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INSIDE

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Alarming Rates of Mortality in Patients with Opioid Use Disorder Should Spur Action

Experts note only a small percentage of patients with this disorder are treated by addiction specialists or specialty clinics, and that other medical settings must develop innovative solutions

In yet more evidence of the toll that opioid use is taking on Americans, investigators report that patients with opioid use disorder (OUD) who are seen in general medical settings demonstrate much higher rates of mortality than the general population. In a population of 2,576 adults with OUD in a large healthcare system, researchers found that 476 patients died after four years of follow-up for a mortality rate of 18.1%, 10 times that of the general population.[1]

Another notable finding from this research: The average age of the participants when first diagnosed with OUD was 41 years, and the patients exhibited high rates of other physical and mental health conditions as well as additional types of substance use disorders. In fact, while 19% of the deaths were directly attributable to OUD, most of the patients died from other causes, such as cardiovascular disease, cancer, and infectious diseases such as hepatitis C. Nonetheless, investigators noted that such health complications likely worsened as a result of OUD.

The authors noted that while other studies have found mortality rates among patients with OUD to be roughly four times higher than the general population, most of these studies have been conducted among patients treated in specialty addiction clinics. Their conclusion was that much more must be done in general medical settings, including the emergency environment as well as primary care, to identify OUD in patients at an earlier stage and link them with effective treatment.

Indeed, some states are making progress along these lines with innovative solutions designed to connect frontline providers with critical information at the time patients with OUD present to an ED, and more effective approaches for linking these patients with appropriate care.

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Identify Barriers to Diagnosis

Although this study did not address why patients with OUD are diagnosed at such a late stage, **Andrew Saxon**, MD, one of the co-authors of the paper and the director of the Center for Excellence in Substance Abuse Treatment and Education (CESATE) in the VA Puget Sound Health Care System in Seattle, believes there are several contributing factors.

"There is no convenient and easy way to screen for opioid use disorder or any other type of substance use disorder other than alcohol and tobacco in primary care settings," Saxon observes. "Primary care physicians are being asked to take care of a plethora of problems in a very short visit while also, depending on the health system, being mandated to screen for a whole variety of different disorders."

In addition, Saxon notes some patients are not aware they have a problem with opioids while others are reluctant to disclose such a problem.

"They know if they tell their doctor they are having a problem with opioids the doctor might cut them off, so they do everything they can to disguise they have a disorder ... or at least to disguise the fact that they know they are not taking the medication as prescribed," he says.

On top of these barriers, Saxon notes that many physicians lack the training to diagnose and treat patients with OUD.

Saxon, who spent four years working as an emergency physician, notes that many of the same barriers that primary care physicians face are evident in busy EDs as well, although emergency physicians often see patients who present with the consequences of an OUD.

The diagnosis may be clear in the case of an overdose, but there are more subtle signs of OUD as well.

"Emergency physicians are under incredible pressure to move people through ... but they see people coming in with symptoms of withdrawal ... and pain complaints may be out of proportion to what an injury seems to be," he says.

Leverage Screening Tools

Larissa Mooney, MD, associate clinical professor in the UCLA Department of Psychiatry and Biobehavioral Sciences, director of the UCLA Addiction Medicine Clinic, and a co-author of the study, explains that the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) identifies 11 criteria for an OUD. *(http://bit.ly/1HQyThD)*

"What it boils down to in terms of the diagnosis is loss of control, overuse, and use even despite harmful consequences," she explains, noting that cravings also are on the list of criteria. "That is how we define addiction or a substance use disorder."

Mooney notes there are screening instruments such as the Drug Abuse Screening Test *(http://bit.ly/2r7rhW9)* that frontline clinicians can use to assess risk. For patients with chronic pain, she suggests the Screener and Opioid Assessment for Patients with Pain *(http://bit.ly/2s9zDLt)*.

"These instruments can be administered in just a few minutes, especially if you have a multidisciplinary team or you have a nurse or a social worker who can administer the screen," Mooney advises.

While such tools do not necessarily provide the clinician with a diagnosis, they can create a clinical picture to prompt clinicians to delve into the issue more deeply, she says.

However, when busy providers lack training in this area or resources for referral, they may be less inclined to go down the road of a potential OUD diagnosis. There is literature about the reasons why providers may not be screening for these disorders.

"Of course, one of the reasons is time. Other reasons include that [OUD] is not on their radar, they lack expertise, or they don't know what to do if the person endorses [the diagnosis]," Mooney says.

Although the barriers to diagnosis are substantial, one irony is that patients with OUD tend to use the healthcare system frequently, so clinicians are missing opportunities to intervene.

"We know that untreated substance use disorders complicate the treatment of other chronic medical illnesses, so individuals with substance use disorders have higher rates of psychiatric and medical comorbidities, they are seen more frequently in primary care, and they are seen more frequently in the ED," Mooney says. "And the substance use is making those other conditions harder to treat, so these patients tend to have poor clinical outcomes for other medical conditions and higher mortality rates."

Left untreated, a certain percentage of patients who have become addicted to prescription opioids will switch to heroin because they have run out of their prescription supply or their substance abuse has become too costly, Mooney adds.

"Then, a certain percentage that use heroin will start using via IV, and some people addicted to prescription opioids can also use them via IV, and then you introduce all new risk factors like infectious disease transmission," she says.

EXECUTIVE SUMMARY

With a new study showing alarming rates of mortality among patients with opioid use disorder (OUD) who are seen in general medical settings, experts stress that healthcare organizations and policymakers must create innovative solutions to ensure that OUD is diagnosed at an early stage, and that all care settings are equipped with the training and mechanisms to link these patients with effective treatment.

- In a population of 2,576 adults with OUD in a large healthcare system, researchers found that 476 patients died after four years of follow-up for a mortality rate of 18.1%, 10 times that of the general population.
- The average age of patients when first diagnosed with OUD was 41 years, and the patients exhibited high rates of other mental and physical illnesses.
- One model used in some emergency settings to link patients with OUD to care is Screening, Brief Intervention, and Referral to Treatment, but the approach requires partners who can take over the care of the patients following initial treatment with an FDA-approved medication in the ED.
- The Medicaid program in Washington has made steady progress trimming both the number of prescription opioid deaths and the number of prescriptions for opioids written in EDs through clinical leadership, an electronic information exchange that connects all EDs in the state, and a system of feedback on opioid prescribing.
- The state is working to facilitate access for patients with OUD to addiction specialists and medication-assisted treatment, and it is pursuing behavioral integration.

Provide Training, Resources

The stunning data regarding the mortality and morbidity associated with OUD are a wake-up call for providers in all settings to do more, Mooney stresses. "This highlights an opportunity for us to think about new and innovative ways to address this problem earlier," she says. "Primary care [offices] and emergency departments are often either a first point of contact for patients with this disorder or they are places where these patients are frequently being seen."

Most of the patients with OUD never make it to a specialty addiction treatment clinic or facility, Mooney notes. "Only a small percentage of these patients seek treatment or get referred there," she says. "I don't think the specialty clinics or facilities can even handle the need with this opioid epidemic right now."

One promising model being used in some emergency settings is Screening, Brief Intervention, and Referral to Treatment, or SBIRT. *(http://bit.ly/2jR56A6)*, but it requires the ED to engage in partnerships with treatment facilities, primary care providers, or addiction specialists who can take over the care of patients once they have been discharged from the ED.

In the SBIRT model, patients experiencing withdrawal from

opioids receive a brief conversation or intervention during which a clinician will educate the patient about his or her substance use and the risks involved. The patient then can receive an initial dose of buprenorphine or another FDA-approved medication for opioid addiction while in the ED, and then the clinician will hand off care to a partnering provider who will take over management of the patient with an evidence-based medication-assisted treatment (MAT) plan.

Mooney notes that SBIRT is a reimbursable procedure that clinicians can bill for, but she stresses that training is an important component, and health systems must figure out how they can make this type of multidisciplinary program available to patients most efficiently.

"Opioid use disorder and overdose deaths are on the rise, and we really need to think about ways to integrate screening, identification, and treatment in general healthcare settings before these patients reach the point of a very severe disorder or a fatality," Mooney stresses. "This is an opportunity for us to work on ways to identify OUD earlier on in the course of the illness and in multiple types of healthcare settings where these patients are being seen."

Engage all Stakeholders

While most experts agree that healthcare organizations need to employ systems-level approaches to make headway in dealing with the opioid crisis, Washington has shown that tackling the problem at an even higher level can deliver broader dividends.

"What is important about [our] model is that it is multifaceted," observes **Daniel Lessler**, MD, MPH, the chief medical officer of the Washington State Health Care Authority in Olympia, WA. "We are not just doing this or that. It is a much more comprehensive approach."

The multi-year state effort has involved a collaboration between the Washington chapter of the American College of Emergency Physicians (ACEP) as well as the Washington State Hospital Association and the Washington State Health Care Authority, which governs Medicaid, and the results are impressive.

"There has been a continual reduction in opiate deaths from prescription opiates in this state, year over year, for several years now, so our prescription opiates are implicated in fewer opiate deaths," he says.

Lessler acknowledges that at the same time, deaths related to heroin or synthetic "street" fentanyl have increased, although he notes that such deaths have leveled off in the past year or two.

In addition to the gains related to adverse outcomes related to prescription opioids, there have been significant improvements in provider prescription practices.

"What we have seen is a marked reduction in the number of ED-initiated opiate prescriptions, number one, and number two, a marked reduction in the number of pills prescribed when an opiate prescription is provided," Lessler observes. "Fewer opiate prescriptions and fewer pills per opiate prescription."

Begin with Clinical Leadership

Several factors contributed to these improvements, but clinical leadership has been key, Lessler notes. First, emergency physicians in the state, led by the state chapter of ACEP, developed and disseminated a clinical policy about opioid prescribing in the emergency setting. In turn, the state Medicaid program has worked with EDs in the state to collect data on opioid prescribing and then feed that data back to individual EDs.

"That has, in many cases, been not just at the ED level, but at the provider level within the ED," Lessler observes. "Here is where leadership comes in again, because you have a medical director of the ED who actually sits down with the whole team or individuals and reviews that feedback. I think that is a critical part."

Another critical piece of the state's approach is the development of a health information exchange through which all the EDs in the state have access to medical information about patients who have accessed care in any ED.

"If a person goes to an ED in Yakima, is prescribed pain medicine, and is given a care plan that is placed in his medical record, and then that same person goes to an ED in Seattle the next day, that Seattle ED will immediately know what that patient received in Yakima, what was done, whether there is a care plan, and what that care plan is, particularly in terms of opiate management," Lessler explains.

This prevents patients from accessing prescriptions for opioids at multiple locations, but it also offers an opportunity to identify patients with an OUD and to take steps to intervene. For this population, the state Medicaid program has developed a patient review and coordination (PRC) program.

"It basically involves connecting patients with a care manager who will help to coordinate their care," Lessler says.

For example, the care coordinator may contact the patient to discuss his or her pain management needs or to complete an assessment to determine if the patient has an OUD. The care manager then can connect the patient to appropriate resources, Lessler explains.

Leverage Telemedicine

The state continues to be challenged with a dearth of both pain specialists and mental healthcare providers, particularly in rural parts of the state, notes Lessler, who adds that there has been progress on that front. For example, pain specialists at the University of Washington (UW) have developed a teleconference model to support physicians of all types who treat patients with complex pain conditions.

"The twice-weekly conference has psychiatrists, pain specialists, rehabilitation physicians, and addiction specialists seated around a table, and [providers] can attend via teleconferencing," Lessler says. "Cases get presented and discussed."

In addition, the state has worked with UW to develop a hotline staffed by trained PharmDs that physicians can use to present a case and get help on everything from how to taper the dose for a patient who is on a powerful pain medication to how to manage complex pain medicine regimens.

"It could be for any provider who is struggling to manage a patient who has been on opiates for chronic pain and is not doing well," Lessler observes. "The hotline offers real-time assistance in terms of how to manage patients in that kind of complex situation."

The two programs, the teleconference model and the PharmD hotline, refer physicians to the other resource so that providers in need of specialty assistance are well aware of both options, Lessler observes.

Leverage Access to MAT

As far as mental health is concerned, there are numerous initiatives in the works. The state is considering telemedicine solutions in this area as well, and it has taken steps to ensure that MAT is available broadly through Medicaid.

"We have removed virtually all restrictions and prior authorization [requirements]," Lessler observes. "We are working with the practice community where we have providers who can supply Suboxone [buprenorphine and naloxone], and we encourage them to do that."

Lessler notes that the number of patients on Suboxone in the state has tripled in recent years, but he stresses there is more to do. The state just received an $11 million grant from the Substance Abuse and Mental Health Services Administration to work toward implementing a "hub and spoke" model in which there will be a hub of providers that can handle the initial inductions, in which patients are placed on Suboxone and stabilized, and then there will be providers who can pick up the care of these patients, managing them on an ongoing basis.

The state also has a mandate to pursue what Lessler refers to as behavioral health integration, whereby mental healthcare and chemical dependency treatment are administered and paid for through the same system that administers and pays for physical healthcare.

"When you pool the money and you hold a single entity accountable for the whole person, that is what drives toward better care," Lessler says. "Financial integration doesn't guarantee clinical integration, but without beginning with the financial integration, we are not going to get clinical integration, so that is where we are headed."

The mandate from state lawmakers is that by 2020, Medicaid will be providing fully integrated physical, mental, and behavioral healthcare, Lessler adds. It's just one more piece to an ongoing improvement process, he says.

Lessler advises colleagues that there is no simple solution for making progress on the opioid crisis. "Whatever you do, to succeed it is going to take a lot of hard work," he says. "You need to find the leadership, you've got to engage multiple stakeholders, and you need that collaboration." ■

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Health Promotion Advocate Extends Benefits Offered to Adolescents, Young Adults

These advocates identify risky behaviors and needs, link patients with care and resources, and use motivational interviewing techniques to nudge patients toward positive behavioral changes

With all they have on their plates, emergency personnel generally are not enthusiastic about taking on new preventive health initiatives, but a unique program that aims to identify and respond to risky and unsafe behaviors in adolescents and young adults who present to the ED has won over both providers and staff at Boston Medical Center (BMC).

At the heart of the approach is the creation of a new health promotion advocate (HPA) role, a position designed to encompass both clinical medicine and public health in the emergency setting. Individuals serving as HPAs are trained to connect with young patients, identify risks as well as needs, and to use motivational interviewing techniques to nudge patients away from risky or unsafe behaviors. Also important, HPAs are armed with an impressive array of resources they can provide to young patients, ranging from substance abuse treatment and mental healthcare to housing, food assistance, or even help in obtaining a general education diploma.

While it is difficult to document preventive outcomes, one new study shows that the approach is effective at identifying and connecting young patients with needed care, much of it focused on substance abuse. Between 2009 and 2013, investigators reported that HPAs screened 2,149 pediatric patients 14-21 years of age, and referred 834 of these individuals for services to address identified health risks. Of 785 patients in this group who screened positive for at-risk substance abuse, 636 received a brief intervention, and 546 were connected to specialized substance abuse treatment.[1]

The conclusion of the study was that HPAs who work as part of the pediatric emergency medicine team can extend the benefits offered in the ED beyond treatment of the presenting complaint.

Earlier studies have shown that the HPA model can be leveraged with other interventions to positively affect drug and alcohol use behaviors and increase access to primary care.[2-4] Although the results are modest, emergency providers at BMC approve of the HPA role, noting that it gives them a shot at connecting high-risk patients with the kind of interventions that can positively affect their overall healthcare trajectories. Further, they believe it's an approach that may make sense for other EDs, especially those that serve high-risk populations.

EXECUTIVE SUMMARY

Innovators at Boston Medical Center (BMC) have created a unique health promotion advocate (HPA) role to extend the benefits they can offer to adolescents and young adults who present to the pediatric ED. The HPAs actively round in the department, targeting patients 14-21 years of age, using a health and safety survey to identify risks and needs. The HPAs then work with physicians and nurses to link patients with services, ranging from substance abuse treatment and mental healthcare to housing and food assistance.

- The HPA role grew out of similar work that was happening with adult populations at BMC through a Substance Abuse and Mental Health Services Administration-funded program called Project ASSERT (Alcohol & Substance Abuse Services, Education, and Referral to Treatment).
- The HPAs are trained in how to establish a rapport most effectively with young patients and to leverage motivational interviewing techniques to nudge patients away from risky or unsafe behaviors.
- Emergency providers at BMC are enthusiastic about the HPA role, noting that it gives them a shot at connecting high-risk patients with the kind of interventions that can positively affect their overall healthcare trajectories.

Focus on Health, Safety Needs

The HPA role grew out of similar work that was happening with adult populations at BMC through a Substance Abuse and Mental Health Services Administration-funded program called Project ASSERT (Alcohol & Substance Abuse Services, Education, and Referral to Treatment), explains **David Dorfman**, MD, chief of the division of pediatric emergency medicine at BMC.

"We started to then apply some

of these approaches to patients in the pediatric ED, realizing that we were seeing adolescents and young adults with drug-related issues," he says. "Then, once we had the resource [of an HPA] through our research efforts, we then decided it was working well, and people appreciated it."

Another motivating factor for adoption of the HPA role in the pediatric ED was the fact that social workers there already had their hands full.

"Most of their issues were about neglect and abuse, and [these matters] were taking up most of their time," Dorfman observes. "We felt that we were missing a large group in our population that we could help with other kinds of social and lifestyle issues, and that we could be doing more for these patients."

The model used in Project ASSERT was adapted and refined to fit the needs of adolescents and young adults by **Edward Bernstein**, MD, an emergency medicine physician and the director of Project ASSERT at BMC.

"It's not just about alcohol and drugs. These patients have an array of issues ... and that came through in our research," he says. "We had high rates of PTSD, depression, anxiety, and [there were] children with special needs."

Bernstein developed a health and safety survey for the HPAs to use that encompasses everything from safe sex and drug and alcohol use to smoking, behavioral health, and access to primary care.

"Basically, [the HPAs] go room to room without any profiling and they just introduce themselves as health promotion advocates," he explains. "They ask if the patient has a few minutes to chat and find out how things are going for [the patient] ... and what sort of needs they have."

HPAs may be able to provide resources to patients, and they may work with patients to develop a plan. "It is like a friendly conversation, and nobody has really turned them down," Bernstein offers. "If parents are in the room, [the HPA] might ask them to step out after informing them what is in the survey."

The overarching goal of the program is to interrupt the problematic health trajectory that lies ahead for many of the young patients who present to the pediatric ED, problems that clinicians already can see in the adult population, Bernstein observes.

"We definitely wanted something that was trauma-informed, respectful, and that young people could relate to ... so we [integrated into the role] the peer model of community in-reach, motivational interviewing, and screening and intervention," he says.

New data on the approach collected between January 2015 and November 2016 found that more than one-third of patients approached by HPAs lacked access to primary care, and so these patients were referred to an adolescent clinic, Bernstein explains.

"The big issue was safe sex practices if the patients were sexually active; 65% of those surveyed were sexually active, and 43% didn't use any birth control or contraception," he says. These patients received safe sex education and were offered condoms.

Bernstein adds that 65% of patients surveyed used drugs or alcohol in an unsafe way, with more than half using marijuana and alcohol. Many of these patients received alcohol and drug education along with a brief motivational interview. Patients identified with severe problems in this area were linked with either an inpatient or outpatient program.

"We have a lot of internal resources at BMC. It is sort of a hub for addiction and at-risk alcohol and drug use," he says. "We provide these services, and we also have community linkages to a lot of other resources."

Initially, the pediatric ED-based HPAs tended to work with the social worker, identifying patients potentially in need of screening through electronic flags, but the approach has evolved to where HPAs round on all patients. "You can walk around and very easily pop your head in each room and round with the nurses as well as always be an active presence on the unit," explains **Karin Rallo**, RN, the nurse manager in the ED at BMC. "It is much less restrictive to be on the unit rounding than it is to be in the office going through medical histories."

Further, Rallo stresses that active rounding is imperative given that many patient needs are not captured on medical charts. For example, patients often need food or housing, or there may be problems at home that interfere with their ability to access care or to get to school. It may take only five minutes to effectively intervene, she observes. "In some cases, people have complex needs that take longer, but other people have needs that are very simple," she says, noting that HPAs can direct patients to nearby food banks when basic necessities are an issue.

Rallo stresses that the patient population at BMC is very challenging demographically. "One of the primary complaints in the pediatric ED here is homelessness, so there is a lot of room to help," she says. Further, she notes that the HPA program has grown to where the nurses, physicians, and HPAs collaborate well together.

"We have huddles in the pediatric ED three times a day, and the health promotion advocates are at those huddles," she says. "Not only are they roaming around the unit and surveying who we have here for

patients, but they are also at the huddles to hear pressing issues that we may be having as far as flow issues, bed capacity, and things like that. And their ears are already turning from that perspective to assess what they can do to help patients."

For example, Rallo notes that when the ED is backed up with patients, it may mean that the HPAs have more time to spend with patients, and they may be interacting with people in the waiting room. When a medical or social work-related need is identified through the health and safety conversation, the HPAs are trained to work with the nurse and the primary emergency physician to arrange for appropriate referrals.

Maximize Downtime

Dorfman notes that there has been no problem fitting the HPA role into the workflow of the ED. "Even if the place is busy, most ED visits are long, with a lot of downtime between tests," he explains. "When there is a break between nursing or physician interventions, and the patient is in the room alone, [the HPAs] will go in and introduce themselves, explain what they are there for, and start a conversation with the patient."

If the nurse comes back with an IV, the HPA will step outside until the procedure is completed, says Dorfman, noting that there is never any disruption to the care process. "The people who [serve as HPAs] have been well-integrated into the role, and the nurses and the physicians really appreciate having them there," he says. "The advantage is that this is an extra person, and the physicians and nurses understand that [the HPA role] is important."

In cases in which a patient is in a lot of pain or distress, the HPA will defer interacting with this person until later in the visit when he or she is more comfortable, Dorfman explains. "Obviously, there are some patients who are in and out and never get approached by the HPA," he says. "It is really about approaching as many patients as we can and coaching the HPAs to be as proactive as possible."

Bernstein stresses that there is no required trigger to prompt an HPA to interact with a patient. "We are not profiling. We are not waiting until someone has a serious problem to talk to them," he says. "This is primary prevention."

However, any social or other issues that are uncovered by the HPA are documented in the medical record. "There is a page that addresses all these needs, whether it is food security, housing security, or whatever the need may be," Bernstein explains. "All these needs are identified and that record goes with the patients to primary care."

Nurture HPA Candidates

By training, the HPAs come from myriad health backgrounds, Bernstein explains. "The last several [HPAs] had public health backgrounds because this is really trying to integrate public health into clinical practice, so those folks did very well in the role because they were health educators," he explains. "We educated them at our institute for motivational interviewing and screening."

Alternatively, one HPA had a license in drug and alcohol counseling as well as a mental health background in a community-based program. "The HPAs need to have some background in adolescents, good communications skills, and they need to be able to be flexible to fit in with the busy ED and not be intimidated," Bernstein offers. "They can't be sitting in a corner waiting to be called. They have to be really good at mixing [with different types of people], respecting diversity, and communicating well with people of all backgrounds."

The HPA program is fortunate to have a ready supply of interns available through the Boston University School of Public Health. The interns work under a supervising HPA, learn about the role, and help the HPA round on patients and provide services. They also can help bridge gaps when the HPA position is open.

While the HPAs have diverse educational backgrounds, they must be able to approach patients in a friendly, supportive, non-judgmental manner, Bernstein observes. "That is what our training is about, along with how to use the health and safety survey, how to get the most out of it, how to build resources, and then make the referrals," he says.

Identify Resources

With any prevention effort, it is difficult to document benefits or to show a direct link to a particular intervention. Further, it would take years of very expensive research to determine whether an HPA-driven intervention produced the intended effect of curbing unsafe or unhealthy behaviors. However, Bernstein observes that BMC has developed a mission geared toward addressing the social determinants of health, and the HPA approach fits this mission well.

"The reality is we have our fingers on the pulse of a person when we check him or her out in the ED, but we also have our fingers on the pulse of the community, and we get to see patterns," Bernstein says. "That is how we developed some of our pro-

grams. We get to identify things that pass the threshold of a normal visit."

Program administrators emphasize that a lot of the difficulties young people face do not arise from medical problems, but rather inadequate housing or education, food insecurity, or other social issues. Many young people cope with their problems through drinking or drug use.

Bernstein recalls the case of one young woman who was in the ED because of her marijuana use. "In questioning her and trying to find out what was going on, she said her mother had been overdosing on heroin, and so we were able to provide her with a naloxone rescue kit," he says. "We actually found out through follow-up that she had actually used it and saved her mother's life."

Bernstein stresses that the idea behind the HPA program is not to wait for that moment when a person has a sexually transmitted disease or another bad outcome.

"We want to avoid that, but it is a teachable moment when people are a little bit more open to hearing what you have to say," he explains. "For those people who are seriously impaired by risky behaviors, we definitely want to connect them with things that are much more permanent, so the treatment system is there for them."

One outcome that should not be overlooked is the effect the HPA program has had on practitioners, Dorfman observes.

"It has had a very positive effect on nursing and the physicians," he says. "It lessens your sense of hopelessness sometimes about your patients."

However, integral to this provider satisfaction is the array of resources that the emergency staff have at their disposal.

"When we identify someone [with a drug or alcohol use problem], we can at least offer them the chance of a real referral to outpatient management, and that has been a great thing," Dorfman shares. "And that is mostly about opioids."

Key to the success of the HPA program is collaboration and knowing who the patient population is, Rallo notes.

"There is really no substitution for hands-on rounding in the department. You have to have an active presence to know what is going on," she says.

For instance, if there is a new drug in the community that is affecting kids, everyone in the ED must be up to speed on this development, Rallo notes.

"The dynamic changes from day to day, and it can change from season to season, so really making sure everyone is on the right page is important," she says. "Nurses will often let the health promotion advocate know that there is a concern if the HPA hasn't had a chance to round on a patient yet or if he or she has been tied up with somebody else," Rallo says.

Conversely, HPAs will let nurses know about new resources they have identified and how they can be accessed during times when the HPAs are not on campus, Rallo advises.

"Collaboration is key ... and not being afraid to poke your head in [a room] and actually talk to a family," she says.

Bernstein stresses that starting something like the HPA program begins with a culture in the ED that embraces patients with drug or alcohol use problems on an equal footing with patients who present with other medical problems.

"Our diabetics don't always eat the right foods or exercise or show up at their appointments. They often come into the ED out of control, and we don't beat up on them," he says. "I think there needs to be more of a sense of responsibility that our mission is beyond treating and streeting." ■

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Study: Reverse Triage Can Make a Meaningful Contribution to Capacity Creation

Hospitals and emergency personnel devote considerable time and energy developing surge plans for when a disaster, mass casualty event, or an infectious disease outbreak pushes hospitals beyond their normal capacity to take care of patients. But what happens when the demand for care primarily comes from pediatric patients?

"There is a fair amount of literature out there [suggesting] that should something happen to a large group of kids, even with a network of hospitals prepared to care for them, [the system] can get overwhelmed fairly quickly," explains **Gabor Kelen**, MD, FRCP(C), FACEP, FAAEM, director of the department of emergency medicine and the office of critical event preparedness and response at Johns Hopkins University School of Medicine in Baltimore.

In developing solutions for such scenarios, Kelen and colleagues analyzed data on inpatients from seven pediatric units during 196 mock disaster days over a period of one year to see if reverse triage, a strategy commonly used during surges of adult patients, also could be effective at relieving pressure on hospitals caring for pediatric patients.

In a sampling of 501 inpatients, investigators found that more than 10% were eligible for immediate, low-risk reverse triage, meaning that these patients did not require any critical interventions such as IV medication or invasive procedures during the following four days. Further, investigators found that more than 13% would be eligible for low-risk reverse triage within 96 hours. When investigators applied a standard of accepting moderate risks, they found that reverse triage could expand surge capacity by 50%.[1]

While the effect of using low-risk reverse triage was modest, investigators concluded that when used with other strategies, it could have a meaningful effect on creating capacity.

The concept of reverse triage is relatively straightforward. It involves devising a way to identify patients who can be discharged earlier than protocols or routine would generally suggest to make room for patients at high risk who need immediate access to hospital resources, Kelen explains. However, making this kind of decision is more complicated with a pediatric population because young patients have unique needs.

"First of all, there is the whole ethical issue that kids can't truly make decisions for themselves," Kelen says. "You can't do shared decision-making directly with a child when you are trying to explain the risks of leaving, so their first need is for a good and responsible parent, guardian, or proxy."

In addition, Kelen notes that pediatric patients are much more dependent on the judgment of doctors, nurses, and caregivers than adult patients; they rely on others for their needs. "In the pediatric population, you may not be able to send some kids to certain homes, even if they are medically stable because whoever are the responsible people in the home may not be able to do the next step," he says. "These children may actually have to remain in the hospital a little bit longer until the [responsible adults in the home] are able to take care of the child properly."

On top of these vulnerabilities, children are physiologically different from adults, Kelen observes. "At different ages, there are different kinds of considerations as to what has to happen for a child to be sent home," he says.

However, when the unique vulnerabilities of children are accounted for, certain types of patients emerge

EXECUTIVE SUMMARY

Investigators have found that low-risk reverse triage can provide modest benefits to pediatric hospitals looking to create capacity during patient surges. The approach involves identifying patients who can be discharged early with minimal risks of an adverse outcome, but investigators noted that the unique needs of pediatric patients must be considered.

- Investigators analyzed data on inpatients from seven units during 196 mock disaster days over a period of one year, finding that in a sampling of 501 patients, more than 10% were eligible for immediate, low-risk reverse triage.
- The next step for investigators is to develop prediction rules and risk scoring for reverse triage, although they advise hospitals to consider reverse triage in their surge planning practices, basing decisions on clinician judgment at this point.

as good candidates for reverse triage, Kelen says. "Let's say you have a patient who had some kind of orthopedic surgery and has been receiving IV pain medication and antibiotics," he says. "That patient could very easily be switched over to oral medications, and a responsible parent could, in fact, monitor the wound and do wound dressings. If the patient was discharged one day earlier than otherwise planned, the risk of something going terribly wrong would be pretty minor."

Another potential candidate for reverse triage could be a patient suffering from bronchiolitis, asthma, or croup, and who is at the tail end of his treatment. "He could be switched to continuous medications, which can be given at home," Kelen observes.

Similarly, a child who has been properly treated for diabetic ketoacidosis and is close to achieving the right balance of insulin would be at very low risk under the care of a responsible parent, Kelen adds.

Explore the Concept

Capacity-freeing tactics such as reverse triage have importance to the ED. When there is a sudden influx of patients, other parts of the hospital must be able to rapidly take in the victims that emergency providers have screened and started treating, Kelen explains. "This is a way to make sure that the victims who need a further level of care have a place to get it," he says. "Otherwise, the incoming patients will completely clog the ED and take up all of those resources."

It is not just during disasters and mass-casualty events that such strategies are useful, Kelen stresses. "Many of us who are at these major institutions have experienced crowding to the level of disaster proportions," he says. "If we had these kinds of protocols to help our inpatient colleagues, the ED could unclog within 24 hours, whereas sometimes the impact of crowding takes three to five days to actually [resolve] because the inpatient services have no real way to approach the early discharge of their patients right now."

The next step for researchers is to develop prediction rules and risk-scoring for reverse triage, and eventually to offer a live score that continuously updates based on vital signs and lab results from the electronic medical record so that clinicians can predict outcomes safely, including the ability to discharge a patient safely, Kelen explains.

In the meantime, the primary message from this work is that reverse triage is one strategy to consider when a disaster strikes or when ED administrators are developing surge plans, Kelen advises. "Most people don't think about reverse triage yet, so we want to get the concept out there," he says. "Hopefully, this will stimulate thinking in ... pediatric hospitals so that even in the absence of a valid risk-scoring system, protocols will be developed."

At this point, such plans would be based primarily on clinician judgment, but they could be used to create space for patients in immediate need of hospital resources. "That would be at least an interim step, and at this hospital we are doing exactly those kinds of developments now," Kelen adds. ■

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SOURCE

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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.

COMING IN FUTURE MONTHS

- Optimally managing vertigo in the ED
- Integrating medication-assisted treatment into the emergency setting
- A new look at the appropriate use of observation medicine
- Leveraging telemedicine to bring emergency care to rural hospitals

CME/CE INSTRUCTIONS

To earn credit for this activity, please follow these instructions:

1. Read and study the activity, using the provided references for further research.

2. Log on to **AHCMedia.com** and click on My Account. First-time users must register on the site using the eight-digit subscriber number printed on their mailing label, invoice, or renewal notice.

3. Pass the online tests with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%.

4. After successfully completing the test, a credit letter will be emailed to you instantly.

5. Twice yearly after the test, your browser will be directed to an activity evaluation form, which must be completed to receive your credit letter.

CME/CE QUESTIONS

1. **Among a population of patients suffering from opioid use disorder in general medical settings, how much higher was the mortality rate compared to that of patients in the general population?**

   a. Two times
   b. Three times
   c. Five times
   d. 10 times

2. **The state of Washington has issued a mandate to pursue behavioral health integration, which is when:**

   a. mental healthcare and chemical dependency treatment are administered and paid for through the same system that administers and pays for physical healthcare.
   b. primary care and emergency providers are trained to administer treatment for more mental healthcare conditions.
   c. addiction specialists are provided on site in EDs and primary care practices.
   d. all health plans are required to reimburse for mental healthcare treatment.

3. **The overarching goal of the health promotion advocate program in the pediatric ED at Boston Medical Center is to:**

   a. get patients to admit to problematic health behaviors.
   b. help physicians and nurses administer care.
   c. interrupt the problematic health trajectory that lies ahead for many young patients.
   d. None of the above

4. **Initially, pediatric ED-based health promotion advocates (HPAs) tended to work with the social worker, identifying patients potentially in need of screening through electronic flags, but the approach has evolved to where:**

   a. the HPAs conduct their work independently.
   b. the HPAs round on all patients.
   c. the HPAs now work primarily alongside physicians.
   d. the HPAs intervene with patients identified by the nurses.