



OCTOBER 2019

Vol. 31, No. 10; p. 109-120

→ INSIDE

Michigan EDs work to eliminate low-value imaging..... 113

More scrutiny on the horizon regarding orders for advanced diagnostic imaging..... 115

Nurses are at elevated risk of suicide, but there are ways to confront the issue 116

Urgency around ensuring naloxone goes to patients and families who can benefit 119



RELIAS
MEDIA

Unique Approach Helps Address Volume, Higher-Acuity Patient Challenges

The ED at Palomar Medical Center (PMC) in Escondido, CA, has used the provider-in-triage (PIT) model for years, and it has worked well. But since the hospital moved to a new, state-of-the-art facility in 2012, volume has nearly doubled, creating new throughput challenges. The problem became even more intense when a neighboring hospital closed both its behavioral health and stabilization units earlier this year, creating considerable pressure on the ED to manage a new group of behavioral health patients, many of whom are under psychiatric holds.

Realizing the current PIT approach was no longer keeping up with the volume demands, physicians and nurses in the ED collaborated on a new approach that combines elements of both the PIT and split-flow models as well as a waterfall approach to shifts. The early results have been dramatic.

Less than one month into the new approach, patient turnaround time in the ED is down substantially and the left-without-treatment (LWT) rate, a trouble sign for the department, has

declined to near zero. All this has been accomplished without any additional spending or resources.

While the approach comes with inherent challenges and a level of complexity that takes some time to absorb, ED leaders are pleased with their progress thus far. They believe their journey through this implementation may offer lessons to other EDs facing similar throughput-related challenges.

The first year in the new hospital, the ED saw 68,000 patients, but that number has continued to climb, reaching 115,000 patients in 2018. “We’ve got the same thing that a lot of EDs have where we have a lot of inpatient [and] psychiatric holds. Throughput tends to be a challenge for us here,” says **Desiree Hadden**, RN, MSN, the nurse manager in the ED. “We really tried to go to the table with our physician partners and come up with a new process that could get people [through the ED] faster.” Some clues on how to proceed emerged from an analysis of the ED’s data, which revealed that the patient population the department serves differs

ReliasMedia.com

Financial Disclosure: Physician Editor **Robert Bitterman**, MD, JD, FACEP, Nurse Planner **Nicole Huff**, MBA, MSN, RN, CEN, Author **Dorothy Brooks**, Editor **Jonathan Springston**, Editor **Jill Drachenberg**, Editorial Group Manager **Leslie Coplin**, and Accreditations Manager **Amy M. Johnson**, MSN, RN, CPN, report no consultant, stockholder, speaker's bureau, research, or other financial relationships with companies having ties to this field of study.



ED MANAGEMENT

ED Management (ISSN 1044-9167) is published monthly by Relias LLC, 1010 Sync St., Ste. 100, Morrisville, NC 27560-5468. Periodicals postage paid at Morrisville, NC, and additional mailing offices. POSTMASTER: Send address changes to *ED Management*, Relias LLC, 1010 Sync St., Ste. 100, Morrisville, NC 27560-5468.

GST Registration Number: R128870672.

SUBSCRIBER INFORMATION

Customer Service: (800) 688-2421
customerservice@reliamedia.com
ReliasMedia.com

ACCREDITATION

Relias LLC is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Relias LLC designates this enduring material for a maximum of 1.25 AMA PRA Category 1 Credit(s)[™]. Physicians should claim only credit commensurate with the extent of their participation in the activity.

Relias LLC is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. Contact hours [1.25] will be awarded to participants who meet the criteria for successful completion. California Board of Registered Nursing, Provider CEP#13791.

This activity is intended for emergency physicians, ED nurses, and other clinicians. It is in effect for 36 months from the date of the publication.

Opinions expressed are not necessarily those of this publication, the executive editor, or the editorial board. Mention of products or services does not constitute endorsement. Clinical, legal, tax, and other comments are offered for general guidance only; professional counsel should be sought in specific situations.

AUTHOR: Dorothy Brooks
EDITOR: Jonathan Springston
EDITOR: Jill Drachenberg
EDITORIAL GROUP MANAGER: Leslie Coplin
ACCREDITATIONS MANAGER: Amy M. Johnson, MSN, RN, CPN

© 2019 Relias LLC. All rights reserved. No part of this newsletter may be reproduced in any form or incorporated into any information-retrieval system without the written permission of the copyright owner.

in some respects from the typical ED, according to statistics from the National Hospital Ambulatory Medical Care Survey.

“We were looking at patient distribution based on our Emergency Severity Index [ESI] [triage scores],” observes **Bruce Friedberg**, MD, FAAEM, an emergency physician (EP) and the assistant medical director in the ED at PMC. “On average, we are seeing 28% more ESI level 3s than most hospitals. Those are the patients that generally require much more extensive evaluation in the ED.”

Further, the PMC ED sees significantly fewer lower-acuity patients than the average ED. Specifically, the ED at PMC sees about 30% fewer ESI level 4 patients and 67% fewer ESI level 5 patients, Friedberg shares.

“These patients require a very limited amount of diagnostic and therapeutic evaluation and also get a much quicker disposition,” he adds.

This information prompted the medical team to consider a change to the current triage approach. Previously, the team had been directing an advanced practice provider to conduct a quick medical evaluation of patients up front and then start on workups.

“We found that this rapid evaluation is much more difficult to do consistently and correctly on these usually sicker patients, the ESI level 3s,” Friedberg observes.

Consequently, the EPs and nurses worked together with the ED's quality improvement team and the hospital's staffing partner, Emeryville, CA-based Vituity, to redesign the triage process. Under the new approach, which the ED began using in mid-July, a patient who presents to the ED is assigned an ESI score by a nurse in the waiting room. The ESI designation is based on the patient's

chief complaint and a quick evaluation. This is where a split-flow triage process begins.

“One triage room is dedicated to a triage nurse and an advanced care provider. The [lower acuity] ESI level 4s and 5s will go there,” Friedberg explains. “The second triage room is dedicated to the ESI level 3s. We call that the ‘threeage’ room, and it is staffed by a nurse and a physician.”

By staffing the threeage room with a physician and a nurse, the thinking is that these clinicians will be better equipped to assess the needs of these more complicated patients. Further, these staffers could complete appropriate tests and/or workups in progress more quickly than the advanced practice providers could previously.

“They are seeing all the ESI level 3s who are coming in with the expectation that the physician-nurse team is going to see each patient and stick with each patient throughout his or her stay in the ED,” Friedberg shares. “Physicians perform a much more expanded history and physical [on the ESI level 3 patients] in addition to and in conjunction with the triage nurse. Then, they initiate appropriate comprehensive workups with the goal of keeping those patients to completion. This way the providers are making an early connection with the patients, and they can let them know that they are going to be their provider during the entire ED stay, which is one of the most important parts of this [process].”

As part of the patient evaluation in threeage, the physician/nurse team also will determine whether the workups required can be completed while the patient is sitting in the waiting room. If so, these patients are designated “vertical 3” patients on the ED tracking board. Alternatively, the ESI level 3 patients who require a bed while workups are completed

will be placed in one as soon as a bed becomes available. These patients are designated as “horizontal 3” patients on the tracking board.

“We have set up guidelines of what makes an appropriate horizontal ESI 3 patient vs. a vertical ESI level 3 patient, and we have educated staff about this,” Friedberg notes.

The most acute patients who present to the ED, the ESI level 1 and 2 patients, largely bypass both triage rooms. Instead, they are taken into the ED immediately for care. Further, there are times when an initial ESI designation is incorrect. When that occurs, the ESI designation is changed, typically during a patient’s evaluation in one of the triage rooms, Friedberg notes.

To be sure, seeing nothing but ESI level 3 patients in the ED is intense work. Thus, the physician/nurse team fulfilling this role only does so for a three-hour shift. Then, the next physician/nurse team takes over in threeage while the first team retrieves any results or workups that were ordered for the patients who they began seeing while in threeage. The original team continues caring for these patients until their disposition, providing consistency for the patients.

“We call these waterfall shifts. They start off there [in threeage], and then flow into the back as a waterfall,” Friedberg explains. “There are five different [physician/nurse] teams throughout the day [from 8 a.m. until midnight].” Friedberg acknowledges that staff physicians were not universally enthusiastic about the new approach when it was first introduced.

“There definitely were concerns. Those three hours [in threeage] are rough. I have seen 20 patients in those three hours,” he shares. However, physicians have come to appreciate some of the benefits of the new approach. For instance, on average,

EXECUTIVE SUMMARY

A new, multifaceted triage process is credited with helping the ED at Palomar Medical Center in Escondido, CA, slash turnaround times and the left-without-treatment (LWT) rate without requiring additional spending or resources. The approach integrates elements of the provider-in-triage and split-flow models while also using waterfall-style shifts for certain physician/nurse teams in the ED.

- The model devotes one of two triage rooms to a physician/nurse team that see only Emergency Severity Index (ESI) level 3 patients, requiring more extensive evaluation. Called “threeage,” the approach is in response to the fact that the Palomar ED sees 28% more ESI level 3 patients than the typical ED.
- The physician/nurse teams serve in threeage for three hours in waterfall-style shifts, after which they float back to the ED to finish caring for the patients they evaluated during their threeage shifts.
- The other triage room, dedicated to a nurse and an advanced care provider, is for ESI level 4 and 5 patients. The higher-acuity ESI level 1 and 2 patients largely bypass triage and go straight to the back of the ED for care.
- In less than one month of using the new approach, patient turnaround times have declined by 11% and the LWT rate has gone from 2.6% in the six months prior to implementation to 0.5%.

most physicians who complete these shifts can slowly taper off seeing patients as they reach the end of their threeage shifts and complete their charts, Friedberg notes. “They are getting out on time or close to on time, which is an unheard-of thing for us,” he says.

Nonetheless, Friedberg acknowledges that the three-hour shifts in threeage probably still are too long. Most labs and other workups that are ordered for the ESI level 3 patient usually are back and ready to be reviewed and acted on before the physician/nurse teams are relieved from their threeage shifts. He envisions further tweaking of the approach.

“Just looking at the average time it takes for initial labs and radiographic studies to come back — I think two hours is probably a sweeter spot,” shares Friedberg, referring to what the ideal length for a threeage shift might be. “In the next couple of months,

we may be looking at changing the process a little bit so that the waterfall shifts are actually two hours and there are more of them. Once you leave the triage room, and you head back to the main ED, that is when the results are starting to flow back.”

While some tweaking of the approach is likely, ED leadership could not be more pleased with the early results. In fact, in just three weeks, the new process exceeded the collaborative’s initial goals, which were to reduce patient turnaround time by 10% and to curb the ED’s LWT rate.

“In less than one month we have seen our turnaround times to discharge drop ... from 248 minutes down to 220 minutes compared to [data from] the prior six months,” Friedberg reports. “What I find even more impressive is since the patient is making that initial connection with the provider and they know that this provider is going to be following

them, our LWT percentage has gone from 2.6% on average in the six months prior [to implementation of the new process] to 0.5%.”

Hadden notes that initially, the ED completed several different trial days of the new model to see how it would work under challenging circumstances.

“Mondays are always very high-volume for us, so we trialed it on a Monday. We did it on a day when one of our CTs ended up being down,” she says. “There were different results on all of these days, but all of them showed a decrease in the turnaround time to discharge and in the LWT rate.”

Administrators were particularly focused on reducing the LWT rate because they view this as a safety and quality issue as well as a financial one, Hadden notes. “Every time a patient walks out the door [before being treated], that is money that is walking out the door as well,” she says.

While the changes to the triage process are largely credited with the improvement in patient turnaround times, Hadden notes other operational tweaks have played a role, too. For instance, she says there are now two designated transporters for patients requiring diagnostic imaging to eliminate any time between radiographic procedures.

“Somebody is always getting a test, and somebody is always right outside waiting. We are just constantly keeping that going,” she says. There also

have been changes to the registration process so that it is no longer something that is completed at the end of an ED visit. Rather, the process occurs now while the patient is in the waiting room or during another downtime in the course of the visit.

“We’ve got a team of volunteers who will either bring the patient to the registration area to get registered, or the registration person will go to the patient,” Hadden shares.

For other EDs that are intrigued by the multifaceted approach to triage that PMC has implemented, Friedberg stresses that effective communication with patients is one of the most important factors to making the model effective. In particular, after patients leave triage, patients need to understand that tests are completed while they wait to hear from their providers and that things are happening.

“We have seen that patients really do appreciate the communication and getting through the ED more quickly,” Friedberg says.

Another critical factor is making sure physicians, nurses, and ancillary staff are all well-informed about how the new model works.

“We have actually been contacting each advanced care provider and physician before their shift to discuss the process, answer any questions, and make sure everyone is on the same page,” Friedberg says. “This has been a pretty radical change for us.” Before embarking on any change

process, Friedberg advises colleagues to become well acquainted with their current data.

“You have to know where you stand; the numbers don’t lie,” he says. “I think it is important to look at your ESI [acuity level] distribution. We have actually broken our turnaround time to discharge down into [sections] based on ESI [level] so we can really tell where our pinch points are located.”

For EDs with a higher percentage of ESI level 3 patients, the threeage process may offer similar benefits, Friedberg notes. Hadden adds that the model requires an actively engaged provider group and good relationships with ancillary departments.

“We meet monthly with our radiology and transport teams,” she says. “We’ve got these embedded relationships so that when we go to them and say we’ve got this initiative we want to do, they are more likely to jump in and be collaborative with it.”

The triage process still is relatively new to the ED at PMC, and there may be some fine-tuning in the months ahead. However, administrators intend to keep the new approach for the long term.

“What we see right now is that it is working and it is working well. Now, we just need to focus on sustainability,” Hadden says. “This isn’t just going to be a flavor of the month. This is something that is here to stay with our ED.” ■

Assess...

Manage...

Reduce...

Healthcare RISK

Listen to our free podcast!

Episode 4: Reflections of a Nurse: What Made Me Stay or Leave?

www.reliasmmedia.com/podcasts



Michigan EDs Collaborate to Reduce Excess Use of Certain Imaging Tests

It can be challenging to push quality improvement (QI) across a range of EDs that are run by different health-care organizations, serve different populations, and often are shaped by different cultures. But a unique payer-funded collaborative in Michigan is endeavoring to do just that. Established in 2015, the Michigan Emergency Department Improvement Collaborative (MEDIC) is seeking to identify opportunities for improvement among participating EDs and to drive practice changes that will improve outcomes and efficiency.

Among the group's first targets for improvement is low-value imaging, an area MEDIC investigators have found to be ripe for improvement among many of its participating sites.¹ Now, the group is using its scale to develop and drive quality improvement interventions at a much faster clip than might otherwise be possible in such a diverse group of EDs.

It is an intriguing model, one that MEDIC's leaders believe can offer valuable lessons to health systems and EDs in other states.

The MEDIC collaborative includes EDs from across Michigan that have agreed to show their data to investigators and to work diligently toward quality improvement. Further, there are two major requirements for participation in the collaborative, according to **Michele Nypaver**, MD, MEDIC co-director, a professor of emergency medicine and pediatrics at the University of Michigan and C.S. Mott Children's Hospital, both in Ann Arbor.

"One is [that] a site has to have a contract with Blue Cross and Blue Shield of Michigan [because] it is a funder of the program," she says. "The second requirement is that we

need a site to have a basic number of visits so that we have enough data from the site to be able to work with."

The MEDIC team recruits members annually. The goal is to create a registry that represents the demography of the state, including people from all different regions, Nypaver shares. For instance, MEDIC's research on imaging practices relied on a registry containing data on more than 1 million ED visits, 23% of which involved children.

Collecting meaningful data from the participating EDs certainly is a challenge, so MEDIC goes about the task in two different ways. First, the participating sites gather operational data such as how long patients spent in the ED, how they arrived, and similar metrics. "Those operational data points are in a data dictionary, which we ask our sites to map and give us on every single patient that visits their ED, not just the quality initiative cohorts," Nypaver says.

In addition, MEDIC uses abstractors to explore specific patient records to pull up relevant data pertaining to a particular quality initiative. "For instance, if we are looking at CT use for head injuries, there will be abstractors at [the sites] who go into the ED records of the patients who are eligible and fit that cohort. They then will [collect] additional information from the charts and add that to the clinical registry," Nypaver explains.

The idea of focusing on low-value imaging was made by MEDIC's clinical leaders in partnership with the collaborative's membership, explains **Keith Kocher**, MD, MPH, an assistant professor of emergency medicine at the University of Michigan and the other MEDIC co-director. "There is a lot of opportunity to do better around high-cost imaging decisions," he explains.

The point is bolstered by the fact that professional organizations, such as the American College of

EXECUTIVE SUMMARY

A payer-funded initiative hopes to use its scale to drive quality improvement in the emergency setting across an array of diverse EDs in Michigan. Aptly called the Michigan Emergency Department Improvement Collaborative (MEDIC), the group has identified low-value imaging as one area that is ripe for improvement across many of its sites. Now, the group is developing and implementing interventions that will improve practice in this area.

- MEDIC's research on imaging practices relied on a registry containing data on more than 1 million ED visits, 23% of which involved children.
- Looking at the data collected through MEDIC from 16 participating EDs, investigators found that there is ample room for improvement in the way imaging studies are used according to clinical rules or guidelines pertaining to when specific studies should be conducted.
- Reviewing all data for imaging tests conducted between June 1, 2016, and Oct. 31, 2017, investigators concluded that thousands of CT scans and X-rays could have been avoided, saving millions of dollars.

Emergency Physicians (ACEP), have long recognized that several imaging tests sometimes are used in circumstances where they are not in line with consensus guidelines or the available evidence.² This is important not only from the standpoint of cost, but also because providers do not want to unnecessarily expose patients to the potential harms associated with certain imaging tests. For example, there has been a push in recent years to limit the amount of radiation to which patients are exposed during CT scans.

Looking at the data collected through MEDIC from 16 participating EDs, investigators found that there is ample room for improvement in the way imaging studies are used according to clinical rules or guidelines pertaining to when specific studies should be conducted.

“Where there is high-quality evidence in particular use scenarios, we relied on that,” observes Kocher, spelling out how investigators determined when an imaging test was potentially avoidable. “For example, in children with minor head injuries, there [is guidance] that informs whether a CT should be done or not. This is called the PECARN [Pediatric Emergency Care Applied Research Network] rule.”³

Similarly, for adult patients, investigators relied on the Canadian Head CT Rule to determine whether a CT was appropriate in each case that it was used.⁴

Kocher acknowledges that there was not a comparable clinical decision rule for determining whether specific imaging tests should be used in some other clinical cases that were evaluated. However, there was enough literature and evidence for investigators to conclude that certain tests are overused. For instance, in the case of children who present with respiratory

illnesses such as asthma, bronchiolitis, and croup, Kocher notes that X-rays typically are not required to reach a diagnosis.

Reviewing all the data for imaging tests conducted between June 1, 2016, and Oct. 31, 2017, investigators concluded that 1,519 head CT scans for minor head injury; 3,308 chest X-rays for children with asthma, bronchiolitis, or croup; and 4,254 CT scans for suspected pulmonary embolism could have been avoided. This translates into a potential savings of about \$3.8 million per year, Kocher notes. Furthermore, researchers found substantial differences between the ED sites with respect to their imaging practices.

“Because there was so much variation that we saw across our sites, we know that some of them perform quite well ... we know it is possible to improve,” Kocher adds.

With these data in hand, the next step for MEDIC is to focus on its core mission, which is QI, Nypaver observes. “We set targets each year [for improvement] and we hold ourselves financially accountable, but the skeleton of the work is at the site level through quality improvement activity in order to drive improvements,” she explains. “Different sites are working on this in different ways.”

While MEDIC uses a framework for improvement that is based on the use of Plan-Do-Study-Act (PDSA) cycles, participating EDs design and leverage their own interventions to achieve collaborative goals. “We have instructed them in a small way about QI education at our collaborative-wide meetings. We teach them how to take these ideas and turn them into interventions ... and then understand whether they are working or not,” Nypaver shares.

Much of this QI work is ongoing. For example, Nypaver notes some

sites are testing when and where to deliver guidance around the rules regarding specific imaging tests. The idea is to make it easy for physicians to absorb and understand this information at a time and place that is most effective at influencing decision-making. Other sites are looking at opportunities for shared decision-making with patients in cases where it is not clear-cut whether it is appropriate to conduct a specific imaging test.

“How can we standardize that process using evidence-based methods that are published in the literature?” Nypaver asks, alluding to a question that investigators at some of the ED sites are seeking to answer.

Over the next year or two, MEDIC leaders will be studying the specific imaging-focused interventions leveraged at different sites to see where improvement has been the greatest.

“At the end of the day, we want to short-cut the sites’ quality work and figure out what is most successful at driving change,” Nypaver says. “We can [then] share [the successful interventions] with everybody in the collaborative so that they can apply these things internal to their own institutions.”

While not every successful intervention will necessarily work equally well at all the sites, Nypaver anticipates that ED leaders will be particularly interested in the tactics that have proven successful at the sites that are the most similar to their own departments.

Imaging is the focus of the most recent study, but MEDIC has other quality improvement initiatives in the works, too. For instance, the collaborative is developing alternatives to hospitalization for specific diagnoses or conditions that could be managed successfully in the outpatient setting. Kocher acknowledges that this work

is challenging considering that much depends on what resources are available in the local healthcare environment and how care coordination can work within that locality.

“We are also moving to coalesce around uniformly working on low-risk chest pain because there is increasingly great evidence [regarding] how to risk-stratify this population,” Kocher explains. “One of the trends here is that many hospitals and EDs are moving to high-sensitivity troponin [assays], which also facilitate this kind of work. We think the timing is right to begin tackling this particular condition as an entire collaborative.”

MEDIC’s work shares many similarities to other QI efforts, but there is great power in the scale that the collaborative brings to the equation, Kocher explains. “We can learn ideally from everybody ... and shorten the cycle time to improvement,” he says. “But I don’t think it is otherwise different than what you could do locally with the tools at your disposal in general for QI.”

Kocher advises colleagues interested in developing their own approaches to QI to first develop a multidisciplinary team. It should be inclusive of all the people who would be affected by the specific care decisions that are a focal point of the effort.

“Have some regular cadence to the work so that you are adjusting in PDSA cycles,” he offers. Also, work

hard to chart some early gains. “One lesson that we can share from MEDIC to all kinds of EDs is we are really over the hump now in terms of beginning to prove our value,” Nypaver notes. “I think that will help people tremendously. As you can imagine, all the different stakeholders in our various camps [need to know] why they should do something like this.”

While clinicians are most concerned with outcomes, the financial aspect always is a key factor in every conversation. Both administrative and clinical support are essential in any successful QI effort, Nypaver explains.

“You cannot get physicians to the table unless they believe ... that they are doing the right thing for their patients. It is just a nonstarter [otherwise],” she says. “But it is a nonstarter for all the other stakeholders [when the financials don’t work].”

Nypaver adds that one reason why she is so interested and involved with MEDIC is because of its importance in pushing advances in pediatric emergency medicine beyond the confines of children’s hospitals. “The ED is the great equalizer. That is where everyone shows up in an acute emergency. Most children in the U.S. ... are not cared for in children’s hospitals. They are cared for in general hospitals,” she explains. “If you are going to do anything to improve children’s emergency care, you have

to be at the table with the general emergency physicians.”

While all the research coming out of children’s hospitals is outstanding, it will not make a dent if that information does not land on the radar screen at general hospitals daily, Nypaver explains. “There has got to be some give and take. We have just not had the platform to do that in the United States. MEDIC is one such entity that allows us the ability to do that.” ■

REFERENCES

1. Kocher K, Arora R, Bassin B, et al. Baseline performance of real-world clinical practice within a statewide emergency medicine quality network: The Michigan Emergency Department Improvement Collaborative (MEDIC). *Ann Emerg Med* 2019; Jun 25. pii: S0196-0644(19)30356-7. doi: 10.1016/j.annemergmed.2019.04.033.
2. American College of Emergency Physicians. Ten things physicians and patients should question. Updated June 18, 2018. Available at: <http://bit.ly/2Zy4h4e>. Accessed Aug. 29, 2019.
3. PECARN Pediatric Head Injury/Trauma Algorithm. Available at: <http://bit.ly/2ZnsN9q>. Accessed Aug. 29, 2019.
4. Canadian CT Head Injury/Trauma Rule. Available at: <http://bit.ly/2L2JE8w>. Accessed Aug. 29, 2019.

CMS Aims to Slash Inappropriate Use of Advanced Diagnostic Imaging

Beginning in January 2020, the Centers for Medicare & Medicaid Services (CMS) will require healthcare providers to consult appropriate use criteria through a qualified decision support mechanism before

ordering advanced diagnostic imaging tests for Medicare patients.¹ It is part of an effort to avoid unwarranted testing and the unnecessary use of medical resources while also promoting the most appropriate care for patients.

The Johns Hopkins University Department of Medicine reports that it has been designated by CMS as one of 22 institutions engaged in developing criteria for when tests, such as CT scans, MRI scans, and

nuclear imaging, should be ordered in the ED or other ambulatory care settings.

Johns Hopkins Health System (JHHS) has made strides in this area. In 2018, its High Value Care Committee implemented interventions aimed at encouraging the appropriate use of both lab and imaging tests, a move that resulted in more than \$4 million in reduced hospital charges to both payers and patients at Johns Hopkins Hospital, according to reports from the JHHS. Further, JHHS is part of the High Value Practice Academic Alliance, a consortium of more than 90 academic medical centers in the United States and Canada working to advance

high-value medical practices. Health system teams at JHHS already have established criteria to guide their own diagnostic decision-making. They have embedded the criteria into the electronic medical record (EMR) systems used by hospitals and ambulatory practices in the health system. To date, more than 70 guidelines addressing both diagnosis and management of clinical scenarios have been integrated into the EMRs used by EDs within the JHHS. Health system analysts report that the effort has resulted in care that is more consistent with the criteria.

As a “qualified provider-led entity” for the CMS Appropriate Use Criteria Program, Johns Hopkins will focus

on developing criteria in eight clinical priority areas: chest pain, pulmonary embolism, neck pain, low back pain, shoulder pain, hip pain, headache, and lung cancer.

Johns Hopkins experts plan to make the criteria available to all other healthcare providers by the beginning of next year when the new appropriate use criteria requirements for advanced diagnostic tests kick in. ■

REFERENCE

1. Centers for Medicare & Medicaid Services. Medicare Learning Network fact sheet: Appropriate use criteria for advanced diagnostic imaging. December 2018. Available at: <https://go.cms.gov/2UomYCYZ>.

Study: Nurses at Higher Risk of Suicide Than General Population

With mass shootings now happening at a predictable clip, several healthcare organizations are beginning to pay closer attention to the emotional toll these types of events can take on frontline clinicians who are charged with caring for victims. It is not easy to witness such trauma, and it can hit some healthcare workers hard, particularly when these events are added to a long list of other burdens clinicians often face daily.

The authors of a new study found that nurses are at higher risk of suicide than the general population.¹ This is the first national investigation of the issue in more than 20 years. While there is no one factor highlighted as the primary cause, the research sends a powerful message that healthcare leaders need to do more to ensure that clinicians can access help when needed. Analyzing data from the CDC’s 2014 National

Violent Death Reporting System (NVDRS) database as well as the National Council of State Boards of Nursing and Oklahoma Board of Nursing websites, investigators found that the rate of suicide among women nurses (11.97 per 100,000) was significantly higher than the suicide rate among women in the general population (7.78 per 100,000). Similarly, the suicide rate among men nurses (39.8 per 100,000) was higher than the rate among men in the general population (28.2 per 100,000).

When studying the issue, researchers needed to separate the data by gender because men are three to four times more likely to commit suicide than women. Still, nursing is a woman-dominated profession, explains **Judy Davidson**, DNP, RN, the lead author of the study and a research scientist at University of California, San Diego (UCSD)

School of Medicine. However, it is clear that nurses of both genders are affected adversely when it comes to suicide risk, and this was not a surprise to investigators.

“From our prevention work we know that when people have a new manager or a new team, recent relocation, loneliness on the job, or feelings of inadequacy due to a perceived incomplete orientation to the role ... all of those things can increase symptomatic stress,” Davidson says.

Similarly, conflict in the workplace, lateral violence, [a hefty] workload, and blame for a negative outcome all can contribute to stress. “Then, there is the obvious: witnessing death repeatedly or experiencing firsthand, up front an unanticipated death. [These are] some of the gruesome things that nurses are exposed to that [people in other professions] don’t witness in

their lifetimes. All of those normal aspects of nursing can cause wear and tear and take a toll on the psyche,” Davidson shares. “For instance, if you are caring for a burned baby that is the same age as your child at home, that can creep in and get under your skin. You need to talk about that and get it out.”

In fact, UCSD Health is ahead of the curve on this issue. They developed a program to prevent suicide among nurses and ancillary staff. The program was put into place three years ago after multiple nurses in the health system took their own lives within a short period.

The Healer Education Assessment and Referral (HEAR) program is an extension of a program that had been in place for seven years for physicians, Davidson explains. “We just extended it to nurses and the rest of the hospital staff,” she says. “We are successfully identifying approximately 30 nurses a year out of one organization that have serious issues and are being referred into mental health treatment to get the support they need.”

Davidson notes that similar programs typically are in place for police officers and firefighters, so a program for nurses was long overdue. “We feel very strongly that nurses need this type of support to be able to cope with the stressors they have on the job and at home,” she adds.

There are several key elements to the HEAR approach. For instance, Davidson notes that a facility needs a therapist who can counsel and respond at a moment’s notice to any issue of concern.

“We have two paid therapists and then approximately 40 volunteers who can help in the case of a mass shooting [or an incident of that nature] where the need would exceed the capacity of those two people,” she

EXECUTIVE SUMMARY

In the first such study in more than two decades, investigators reported that nurses are at significantly higher risk of suicide than the general population. The study involves an analysis of data from the CDC’s 2014 National Violent Death Reporting System (NVDRS) database as well as the National Council of State Boards of Nursing and Oklahoma Board of Nursing websites. Investigators from the University of California, San Diego (UCSD) found that the rate of suicide among women nurses was significantly higher than the suicide rate among women in the general population. Likewise, the rate of suicide among men nurses also was higher than rate of suicide among men in the general population.

- Investigators noted that many issues common to nursing contribute to symptomatic stress, including conflict in the workplace, lateral violence, a hefty workload, blame for a negative outcome, and witnessing death repeatedly.
- While investigators did not report on ED-specific data, the lead author notes that nurse stressors common in the emergency setting include patient recidivism that nurses may feel powerless to address, the lack of time to establish a rapport with patients, and frequent exposure to traumatic injuries.
- To prevent suicide among nurses, UCSD Health developed the Healer Education Assessment and Referral (HEAR) program to proactively and anonymously identify nurses and other healthcare workers at risk of suicide and to provide access to effective care.
- The HEAR program is successfully identifying approximately 30 nurses a year with serious issues. These nurses are referred into mental health treatment to receive the support they need.

says. “We also have the palliative care team members who are all willing to volunteer to help in the case of a need that exceeds capacity.”

The HEAR therapists also are charged with keeping a referral list of professionals who are willing to accept healthcare professionals who require counseling or mental healthcare support. “We all know there are not enough mental health providers in the community. [The HEAR program] works very hard to get a list of people who will take patients even if their patient panels are technically closed,” Davidson observes.

However, even with such a list of willing providers, the HEAR therapists must often provide counseling to healthcare professionals

in need of counseling or support until their first appointment with an outside professional. “The [HEAR] therapists provide the bridge to treatment and don’t drop anybody through the cracks,” Davidson says.

Another key pillar of the HEAR program is proactive risk screening. This occurs in collaboration with the American Foundation for Suicide Prevention (AFSP). “The reason why that works is because it is totally encrypted. We don’t know who the people are when they do a screening and come in at high risk for suicide,” Davidson says. “They may even make statements of suicidal intent, but we don’t know who they are because the screening is completely encrypted and goes through the AFSP back to our therapists. Then, a therapist

will contact the person through encryption.”

The encryption is essential because it gives people the confidence to report their feelings, knowing that “Big Brother” is not listening in, Davidson shares. “All of our nurses that we have gotten into treatment and all of our doctors that we have gotten into treatment were all insured. They could have gone to treatment without [HEAR],” she says.

However, it took organizational leaders reaching out to them proactively with a memo stating that they care about their employees’ mental health, and that they know stressors on the job cannot be avoided, Davidson reports. Usually, the chief nursing officer sends this memo to nurses, and the dean or the chancellor of the school of medicine sends the memo to physicians. The document asks clinicians to take the screening. If they require help, the organization is there to provide it. “It is a push. It is not like an EAP [employee assistance program] where they just wait to hear from somebody,” Davidson adds.

Davidson does not have any data to show that emergency nurses are at higher risk for suicide than nurses working in other settings, but she points to several factors that typically add to the stress level in emergency settings. For instance, emergency nurses often do not have time to establish a strong rapport with patients. Some things these nurses witness in the ED can be particularly traumatic, she says.

“Then, there is the recidivism and the people you can’t help but you want to help,” Davidson observes. “If people can’t get the help they need on the outside, they keep coming back to the ED. There may not be enough mental health professionals to send these patients to, or they may not

have the right insurance to get the care they need.”

These patients may keep returning to the ED, each time exhibiting deteriorating circumstances. “You can see why that would be stressful on a [nurse’s] psyche,” Davidson says. “There is this distress that is caused by knowing the right thing to do, but being prevented by society or the organization from being able to do it. That moral distress can lead to depression, and depression is a precursor — untreated — to suicide.”

Another factor that can adversely affect mental health in the ED is workplace violence. In fact, the ED at UCSD is studying whether holding clinical debriefing after any such incident can make a positive difference in these cases, explains **Karen Elizabeth Mitchell-Keels**, EdD (c), MSN, RN, CMCN, clinical educator and outreach manager in the department of emergency medicine at UCSD Health. “Usually, if you have a violent event, it affects more than one person,” she says. “What we are trying to do is have the nurse reach out and then pull in a group [to talk about it]. Facilitators will be coming down to facilitate those conversations.”

This is part of a referral project from the HEAR program, but it is addressing some of the same issues, according to Mitchell-Keels. “When you start talking about the emotional piece of working ... most healthcare providers are not that good at it,” she observes. “The HEAR project helps us do that.”

One aspect of the project will involve encouraging nurses to make use of the HEAR resource. “I know our nurses suffer from burnout and compassion fatigue,” Mitchell-Keels shares. “Watching them deal with patients on a day-to-day basis who are homeless, have a lot of socioeconomic needs, and often are not the most

compassionate people themselves, that puts a burden on our nurses to really maintain their compassion and empathetic care.” Learning how to recognize burnout and how it may be affecting workplace engagement is something that nurses do not discuss nearly enough, Mitchell-Keels notes.

“[Nurses] have a mindset of resilience. It is part of the job ... and when you have that, you are reluctant to admit [there is a problem] until it is really getting to you that things don’t feel comfortable,” she says. “How is everybody feeling at the end of the day? Sometimes, that is the last thing we think about discussing in the ED. We just go on to the next emergency and the next crisis.”

However, healthcare organizations are obligated to create a healthy environment, which means it is important to facilitate access to programs like HEAR, Mitchell-Keels adds.

For hospitals or EDs interested in taking steps to better address suicide prevention, Davidson suggests there is no need to start from scratch. “Just replicate what is known to work,” she advises, citing the HEAR program as one example. “The AFSP can help with the encryption process.”

Further, the AFSP offers many resources that can help healthcare organizations and clinicians more effectively respond to suicide risk more effectively.²

(Editor’s Note: Any discussion or even mention of suicide can be a trigger to those at risk. Consequently, Davidson encourages colleagues who may be in need of help to contact the National Suicide Prevention Hotline: 1 (800) 273-8255.) ■

REFERENCES

1. Davidson J, Proudfoot J, Lee K, Zisook S. Nurse suicide in the United States: Analysis of the Center for

CDC: Naloxone Prescribing Has Increased, Still Room for Improvement

While prescriptions for naloxone have increased markedly in recent years, researchers at the CDC report that the overdose reversal drug is not prescribed enough in many areas of the country that need it most. Further, the agency reports that too few physicians are prescribing naloxone in accordance with the CDC's Guideline for Prescribing Opioids for Chronic Pain.¹

During a media briefing on the subject on Aug. 6, **Anne Schuchat**, MD, the CDC's principal deputy director, noted that there are many missed opportunities to implement techniques at the local level to provide naloxone to patients at risk of overdose.

"Pharmacists and other healthcare providers play a critical role in ensuring that patients receive naloxone," she explained. "The CDC Guideline for Prescribing Opioids for Chronic Pain recommends that that healthcare providers consider prescribing or dispensing naloxone to patients at risk for overdose. These risk factors include taking high daily dosages of prescription opioids, using benzodiazepines concurrently with opioids, and having a history of substance use disorder."

Schuchat also noted that because of the increasing availability of highly potent opioids such as illegally made fentanyl, guidance on naloxone prescribing from the Department of Health and Human Services also recommends that naloxone be considered for people who are

misusing prescription opioids, heroin, or other illicit drugs like cocaine or methamphetamine that might be contaminated with fentanyl.²

Data show that while prescriptions for naloxone doubled from 2017 to 2018, the number of naloxone prescriptions per every high-dose opioid prescription remained low, with only one naloxone prescription dispensed for every 70 high-dose opioid prescriptions, Schuchat reported. She also noted that naloxone-prescribing practices varied substantially across the country. For instance, rural counties were nearly three times more likely to be low prescribers vs. metropolitan counties.

Further, pharmacies in one out of every 12 counties dispensed high-dose opioids but did not dispense naloxone, Schuchat said.

"If each person with a high-dose opioid prescription were offered naloxone, nearly 9 million prescriptions for naloxone could have been dispensed in 2018," she noted.

Schuchat stressed the important role healthcare providers play in educating patients, caregivers, and the community about the benefits of making naloxone readily available. She also encouraged providers to

consider seeking more training on how to most effectively communicate with patients about both the risk of overdose and how to use naloxone. For emergency providers in particular, the CDC is offering new guidance on what steps they can take to further address the opioid epidemic, including providing naloxone to patients at risk of overdose.³

"On average, 130 Americans die every day from an opioid overdose," Schuchat said. "We must do a better job getting naloxone in the hands of the people who really need it and those likely to be nearby when an overdose occurs." ■

REFERENCES

1. Dowell D, Haegerich TM, Chou R. CDC guideline for prescribing opioids for chronic pain - United States, 2016. *MMWR Recomm Rep* 2016;65:1-49.
2. U.S. Department of Health and Human Services. How to respond to an opioid overdose. Available at: <http://bit.ly/2lu6dZC>. Accessed Sept. 3, 2019.
3. Houry D, Adams J. Emergency physicians and opioid overdoses: A call to aid. *Ann Emerg Med* 2019;74:436-438.

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;
3. Implement managerial procedures suggested by your peers in the publication.



ED MANAGEMENT

PHYSICIAN EDITOR

Robert A. Bitterman, MD, JD, FACEP
President
Bitterman Health Law Consulting Group

NURSE PLANNER

Nicole Huff, MBA, MSN, RN, CEN
Clinical Manager
Santa Ynez Cottage Hospital
Emergency Department
Solvang, CA

EDITORIAL ADVISORY BOARD

Nancy Auer, MD, FACEP
Vice President for Medical Affairs
Swedish Health Services, Seattle

Kay Ball, PhD, RN, CNOR, FAAN
Professor of Nursing
Otterbein University
Westerville, OH

Larry Bedard, MD, FACEP
Senior Partner
California Emergency Physicians
President, Bedard and Associates
Sausalito, CA

Richard Bukata, MD
Medical Director, ED, San Gabriel (CA) Valley Medical
Center; Clinical Professor of Emergency Medicine, Keck
School of Medicine, University of Southern California
Los Angeles

Diana S. Contino, RN, MBA, FAEN
Executive Director, Accountable Care Organization
Memorial Care Health System
Fountain Valley, CA

Caral Edelberg, CPC, CPMA, CAC, CCS-P, CHC
President, Edelberg Compliance Associates
Baton Rouge, LA

Gregory L. Henry, MD, FACEP
Clinical Professor, Department of Emergency Medicine
University of Michigan Medical School
Risk Management Consultant
Emergency Physicians Medical Group
Chief Executive Officer
Medical Practice Risk Assessment Inc.
Ann Arbor, MI

Marty Karpel, MPA, FACHE, FHFMA
Emergency Services Consultant
Karpel Consulting Group Inc.
Long Beach, CA

Thom A. Mayer, MD, FACEP
Chairman, Department of Emergency Medicine
Fairfax Hospital, Falls Church, VA

Larry B. Mellick, MD, MS, FAAP, FACEP
Vice Chairman, Academic Affairs
Interim Section Chief, Pediatric Emergency Medicine
Assistant Residency Director
Professor, Emergency Medicine
University of South Alabama
Mobile, AL

Robert B. Takla, MD, FACEP
Medical Director and Chair
Department of Emergency Medicine
St. John Hospital and Medical Center, Detroit

Michael J. Williams, MPA/HSA
President, The Abaris Group
Walnut Creek, CA

Interested in reprints or posting an article to your company's site? There are numerous opportunities for you to leverage editorial recognition for the benefit of your brand. Call us at (800) 688-2421 or email us at reprints@reliasmmedia.com.

Discounts are available for group subscriptions, multiple copies, site licenses, or electronic distribution. For pricing information, please contact our Group Account Managers at groups@reliasmmedia.com or (866) 213-0844.

To reproduce any part of Relias Media newsletters for educational purposes, please contact The Copyright Clearance Center for permission:

Email: info@copyright.com
Website: www.copyright.com
Phone: (978) 750-8400

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 **ReliasMedia.com** and click on My Account. First-time users must register on the site. Tests are taken after each issue.
3. Pass the online test 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, your browser will be automatically directed to the activity evaluation form, which you will submit online.
5. Once the completed evaluation is received, a credit letter will be emailed to you.

CME/CE QUESTIONS

1. In the new triage process implemented in the ED at Palomar Medical Center in Escondido, CA, a "vertical 3" patient is:
 - a. a low-acuity patient.
 - b. a patient who walked into the ED for care (as opposed to arriving by ambulance).
 - c. a patient who can be cared for in the fast-track section.
 - d. an Emergency Severity Index level 3 patient who can sit in the waiting room while tests are completed.
2. Reviewing all the data for imaging tests conducted between June 1, 2016, and Oct. 31, 2017, at participating EDs in the state, investigators from the Michigan Emergency Department Improvement Collaborative concluded that thousands of imaging tests could have been avoided, translating into a potential annual savings of about:
 - a. \$3.8 million.
 - b. \$7.3 million.
 - c. \$10.6 million.
 - d. \$15.2 million.
3. A key pillar of the Healer Education Assessment and Referral program is proactive risk screening, which occurs in collaboration with the American Foundation for Suicide Prevention. The reason why that works is because it is:
 - a. quick and easy.
 - b. a mandated activity for employees.
 - c. totally encrypted.
 - d. conducted twice a year.
4. The CDC reports that while prescriptions for naloxone doubled from 2017 to 2018, the number of naloxone prescriptions per every high-dose opioid prescription remained low. Only one naloxone prescription was dispensed for how many high-dose opioid prescriptions?
 - a. 20
 - b. 35
 - c. 50
 - d. 70