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Unexpected drop-offs in demand in some regions worry ED administrators

Experts: If the decreases persist, there will be an impact on staffing, other resources

In the last few months of 2013 and the beginning of this year, some ED administrators around the country observed a curious variation in their data. Patient volumes were down compared to the same period in previous years, during a period of record cold in some areas and seasonal flu outbreaks. There are many theories about what could be driving down demand for emergency services, and they all have a degree of validity, according to **Charles Shufflebarger, MD**, medical director of the Emergency Medicine and Trauma Center at Indiana University Health Methodist Hospital in Indianapolis, IN. But he suggests that none of the theories he has come across thus far fully explain the decreased ED volumes being reported.

EXECUTIVE SUMMARY

Some EDs are noticing unexpected decreases in volume that began in the latter half of 2013. The impact has been particularly evident in the Midwest and Northeast, where there has been record cold weather, but observers are concerned that other factors could be playing a role as well. While the changes in demand could be temporary, experts worry that persistent decreases in demand for emergency services could impact staffing and other resources.

- In Indiana, experts note that January ED volumes were down by 10% to 15% in most facilities, compared to a year ago. And similar changes have been observed in other Midwestern hospitals.
- Besides record cold weather, experts suggest that other factors that could be impacting demand include the growing number of high-deductible health plans, the increasing availability of urgent care centers and other alternative care venues, an atypical viral season, and the weak economy.
- The numbers are difficult to analyze at this point because while some EDs are seeing decreased demand, others are seeing normal or even increased demand for emergency services.

“For much of the country, weather has been particularly harsh,” says Shufflebarger, noting that some of the biggest decreases in ED volumes have been reported in the Midwest and Northeast, where weather has probably played a big role in depressing demand. In Indiana, for example, January ED volumes were down by 10% to 15% in most facilities, compared to a year ago, he says.

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Editorial Questions

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Also noteworthy is the unusual nature of this year's viral season, including both influenza and respiratory syncytial virus (RSV). “Patients have been relatively ill, but not in large numbers,” says Shufflebarger.

Other factors that may be playing a role include the growing number of high-deductible health plans, the increasing availability of alternative options such as urgent care centers, and the ongoing, systematic efforts to get people to increase their use of these other venues, notes Shufflebarger.

Whatever is driving the reduced demand, however, it's a definite concern for ED administrators. “It is harder to plan for the needs of our patients when we are unsure about utilization patterns,” says Shufflebarger. “If this trend is permanent, then we will all face adjustments in resources based on the decreased need.”

Lower ED volumes are coupled with higher admissions

It was October of 2013 when **Laura Pimentel**, MD, MMM, CPE, chief medical officer for the Maryland Emergency Medicine Network and assistant professor of surgery in the Division of Emergency Medicine at the University of Maryland School of Medicine in Baltimore, MD, began observing decreases in volume, ranging from 3% to 16%, in nine out of 14 ED facilities. However, she is not sure that these changes represent a pattern that will be sustained. “October through December is historically the lightest quarter of the year, but it was lighter than normal this year,” she says.

Patients may be utilizing urgent care centers to a greater extent than they have in the past, but Pimentel is concerned that the economy may be less robust than what people have generally come to believe. “There might be an actual drop in all health services for financial reasons,” she says. “That could be playing into this.”

Indeed, there is considerable evidence that many hospitals have not fully recovered from declines in demand that first became apparent during the steep economic downturn in 2008. Franklin, TN-based Community Health Systems, Dallas, TX-based HCA, and Boston, MA-based Partners HealthCare have all reported declining admissions, although most experts believe the declines are at least partly the result of regulatory changes and the fact that an increasing number of procedures are now being performed on an outpatient basis.

Nonetheless, citing the experience that Massachusetts providers faced with state-level health care reform, many health economists predicted that the Affordable Care Act would drive up demand for emergency services among newly insured Medicaid recipients, and this clearly hasn't happened in some of the states that have opted for Medicaid expansion — at least not yet. “We are anticipating that there will be pretty substantial increases in the number of Medicaid patients ... but I think that is still in the process of ramping up,” observes Pimentel. “It has been surprising in that most people were anticipating that health care reform would bring an increase in patient volume rather than a decrease.”

Another curious observation in some of the reporting on this issue is that in areas in which ED volume is down, admissions from the ED have tended to increase. Pimentel sees some of this impact in her own numbers. “I think it suggests that patients who are going elsewhere are lower-acuity patients, so the urgent care volume — or the more discretionary users of emergency services — are the ones we aren't seeing,” she explains. “The true emergencies — the patients who are sick enough to require admission — are still coming to the ED, so just by diluting out the lower-acuity patients, we are seeing an increasing percentage of admitted patients.”

While this is a change in utilization that payers and many health care organizations have been pushing for, Pimentel is worried that some patients may be going without care at all. “Most patients [who present to the ED] are sick enough to warrant being seen and treated, so I hope they are getting care in some setting, and that they are certainly getting the equivalent quality of care that they would be receiving in the ED,” she says.

Re-evaluate scope of practice

Making sense of the numbers is difficult at this point, because while many EDs are seeing decreased volumes, others are seeing an influx of newly insured patients, and some hospitals in New York and California, for instance, are reporting that their ED volumes are continuing to increase in line with what they have seen in past years.

William Durkin, MD, MBA, FAAEM, president of the American Academy of Emergency Medicine (AAEM), addressed the issue at

AAEM's Annual Scientific Assembly in New York, NY, in February, noting that some members say volumes are up appreciably since the Affordable Care Act went into effect, while others say they are not as busy as they expected. Durkin anticipates that most EDs will eventually see increases in volume because of the dearth of primary care providers, but not everyone shares this view.

It's clearly not a big issue if demand for emergency services bounces back to normal relatively quickly. “I think it will take three to six months to see if this is a trend or if it is background variation,” says Shufflebarger. “The weather will normalize, but the structural changes in insurance and health care finance may drive trends. I personally believe that ED use will decrease, but I don't know how much yet.”

If the decreased volumes persist, ED directors and other emergency groups may have to adjust their staffing patterns and accommodate the lower volumes, observes Pimentel. “It could be significant for the job market in emergency medicine if we just find ourselves over-staffed for what we are seeing,” she says. “Then shifts would have to be cut and potentially providers could end up losing jobs.”

However, emergency providers could push the field in a different direction as well. “Continually rethinking the scope of practice of emergency physicians is a healthy thing to do,” says Pimentel, noting that many emergency medicine groups have already expanded into observation medicine, which is a market that is on the increase.

Another idea that some groups have floated involves providing needed follow-up care to patients who have been discharged from the ED. “The goal of this would be to not necessarily have to admit patients who are borderline [cases] because they would have access to expedited follow-up care,” says Pimentel.

The types of patients who might benefit from such follow-up include people who present with high blood glucose levels or who require more intensive management of their blood pressure levels, or patients with infections that are on the border of requiring IV antibiotics and admission versus outpatient care. “If we can provide rapid follow-up so we can be very comfortable that they are going to be seen in 24 to 48 hours, then it might increase our comfort level in discharging some of these patients rather than admitting them,” says Pimentel. ■

SOURCES

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New tools to anticipate disasters, epidemics, flu outbreaks

Hospital and ED leaders understand that regular practice drills and pre-planning are critical to facilitating an effective response when disasters or serious infectious disease outbreaks occur. And now they have three new tools at their disposal to help them better forecast what resources and staffing would be needed to deal with several different disaster scenarios, given their own unique regional and facility characteristics.

The tools were developed by researchers at the Johns Hopkins National Center for the Study of Preparedness and Catastrophic Event Response (PACER) in Baltimore, MD, and they are being made available for free through a PACER applications suite website. (See Figure 1 on p. 41.) Interested users just need to register and establish an account to access the applications.

EXECUTIVE SUMMARY

Researchers at the Johns Hopkins National Center for the Study of Preparedness and Catastrophic Event Response (PACER) in Baltimore, MD, have unveiled three new web-based tools that hospitals, EDs, and public health authorities can use to help them prepare for surges related to disasters, epidemics, and seasonal flu outbreaks.

- The prediction models, including EMCAPS 2.0, Surge, and FluCast, are designed to give health care administrators a better idea of anticipated patient volumes as well as the number and types of injuries that are likely to result from specific disaster scenarios.
- The web-based tools are being made available free of charge. Users just need to register and establish an account on the PACER website.
- Further refinements to all three tools are planned as user feedback is collected and results are assessed.

The new tools, which were unveiled in February at the U.S. Department of Homeland Security's University Centers of Excellence Innovation Showcase in Washington, DC, include:

- **EMCAPS 2.0:** An update to the Electronic Mass Casualty Assessment and Planning Scenarios program;
- **Surge:** An application designed to help individual hospitals or units within hospitals determine surge capacity and the potential impact of various surge response strategies;
- **FluCast:** A program that can help EDs predict how many flu patients they are likely to see in a given week based on their own hospital's historical data, as well as information collected by Google Flu Trends, a web-based tool that gauges regional influenza activity by monitoring Internet-based searches for flu information.

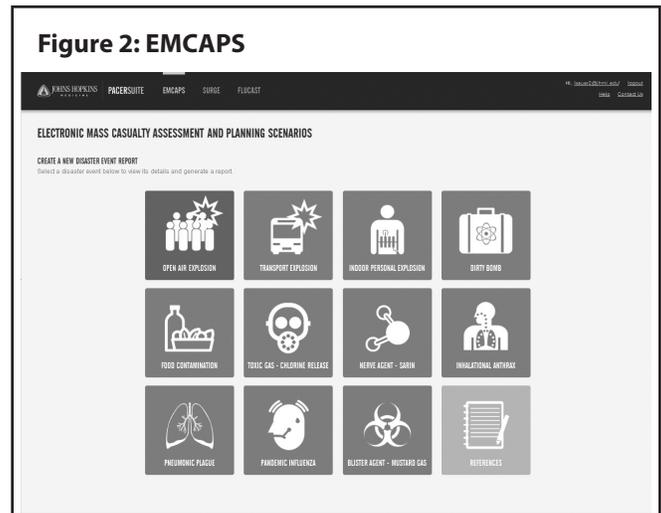
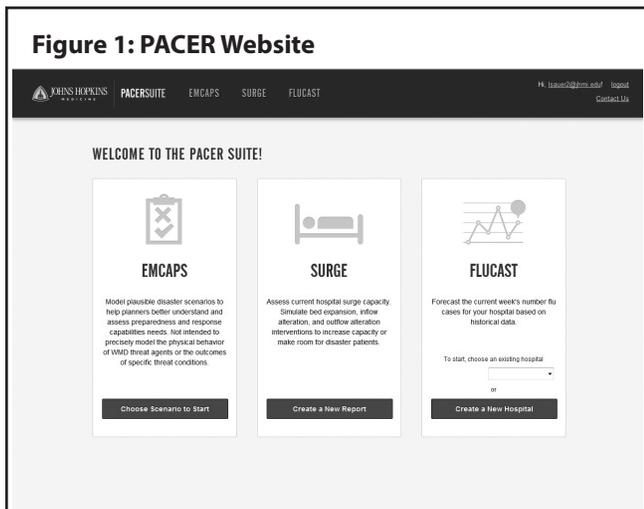
Access EMCAPS via the web

Whereas the first version of EMCAPS was a downloadable file, EMCAPS 2.0 is now part of PACER's web-based suite of applications, so it can be accessed from anywhere a user has access to the web, explains **Lauren Sauer**, MS, PACER's program manager. "It is immediately more robust. We have added a lot of evidence behind the scenarios," she explains. "We have also added three or four new [disaster] scenarios, so we now have 11 disaster scenarios that have been identified as risk areas by [the U.S. Department of] Homeland Security."

For instance, users of the EMCAPS 2.0 tool can now model disasters related to several different types of explosions, food contamination, toxic gas, the nerve agent sarin, anthrax, pneumonic plague, pandemic influenza, and mustard gas. (See Figure 2 on p. 41.) The new EMCAPS tool was developed by a team led by **Jim Scheulen**, PA, MBA, a PACER researcher and executive director of the Johns Hopkins Office of Critical Event Preparedness and Response.

Sauer notes that the user interface for EMCAPS 2.0 has been significantly improved, making the tool more user-friendly and visually oriented. "We have visuals on the EMCAPS home screen of each event," she explains. "The inputs are easier to enter and the outputs are a lot more graphical, nicer looking, and cleaner. They have more information associated with each scenario."

Further, all the assumptions and other information required to run a particular scenario are now readily available to the user, so there is no need for the kind of digging that users used to have to



through to model a disaster using the first version of the tool, notes Sauer.

For example, for one of the explosion scenarios, users would see all the different types of injuries anticipated and the different health care and first-responder decision-making information associated with those injuries in a table up front, observes Sauer. “On top of that would be a black diagram showing the radius of impact of the blast and a representative image that reflects what the casualties and injuries associated with the blast would look like.”

Also, EMCAPS 2.0 has been updated with the latest census data so planners can run simulations based on fairly accurate population densities for their regions or cities. “It is a dynamic and easy-to-use tool that makes it especially beneficial for planning, training, and education,” adds Sauer.

Further, Sauer stresses there will be additional refinements. “We are constantly updating the literature and the evidence behind the scenarios, so that is always our next step,” she says. “Additionally, we would like to see an iPhone or iPad application in the future, and we have had discussions about making a downloadable file of the new version of EMCAPS. And on top of that, we are talking about linking EMCAPS with Surge to create a really robust picture of a disaster for a health care setting.”

Use Surge to determine/add capacity

The Surge application was developed by **Gabor Kelen, MD, FACEP, FAAEM, FRCP(C)**, the founding director of PACER and professor and chair of the Department of Emergency Medicine at Johns Hopkins University. He describes the tool as being complementary to EMCAPS 2.0.

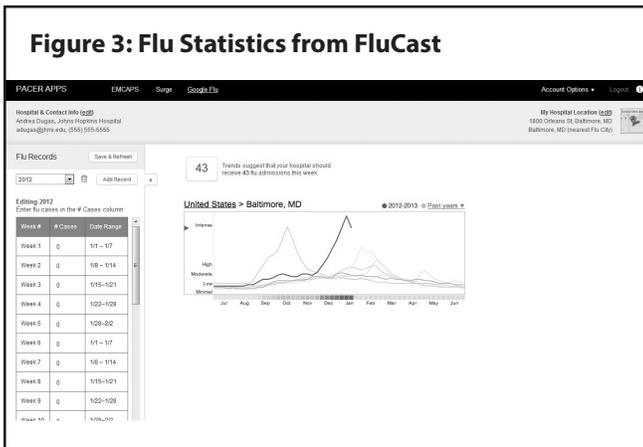
“The EMCAPS tool helps predict the kind of surge you might expect in a given catastrophic event or disaster, and it can be tailored to your local area,” he explains. “The Surge tool gives a region, hospital unit, or even an individual ward the ability to determine what your capacity actually is to absorb victims, and then you get to play with various maneuvers in order to create incremental capacity.”

Surge can be scaled to distinguish between an intensive care unit and a general floor or some other space. “You can do bed planning at a regional level, at multiple hospitals, an entire system, or you can look at just burn units in metropolitan New York,” says Kelen.

Further, whereas EMCAPS may be more of a planning tool, Surge can be used for planning as well as in the heat of the moment to quickly determine capacity. For instance, in the case of a mass emergency, EMS systems typically call around to see how many patients a hospital can accept. “With Surge, you would know [the answer] in a matter of minutes, if not seconds, because you would have your basic data pre-loaded,” says Kelen. In addition, hospitals would be able to report how quickly they could create more capacity by using the Surge tool to assess the impact of different space-creating maneuvers, he says.

“We know [Surge] works pretty well in terms of the mechanics of it. We tested it in old-fashioned algorithmic ways to see that it actually does what it is supposed to do, and we used data from our five hospitals to get a sense,” says Kelen. “We used national data as well. We used data from real live disasters ... and we modeled out and simulated in other programs the reality of freeing up beds.”

Figure 3: Flu Statistics from FluCast



Also embedded in the tool are algorithms comprised of surge-related research data pertaining to how quickly beds can be freed up and what the contributions are of various techniques for adding bed capacity. “For all of these kinds of products, they are only as good as the fixed assumptions that are put in, so we have made [those] fairly robust,” observes Kelen.

While Surge is embedded with some fixed assumptions, it also enables users to adjust these inputs so that they are more closely in line with specific, local circumstances. “We allow you to open up the hood and tinker with the data,” says Kelen. “You get to do quite a few inputs even in the off-the-shelf product.”

For example, users can input such data as average length-of-stay (LOS) for patients, how many transfers come in, and the typical distribution of admissions from ED transfers. “You get to put in those kinds of [data points], as opposed to us determining them, although there is also an off-the-shelf version of assumptions,” explains Kelen. “However, it doesn’t take a lot of sophistication to open up the hood and play with [the data].”

As with the two other applications that PACER has unveiled, further refinements are planned for Surge, so that the tool can more comprehensively consider needed staffing as well as resources when making determinations about capacity. “We have done a considerable amount of work looking at a number of these different disaster scenarios and determining what supplies are required over a period of time to take care of any given patient who is burned or has anthrax poisoning or who is perhaps a victim of a mass casualty bombing,” says Kelen. “We can put those kinds of variables into the model, and the same thing can be done with nurse and physician staffing.”

With this added data, hospital or ED administrators could determine whether they could meet

their standards of care if they opened up beds or whether they would have to relax their standard of care, and by how much, notes Kelen. “There are a lot more variables to put in. The algorithms become much more complicated this way ... but you can always go back to the plain vanilla version, which is kind of what we have now, as sophisticated as the tool already is,” he says.

Stay ahead of flu outbreaks

Every year, EDs across the country struggle with how to stay one step ahead of patient surges from influenza. FluCast is designed to help them do just that by essentially estimating the number of flu patients a specific hospital is likely to see in a given week based on the facility’s own historical data and information from Google Flu Trends, an Internet-based tool that monitors search traffic related to influenza.

FluCast was developed by a team led by **Richard Rothman, MD, PhD**, a professor and vice chair for research in the Department of Emergency Medicine at Johns Hopkins, and **Andrea Dugas, MD**, an assistant professor in the Department of Emergency Medicine. For the past two years, they have been testing and fine-tuning the prediction model underlying the application, but now they are ready for EDs to put it to use across the country.

“Our hospital epidemiology and infection control office has begun running some forecasts. We’re looking forward to seeing how [the tool] performs,” explains Rothman. “We don’t yet know how many EDs will take this up, but we will work with various national emergency medicine organizations to disseminate the tool and should be able to see if and how others, both locally and nationally, may benefit from using it in the future.”

FluCast is very easy to use, adds Rothman. “It basically just requires having your weekly flu census,” he says. “The first time log-on may require 20 to 30 minutes, with weekly updates taking just a minute or two to be able to see your local prediction.” (See Figure 3 on p. 42.)

Rothman acknowledges that developers don’t yet have a systematic way to measure the impact of the tool, but they are planning to work with various agencies to devise a method for assessing impact in the future. He also anticipates a process that will include continual improvements. “We will use the web tool to monitor how often it is used and then solicit feedback from selected users,” he says. “Comparing predicted versus observed trends will allow us to refine the model as needed.” ■

Editor's note: Hospitals and ED administrators can access the new tools via the PACER website at www.pacerapps.org.

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Eliminate CLABSIs with prevention bundles, provider feedback

Experts: ED crowding, related factors interfere with infection-prevention efforts

While there has been great progress in eliminating central line-associated bloodstream infections (CLABSIs) in intensive care units (ICUs) in this country, CLABSIs have proven to be much more difficult to vanquish in emergency settings. Most experts agree that there are multiple reasons for the problem, ranging from cultural factors to staffing limitations, to the hectic nature of most busy, urban, high-volume EDs.

Despite these issues, however, there is no denying the fact that CLABSIs simply don't need to happen, stresses **Patricia Stone**, PhD, MPH, RN, FAAN, a professor of health policy in nursing at Columbia University School of Nursing in New York, NY, and a contributor to best-practice guidelines on infection prevention issued by The Joint Commission (TJC).

"We have good evidence on the processes that need to take place with central lines to prevent infections, but they need to happen all the time

with each and every patient," says Stone. "This is really a matter of developing a climate of prevention and making sure it is on everybody's radar."

Perhaps ironically, one of the reasons why more attention is being focused on CLABSIs in EDs and other hospital settings is all the progress that ICUs have made in eliminating these infections, observes Stone. "Effective processes were developed and ICUs have embraced those," she says. "That is why we are seeing infections occurring in other places. Not because more [CLABSIs] are occurring, but because less of these infections are occurring in ICUs."

What is very clear, however, is that there is much to gain from improved infection prevention. TJC estimates that 100,000 people die from health care-associated infections (HAIs) every year, and about one-third of these are attributable to CLABSIs. The accrediting agency also notes that HAIs drive up costs significantly. It estimates that hospitals are on the hook for \$33 million in excess expenditures related to HAIs. (Also, see "Report: Americans face 'an unacceptable level of risk' from infectious disease," p. 45)

Implement infection-prevention bundles

One strategy that has worked particularly well in reducing CLABSIs in ICUs is the implementation of infection-prevention bundles, which

EXECUTIVE SUMMARY

In recent years, intensive care units (ICUs) have made considerable progress in eliminating central line-associated bloodstream infections (CLABSIs); however, there is still ample room for improvement on infection-control practices in other settings like the ED, where high volumes, patient acuity, crowding, and other factors can interfere with infection-control practices.

- The Joint Commission estimates that 100,000 people die each year from health care-associated (HAI) infections. One-third of these are attributable to CLABSIs.
- Infection-prevention bundles, which typically include barrier precautions, hand-washing, skin preparation with chlorhexidine, and an implementation checklist, have proven particularly effective at eliminating CLABSIs, but they are more difficult to implement on a consistent basis in the ED.
- Experts say administrative leadership, provider feedback, data tracking, and ongoing support are needed to sustain the effective implementation of infection-prevention bundles in the ED.

typically include barrier precautions, hand-washing, skin preparation with chlorhexidine, and an implementation checklist. Indeed, regulatory agencies such as TJC have called on EDs to implement such bundles. However, multiple barriers have emerged in some early efforts to adopt this strategy in the emergency setting.¹

Christopher LeMaster, MD, MPH, an emergency physician with The Permanente Medical Group in Oakland, CA, and colleagues examined the approaches used by six EDs in implementing infection-prevention barriers with the goal of identifying both barriers and facilitators to central line bundle adoption in the emergency setting. To carry out this task, the researchers solicited input from 49 individuals, including both nurses and physicians from the six EDs, and they also conducted three focus groups on the issue.

Perhaps not surprisingly, what emerged from this process was the observation that key barriers to bundle adoption in the ED included high acuity, staffing and space constraints, and high ED volume. However, the researchers also noted difficulties with regard to tracking compliance and infection surveillance.

Conversely, strategies that seemed to facilitate bundle adoption included the identification of a champion, clear staff responsibilities, and a redesigned workflow that included a checklist and a central-line kit or cart with all the materials required to carry out the procedure in one place. However, LeMaster observes that sustained success requires high-level commitment and ongoing diligence.

“I think administrative buy-in for the long-term is absolutely critical. There were places with enthusiastic residents and nurse administrators, for example, but with no system in place once the champion left or once hospital financial resources were moved to other projects. Then nurses and providers stopped hearing about the bundle, compliance fell, and the project was lost,” explains LeMaster. “Feedback to providers is also critical. Nothing motivates like actual data. Instances of fall-out help naysayers get on board, and successes motivate providers to continue to keep up good work.”

However, as this was a qualitative study, LeMaster cautions that the results are largely explorative. “For proof, we need a different study design,” he says. “Success is a complex endpoint, and depends on a host of factors falling into line.”

Nonetheless, LeMaster suggests that ED leaders consider the themes in the study to determine whether to try some of the bundle-implementation strategies in their own settings.

“The ED is particularly challenging because it is dynamic, unpredictable, busy, and there is no limit to capacity, no way of shutting off the valve. Thus, physicians and nurses have conflicting goals and limited time that really make sterile line placement with the bundle difficult,” explains LeMaster. “In addition, implementing bundles and other such interventions that require real effort and time must be done thoughtfully because they can create new tensions and unpredictable effects downstream, which may threaten patient safety in new, unforeseen ways.”

For instance, LeMaster notes that a nurse serving as an observer for a line placement can end up neglecting a patient in another room if workflow and staffing requirements have not been carefully considered when devising a bundle implementation.

Consider crowding, related factors

There is some evidence that crowding in the ED has a detrimental impact on attempts to prevent infections. “What I am noticing is that certainly with hand hygiene, there seems to be a relationship between hand hygiene compliance and ED crowding,” explains **Eileen Carter**, BSN, a third-year PhD student at Columbia University School of Nursing in New York, NY, who is studying this relationship as part of her doctoral dissertation. “For instance, in analyzing the data we have collected, it seems that as crowding gets worse and worse, hand hygiene compliance decreases.”

Carter notes that crowding is related to a multitude of factors, ranging from patient acuity and staffing levels to space and patient volumes. Consequently, she suggests that any of those factors can potentially compromise or be related to infection prevention practices. She also stresses that it is valuable for clinical leaders to review the literature on CLABSIs.

Stone echoes these sentiments, noting that administrators need to stay abreast of the data, and to take the lead in emphasizing infection control processes. “When it starts from the top, and everybody says they are going to wash their hands and they are going to follow [infection control] processes each and every time, then people will follow,” says Stone.

Given the complexities that exist in busy emergency settings, Stone suggests that quality improvement efforts need to focus even harder on making it easier to do the right thing. “That could be done by making sure that all of the central-line equipment is together on a cart that will help [clinicians] do [the procedure] the right way each time,” she says. “And if people get accustomed to doing things the right way in training ... then evidence suggests that is the way they will think about doing them in practice.” ■

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Americans face ‘an unacceptable level of risk’ from infectious disease

A new report unveiled by Trust for America’s Health (TFAH) and the Robert Wood Johnson Foundation (RWJF) suggests that America is ill-prepared to prevent or control infectious disease outbreaks. In *Outbreaks: Protecting Americans from Infectious Disease*, the authors lay the blame for this predicament on outdated systems and limited resources.

When assessed on key indicators, policies, and capabilities to protect against infectious disease, 32 states received a score of five or lower out of a possible score of 10, according to the report. Georgia, Nebraska, and New Jersey tied for the lowest score at 2, while New Hampshire had the highest score, achieving an 8. Noting that infectious disease prevention requires constant

vigilance, the authors state that they found major gaps in the country’s ability to prevent, control, and treat this type of threat. When announcing the findings, **Jeffrey Levi**, PhD, executive director of TFAH, noted that these gaps leave Americans at an unacceptable level of risk.

The report, which was funded by a grant from RWJF, highlights several notable findings, including:

- One-third of the states do not require health care facilities to report health care-associated infections (HAI), and about one out of every 20 hospitalized patients will acquire an HAI.

- Only one-quarter of the states vaccinate at least one-half of their population against seasonal flu outbreaks, and 20% of Americans acquire the flu each year.

- Only Connecticut, Delaware, and Washington, DC, meet the Department of Health and Human Services goal of vaccinating at least 90% of preschoolers against whooping cough.

- Only one-half of the states require human papillomavirus (HPV) vaccinations, education for parents about the vaccine, or funding for the vaccinations, even though the Centers for Disease Control and the American Academy of Pediatrics recommend the vaccine for both males and females at the age of 11 or 12.

- One-third of states do not cover routine HIV screening under their Medicaid programs. This is despite the fact that more than 1 million Americans are living with HIV, and nearly one in five are unaware of their HIV-positive status.

- More than half of the country’s public health laboratories did not test their Continuity of Operations plans (COOP) through a drill or a real event last year.

- Two-thirds of the states decreased funding for public health between fiscal year 2011-2012 and fiscal year 2012-2013.

To address these deficiencies, the report makes a series of recommendations that focus on prioritizing disease surveillance and strengthening the country’s capabilities through both workforce enhancements and state-of-the-art tools. The report also calls for policies and incentives aimed at reducing HAIs and ensuring that patients receive safe care.

The complete report and state-specific information are available on TFAH’s website at www.healthyamericans.org. ■

TJC unveils revised standards for CT, PET, NM, and MRI services

First phase of imaging revisions goes into effect on July 1

The Joint Commission (TJC) is taking steps to beef up standards for diagnostic imaging services that are provided at hospitals as well as ambulatory care organizations. This follows a lengthy investigation and review period that was designed to consider improvements. “We convened an expert panel to bring people in who dealt with diagnostic imaging on a daily basis, and we also talked to our accredited customers as well,” explains Joyce Webb, RN, BSN, MBA, CMPE, TJC’s project director in the Department of Standards and Survey Methods. “And the question we posed was, at a minimum, what should organizations be doing to insure that they are providing safe and effective imaging.”

The comprehensive process followed requests from key TJC stakeholders to engage in discussions about radiation safety, adds Webb. “We became aware over the past year about several significant quality and safety issues that have been occurring around radiation safety,” she says. “So we were looking for opportunities for our requirements to better capture and address risk as it relates to the provision of diagnostic imaging.”

What TJC investigators gleaned from this process was that health care organizations need to make sure that they have competent personnel performing imaging tests, and they need to insure that their equipment is functioning properly, explains Webb. “They also need to be engaging in specific activities that relate to making sure that they are minimizing radiation exposure to patients and staff as well,” she explains.

Once the information was collected and organized, the Oakbrook Terrace, IL-based accrediting agency reached out to stakeholders and providers for added input. “From these discussions, we drafted standards, posted them for public comment for six weeks, analyzed the feedback we got back from field reviews and public comments, and then finalized the standards.”

Given the broad scope of the review, TJC plans to unveil changes to its imaging standards

in phases, with the first group of changes set to go into effect on July 1, 2014. These changes focus on computed tomography (CT), nuclear medicine (NM), positron emission tomography (PET), and magnetic resonance imaging (MRI) services.

Phase one changes address safety, risks

The new standards establish a minimum competency level for radiology technologists, noting that they should register and become certified by July of 2015. The standards also call for annual performance evaluations by a medical physicist of equipment that is used to perform imaging studies.

In addition, the standards stipulate that the radiation dose used in a CT study should be noted on a patient’s clinic record, although TJC stopped short of prescribing who should make this notation. “We are developing a survey process around some of the specifics, but we try not to be so prescriptive in terms of how organizations do these things because they may be done by different people in different [work environments],” says Webb. “The aim [of this provision] is to increase awareness so that providers know what they have just exposed a patient to — what was the dose.”

The revised standards also emphasize the importance of considering patient size or habitus when establishing imaging protocols, especially with regard to pediatric populations. Surveyors will be checking to insure that providers are aware of the principles and guidelines governing the safe imaging of children, and that health care organizations are providing adequate education in this area, explains Webb.

Regarding MRI, the new standards reflect concerns about safety risks associated with equipment that is brought into testing environment,

COMING IN FUTURE MONTHS

- New guidelines for geriatric EDs
- Shortening time-to-treatment for stroke patients
- A new case for point-of-care ultrasound
- Identifying sepsis in the ED

and the proper evaluation and preparation of patients who will be undergoing this type of imaging test. “Typically, these tests produce a lot of noise, so some hearing protection [is important],” explains Webb. “It is also important to screen patients to make sure they don’t have any implants that would be problematic if they were introduced to the MRI environment.”

Data collection is a key aspect of the new standards, particularly with respect to cases in which pre-identified radiation dose limits are exceeded. There can be medically appropriate reasons for utilizing a radiation dose that is outside of typical parameters, but these instances need to be documented and reviewed, stresses Webb.

Most health care organizations will find that they are already complying with most, if not all, of the new standards, observes Webb. “The first step is to look at what you are already doing, and then look at the standards and see where there are opportunities to make improvements,” she says.

More imaging standards revisions are on the way. Phase two of TJC’s effort will focus on fluoroscopy, minimum qualifications for clinicians who perform imaging exams, and cone beam CT that is used in dental offices and oral-maxillary surgery practices. These changes will be unveiled in 2015. ■

SOURCE

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2. Discuss how developments in the regulatory arena apply to the ED setting.
3. Implement managerial procedures suggested by your peers in the publication. ■

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CNE/CME QUESTIONS

1. **Charles Shufflebarger**, MD, says this year's viral season has been unusual in that:

- A. Patients have been relatively ill, but not in large numbers.
- B. Acuity has been particularly low.
- C. People are not seeking treatment in the ED.
- D. Flu activity peaked earlier than usual.

2. Shufflebarger points to several factors that may be playing a role in driving down patient volumes in the ED, including:

- A. extreme cold weather
- B. the proliferation of high-deductible health plans
- C. the increasing number of urgent care centers and other alternative care sites
- D. all of the above

3. **Gabor Kelen**, MD, FACEP, FAAEM, FRCP(C), explains that while EMCAPS 2.0 helps health planners predict the kind of surge you might expect in a given catastrophic event or disaster, the Surge tool gives a region, hospital unit, or an individual ward the ability to:

- A. determine the capacity to absorb victims
- B. develop individualized disaster plans
- C. quickly assign personnel in the event of a disaster
- D. coordinate with regional disaster planning authorities

4. Kelen also states that while Surge is embedded with some fixed assumptions, it also enables users to adjust these inputs:

- A. so that users can use the tool in multiple ways
- B. so that users can play around with different scenarios
- C. so that they are more closely in line with specific, local circumstances
- D. in case conditions change

5. The Joint Commission estimates that 100,000 people die from health care-associated infections (HAIs) every year. What percentage of these are attributable to central line-associated bloodstream infections (CLABSIs)?

- A. one-quarter
- B. one-third
- C. one-half
- D. three-quarters

6. **Joyce Webb**, RN, BSN, MBA, CMPE, states that one safety precaution that imaging providers need to consider when performing magnetic resonance imaging (MRI) studies is:

- A. hearing protection
- B. heart protection
- C. lung protection
- D. brain protection

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