authorized persons can obtain the latest information about current threats: *http://www.dhs.gov/critical-infrastructure-0*. ■

CME/CE OBJECTIVES

After completing this activity, participants will be able to:

1. Apply new information about various approaches to ED management;
2. Discuss how developments in the regulatory arena apply to the ED setting; and
3. Implement managerial procedures suggested by your peers in the publication.

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CME/CE QUESTIONS

1. **What is the most reliable predictor of heroin abuse, according to the Centers for Disease Control and Prevention (CDC)?**

   A. Misuse of prescription opioids
   B. A history of IV drug use
   C. A diagnosis of chronic pain
   D. A pattern of doctor shopping

2. **When prescribing opioids, the CDC says that physicians should incorporate strategies to mitigate risk. In particular, new draft guidelines suggest offering _____ to patients who are taking high doses of opioids, have had overdoses in the past, or have a history of substance abuse.**

   A. counseling
   B. monthly follow-up appointments
   C. naloxone
   D. addiction treatment

3. **In a study looking at the adoption of interventions to address crowding, which two proven, cost-effective interventions have some hospitals failed to implement?**

   A. zone nursing and avoiding elective admissions during ambulance diversion
   B. establishment of a separate operating room for ED patients and pooled nursing
   C. bedside registration and use of an electronic tracking system
   D. surgical schedule smoothing and full capacity protocol

4. **Hospitals that have been successful at addressing ED crowding are those that:**

   A. do the best job of tracking data.
   B. embrace systemic solutions.
   C. focus on ED-based interventions.
   D. employ specialized consultants.