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IN THIS ISSUE

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As CMS makes another policy change, policy makers distinguish between different forms of care

Experts urge hospitals to consider the creation of dedicated observation units

As the Centers for Medicare and Medicaid Services (CMS) make yet another change in the regulations regarding "observation status," the confusion continues over when a patient qualifies or doesn't qualify for this type of care, and really what is at stake in these decisions for patients and providers. While emergency providers seek clarity on all these points, proponents of observation care lament the fact that

EXECUTIVE SUMMARY

As observation care continues to draw fire from critics who charge that the designation ends up costing hospitals money while also sticking patients with exorbitant fees, the medical directors of dedicated observation units counter that the kind of care delivered by their specialized units actually saves money and gets patients out of the hospital sooner. They note that the problem is that only about one-third of hospitals actually have dedicated observation units, so patients placed on observation typically wind up in inpatient beds, where they may only be evaluated once a day. CMS has just released a new policy rule on observation that should help patients avoid excessive charges, but many experts would like to see the agency take steps to incentivize the kind of quality care that is delivered in dedicated units.

- The new CMS rule for 2014 caps observation stays at 48 hours. Patients who remain in the hospital beyond this point become inpatients, as long as they meet inpatient criteria.
- Proponents of observation care contend that the average length-of-stay in a dedicated observation unit is just 15 hours — typically much shorter than the LOS of patients who are placed on observation in inpatient beds.
- Care in a dedicated observation unit is generally driven by protocol in an emergency medicine environment where there is continuous rounding. Discharges can occur at any time of the day or night.
- Experts note that observation patients account for the largest portion of both misdiagnoses and malpractice lawsuits stemming from emergency settings.

somewhat lost in the discussion is what they see as growing evidence that when used effectively, protocol-driven observation care that is delivered in a dedicated observation unit can be a superb tool for expediting care and reducing hospital admissions. Though the regulatory infrastructure is not yet in place to require hospitals and EDs to deliver this type of focused, accelerated care, proponents make the case that there is nothing to stop providers from taking steps to bring their use of observation in line with the kind of evidence-based care that is associated with dedicated observation units.

Recognize the needs of observation patients

"The message that has to be gotten out there is that there will always be patients who need more than six hours of care and less than 24 hours of care," explains **Michael Ross**, MD, FACEP, medical director of Emory University Hospital's clinical decision unit, an observation unit that is adjacent to the Atlanta, GA-based hospital's ED. "We can either ignore them and push them all into EDs, leading to overcrowded EDs, or push them into the hospital, which is going to lead to overpayment for those patients, or we can say this is a very real group of patients with very real service needs and provide them with the care that they need."

What is plain to see, according to Ross, is that there is a "widening chasm" between care that is delivered in a protocol-driven ED observation unit and a bed that is somewhere else in the hospital. In fact, Ross has written extensively about what he views as state-of-the-art observation care.[1] However, currently there is no regulatory requirement that observation care be delivered in an observation unit or any other specific setting, so patients are often placed in beds on inpatient floors even though the patients themselves may not even realize that they are still technically outpatients.

Critics charge that the problem with this arrangement is that care tends to be less focused and that rounding may only occur once a day. Indeed, a recent study on observation care in the *Archives of Internal Medicine* noted that observation patients are often subjected to lengths of stay (LOS) in excess of 24 hours, and that hospitals frequently lose money on these patients. The authors questioned what role observation should even play in health reform.[2]

However, Ross suggests that outcomes are quite different when patients are cared for in dedicated observation units, where rounding is constant and care is driven by protocol. "This is a unique patient population, it is a recognized patient population, but for some reason, two-thirds of hospitals haven't been able to recognize the need to provide these patients with a unique setting," explains Ross. "There is a lack of understanding about what observation units are, so I think there has been a clinical need for education."

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Ross suggests that hospital administrators need to consider that observation patients make up the lion's share of both misdiagnoses and malpractice lawsuits in emergency medicine. These are also the patients that cause ED overcrowding because they don't meet inpatient criteria, but providers also can't send them home, he observes. "This is the group that everybody would like to ignore, but that is the worst thing we could possibly do," he says.

Be prepared for RAC scrutiny

Another problem plaguing observation care is that patients have sometimes remained on inpatient floors for as long as five days, resulting in exorbitant fees for patients, because as outpatients, they are responsible for 20% of each individual charge under Medicare Part B. The new CMS rule for 2014 attempts to address this problem by making patients who are in observation for more than 48 hours inpatients, as long as they meet inpatient criteria. Ross, who was part of a panel that met with CMS staff on behalf of the American College of Emergency Physicians (ACEP) during the open comment period for the proposed policy change, says one of CMS' goals with the new rule was to provide more clarification for providers.

"The rule is still a little bit confusing because it is not clear if it trumps or replaces InterQual criteria, or if the two [sets of criteria] work together," says Ross. "I think they are supposed to work together."

While CMS was not responsive to all the changes that Ross and the other ACEP representatives wanted to see in the new rule, he was pleased that the agency dropped wording to the effect that it would only pay for observation care beyond 48 hours if the care occurred in an inpatient bed. "That would have been disastrous for observation units," he says. "They took that wording out."

Ross suggests that the 48-hour rule would be unnecessary if all observation care was, in fact, provided in protocol-driven, dedicated observation units. "The length-of-stay for these units averages 15 hours," he says. "Less than 1% of patients are in observation units for more than 36 hours."

Ross notes that it is also quite clear that placing observation patients in beds on inpatient floors is far from ideal. "The average inpatient bed is made for a five-day patient. It does exceptionally well with five-day patients. But it has been shown time and again that these 6- to 24-hour patients fail miserably when you put them in an inpatient bed," he says.

Christopher Baugh, MD, MBA, medical director of the ED observation unit at Brigham and Women's Hospital in Boston, MA, favors the new CMS rule, but he anticipates that hospitalizations resulting from the new 48-hour rule will be among the most scrutinized by the Recovery Audit Contractors (RAC) when the new policy goes into effect. "What I am reading is that patients can't just be occupying a bed for two midnights to qualify as an inpatient. They will also have to have an inpatient order, and they will have to have some medical justification for being in the hospital," he says. "I presume the RAC is going to be looking very closely at folks with two midnight stays and then discharged home to make sure that the hospital wasn't dragging its feet on the discharges just so the visits would qualify as inpatient stays."

Extend emergency culture into observation units

Baugh has published extensively on observation care, including a recent editorial in the *New England Journal of Medicine* in which he urged CMS to go farther in reforming observation payment polices so that patients will be protected from excessive expenses and efficient care will be incentivized.[3]

Baugh echoes many of the same points as Ross, noting that all observation care is not of the same quality. For instance, he points to several reasons why a dedicated observation unit can deliver better care than the kind of observation that takes place on inpatient floors. "This is a dedicated space where all you do is observation, so it is not a hybrid area or an inpatient area where you are also doing observation," he says. "There are policies in place and leadership that is accountable for these policies. That is a really important part of being efficient and good at delivering observation care."

Further, in addition to having evidence-based protocols in place to direct the care that is delivered, Baugh notes that observation units work best when they are integrated with the ED. "That is where most of the patients who are going to be populating the observation unit are going to come from, so having that emergency medicine culture extend to the observation unit is very helpful," he says. "There are people who don't have emergency medicine training who can run an observation unit efficiently. It is not a requirement, but in my mind, it is very helpful to have [an emergency medicine] background, and that extends to the nurses as well as the physician leadership."

Baugh favors the concept of a closed unit, where the unit leaders are the people who control what happens in that unit and which patients are admitted to the unit. "Some places have what is called an open unit where primary care physicians in the community can directly put one of their patients into the unit and also run the plan of care according to whatever they see fit," he says. "What you end up with is a lot of variation because you have a lot of cooks in the kitchen, and a lot of providers who don't do this type of care very often. As a result, they are not as efficient as they could be."

Alternatively, when a smaller group of clinicians runs a tightly controlled unit, they become very good at providing observation care in a highly efficient manner, adds Baugh.

Make use of case management

Baugh notes that one concern that many observation unit directors have is that their definition of what works well in an observation unit — patients who would benefit from protocol-driven care — is not the same definition that CMS uses. "You have patients who the observation literature would say are not good candidates for an observation unit visit, but they are still being billed as observation," he explains.

Another concern is the ever-changing regulations governing how and when insurers will pay for observation services. "This does affect how we deliver observation care because no one wants to be delivering care that they are not going to be paid for," says Baugh. "It seems like every three or four years, CMS does significant change to their regulations."

For instance, prior to 2007, CMS only paid for observation stays pertaining to three different diagnoses: chest pain, asthma, or congestive heart failure (CHF). "If it was anything else, it didn't qualify for an observation payment," notes Baugh.

However, the regulations changed dramatically in 2007, broadening the scope of observation care so that it can apply to virtually any diagnosis as long as patients meet certain criteria. For example, patients must require further evaluation or testing to determine whether they need inpatient care, explains Baugh. "These are people who need further medical care, and there is real uncertainty and risk around what could be going on with them," he says. "Providers need that additional time to better decide if the patients need an inpatient stay or not."

Now, there is a new CMS rule capping the length of time that a patient can remain on observation at 48 hours, and it may take some time for providers to get used to the latest change, notes Baugh. "There is a lot of memory around how things were in the previous set of regulations, and it is just hard to adapt to the way you think about observation so frequently," he says. "I think there is initially going to be some confusion [about the new rule]."

However, Baugh also notes that the new rule offers an opportunity for case management to work with providers so that they get a better sense of whether patients should be on observation or be admitted as inpatients as early into the patient visit as possible. "This has potentially big ramifications on the setting of care for a patient because if providers decide early on that a patient should be admitted as an inpatient and should not be cared for in an observation unit, it takes that option off the table, and the sooner you know that the better," says Baugh. "Getting case management to be involved early on [in these decisions] seems to be a best practice, although it is very hard to implement because the ED is admitting patients 24 hours a day, and it is hard for case management to be involved at 3 o'clock in the morning in real time, but that is a logistical issue that is being worked on in a lot of places."

Consider advantages in efficiency, expertise

Matthew Lyon, MD, FACEP, director of the ED observation unit at Georgia Regents University Medical Center in Augusta, GA, doesn't think the new CMS rule will have much of an effect on the care that is provided in dedicated observation units because most of them have a 24-hour LOS limit. "If a patient reaches the 24-hour mark in our observation unit, we switch them over to inpatient status, providing the patient meets admission criteria," says Lyon. "Our average LOS is about 16 hours."

However, the rule change may well impact patients who are placed on observation in an inpatient bed. These would be patients who have diagnoses that do not fit with one of the protocols that is used to drive care in the dedicated unit, explains Lyons. "Our emergency observation unit runs by protocols, so a patient has to have a diagnosis of chest pain, sickle cell disease, asthma, or CHF [to be admitted to the observation unit], and the provider has to believe the patient will respond to treatment in less than 24 hours," he says.

Lyon acknowledges that the kind of observation care provided to patients when they are placed in inpatient beds is going to be different than the care provided on a dedicated unit. "That type of care is generally not protocol-driven, so it is not as efficient, and patients generally stay longer than 24 hours," he says.

There is no denying the financial burden that falls on patients with extended observation stays. However, proponents of observation care counter that the kind of protocol-driven care that is provided in observation units actually saves money. This is, in part, because the dedicated clinicians who work in these units become specialists in providing observation care. "You will set up guidelines that allow for more of a focus on LOS, so you aim for a rapid turnaround," says Lyon.

A patient can expect to stay 12 to 16 hours in an observation unit, whereas the same patient might spend twice as much time in the hospital if he or she is placed on observation in an inpatient bed, where the patient may only be evaluated once a day, says Lyon.

"Our patients are evaluated every one or two hours to see if they meet discharge criteria … so they come into the observation unit at any time of the day and they leave at any time of the day," says Lyon. "We have about a third of our discharges between midnight and 7 a.m., so we have a lot of people being discharged in the middle of the night, which is not traditionally when patients are discharged from the hospital. However, because we are there and the patients are there, as long as they have transportation, those patients are ready to get out of the hospital as soon as they can."

In his research completed on the subject, Baugh suggests that the health care system could save more than $3 billion a year if all the hospitals that currently do not have dedicated observation units actually put them in place.[3] "You can turn what would have been 30 hours on an inpatient floor into 15 hours on an observation unit," he explains. "If you aggregate those savings over many thousands of visits — and most hospitals will have thousands of observation visits — that means a real change in capacity in a hospital to be able to take care of patients."

Given the advantages that observation units offer, Baugh is surprised that more hospitals aren't quickly adopting them. "It is a lost opportunity to reduce a significant amount of inefficiency. And this isn't just a pure business-economics perspective. I think patients receive better care when they are on a protocol. You are less likely to miss something, and you are less likely to have unnecessary testing that poses a risk to the patient," he observes. "Being in the hospital is dangerous, particularly if you are there longer than you need to be, so if you can take a 30-hour hospital stay and turn that into 15 hours, that is 15 fewer hours of the patient being in the hospital where he or she could get the wrong medicine administered, have a fall, or pick up an infection."

Prepare for more observation care

Baugh views the new CMS rule as an incremental step in the right direction, but he would like to see higher payments for observation care that is carried out in a dedicated observation unit as opposed to on an inpatient floor. "That could play a role in incentivizing observation unit use, which to me is a best practice for managing these observation patients," he says. In a recent editorial in the *New England Journal of Medicine,* Baugh urged CMS to go farther in reforming observation payment polices so that patients will be protected from excessive expenses, and efficient care will be encouraged.[4]

Given that the typical size of an observation unit is 8 to 10 beds, Ross suggests that almost any hospital could establish such a unit. "You are not opening additional space, you are just partitioning," he says. "You are saying this area will be where the observation patients go with the understanding that [approximately] 20% of these patients will fail in this setting and have to be moved to an inpatient bed."

Whether hospitals establish dedicated units or not, most experts expect the use of observation to increase. Lyon agrees that this is the trend he is seeing. "EDs are used frequently for primary care, but we also have a much sicker population that needs more care than what can be delivered in a short period of time," he says. "So, observation or a short stay is a very good tool. And as our population ages, it is going to be used more." ■

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New study: CT a poor tool for patients presenting with dizziness

Experts urge providers to become adept at using clinical skill, bedside assessment

Patients presenting with complaints of dizziness or vertigo are a common occurrence in the ED. An analysis of data extracted from two large, national databases suggests that these types of visits accounted for about 4% of all ED visits, at an estimated cost of more than $3.9 billion in 2011, with costs projected to reach $4.4 billion by 2015.[1] However, researchers from Johns Hopkins University School of Medicine in Baltimore, MD, note that much of this cost is for computed tomography (CT) studies that providers use to rule out strokes and other conditions in these patients, even though such tests have been shown to provide little value in ruling out ischemic stroke, the most common type of stroke.

David Newman-Toker, MD, PhD, an associate professor of neurology at Johns Hopkins and a co-author of the new study published in *Academic Emergency Medicine*, suggests that there are undoubtedly numerous reasons why emergency physicians opt for CT in these cases, but lack of awareness probably heads the list. "All of them know that MRI [magnetic resonance imaging] would be better, but I think very few of them know that CTs at this early stage miss more than 80% of strokes," he explains.

While lack of access to MRI may be a factor in some cases, Newman-Toker notes that fear of litigation probably plays a role in driving the use of CT in these cases as well. "A neuro image is something clinicians can tangibly point to and say that they did a scan, they looked, and a radiologist told them that there was no stroke, so they sent the patient home. This is a strong defense in a medical legal case," he says. "However, increasingly this will not be the case as people become more aware of just how useless CT scans are for this particular problem."

Rather than turning to expensive imaging tests in all these cases, Newman-Toker suggests there is a better way to accurately distinguish between patients who are suffering from stroke and patients who are experiencing a benign form of dizziness. In fact, he says that if emergency physicians became proficient in the use of a simple bedside exam, called the horizontal head impulse test, the health care system could save as much as $1 billion per year while also improving care quality in these cases.

EXECUTIVE SUMMARY

A new study notes that dizziness accounted for roughly 4% of ED visits in 2011, and that patients seeking emergency care for the condition are on the increase. However, investigators point out that too often such patients receive expensive CT scans to rule out strokes even though CT not a good tool for this purpose. Experts say a bedside assessment that focuses on eye movements can do a better job of distinguishing between patients who are having strokes and those who have a benign form of dizziness, but the assessment requires clinical skill to perform with confidence. Nonetheless, some experts believe that the assessment will become a standard of care in the diagnosis of patients who present with dizziness within five years.

• Investigators project that costs associated with ED visits for dizziness will reach $4.4 billion by 2015, with much of this cost coming from expensive imaging tests that provide little value.
• Data show that the use of imaging tests on patients who present with dizziness has quadrupled since 1995.
• Experts say few physicians realize that CT scans miss more than 80% of strokes in the early stages.
• The horizontal head impulse test is a bedside exam that is highly accurate at predicting stroke, and could save $1 billion per year if skillfully performed on a large scale in busy EDs, say experts.

Experts: Don't rely on CT

In their study, which noted the rising annual costs associated with dizziness presentations in the ED, investigators also found that visits to the ED for dizziness-related complaints are on the rise. They discovered that while the annual number of visits to the ED for all reasons jumped by 44% between 1995 and 2011, the number of ED visits for dizziness nearly doubled during this period.

It's not clear why more people are presenting to the ED with this complaint, says Newman-Toker. "One would have thought that it might be just because of the aging population because [dizziness] is a little bit more common in the elderly, but we looked at that and didn't find that as a rationale," he explains. "It is possible that people are becoming more aware of [dizziness] as stroke symptom, and that is prompting more people to come to the ED rather than stay at home and wait it out or go to see their primary care physician (PCP)."

Investigators found that the use of imaging tests on patients who present with dizziness has quadrupled since 1995. While 10% of these patients received imaging tests in 1995, nearly 40% received such tests in 2011. Newman-Toker adds that while CT is useful in detecting hemorrhagic stroke or bleeding in the brain, this type of stroke is rarely associated with dizziness. Further, in the rare instances when these patients do experience dizziness, there are usually other defining symptoms, such as confusion or weakness, that clarify to the clinician that a CT is in order, he explains.

However, for the vast majority of strokes, Newman-Toker stresses that CT is the wrong diagnostic tool because it misses 85% of strokes in the first 24 hours after symptoms commence, and 60% of strokes after that point. When dizziness is the primary symptom of stroke, the diagnosis is missed in the ED about a third of the time — often because physicians have a false sense of security from normal results on CT scans, he explains.

Pay attention to the eyes

While there is no question that MRI is the better tool for diagnosing stroke, it is much more expensive and takes much longer to complete than a CT. However, if ED physicians could rely on a bedside assessment to distinguish between the patients who may be suffering from strokes and those who have benign inner-ear disorders, the health system would still save money because only a small subset of patients who present with complaints of dizziness would need the MRIs, explains Newman-Toker.

The horizontal head impulse test is a bedside assessment that can enable clinicians to make these types of judgments, but there is little awareness of the tool in busy EDs, according to Newman-Toker. "The sixth sense is the vestibular system — it is the sense of balance, and we ignore it all the time," he says. "There is a small set of people who have made this the focus of their careers. They have learned and understood things about eye movements and the balance system that most people never get exposed to in the course of their medical training."

While much of this knowledge is hyper-specialized and not particularly important for most clinicians, Newman-Toker says frontline clinicians should really learn how to conduct this one assessment because it is a very accurate predictor of stroke.

The horizontal head impulse test requires no special equipment or tools. A clinician merely asks the patient to focus on a particular spot on the wall as the clinician moves the patient's head from side to side. The clinician focuses his or her attention on the patient's eyes. If the patient is making fast, corrective eye adjustments in response to the head movements, that would indicate that the patient is experiencing a benign form of dizziness rather than a stroke.

However, Newman-Toker emphasizes that it takes practice and expert guidance to be able to perform the assessment with a high degree of confidence. "We need that kind of mentorship to really disseminate this effectively from an educational standpoint," he says. "It is too hard to read a paper and look at videos to figure out how to do this on your own to the point where you can make a high-stakes decision on whether to scan somebody or not."

Provide bedside teaching

While the horizontal head impulse test is not generally taught to medical school students, there are settings in which clinicians who are experienced in conducting the assessment are passing on the required skills to other clinicians. For instance, **Jonathan Edlow**, MD, FACEP, vice chairman of the Department of Emergency Medicine at Beth Israel Deaconess Medical Center (BIDMC) in Boston, MA, has been regularly using the assessment himself for four years, and he is also teaching residents and other faculty how to conduct the

assessment, but that doesn't mean that the technique has become a standard of care in the ED at BIDMC.

"This sort of change in practice is not usually a revolution where one day it is not there and the next day it is there by fiat," says Edlow. Rather, he notes that it is more of a step-by-step evolution that involves convincing practitioners that the approach offers a better way of distinguishing between patients who are experiencing strokes versus patients who are experiencing a benign form of dizziness. "Increasingly, it is being done much more frequently, but it is not a standard of care. I don't think it is a standard of care in any ED," he says.

"It is an incremental thing. You can teach someone about the procedure in a lecture. I can and I do give lectures about how to do this, but you really need to give people some bedside teaching — not just with patients who don't have the finding [of a potential stroke], but on someone who does," explains Edlow. "So it does take time. It is almost like winning people over one at a time."

Edlow says he has not gathered any hard data to document the effectiveness of the procedure, but he does hear from clinicians who have put the education and mentoring that he has provided into practice. "I will get an email a year later, or they will come by the office if they are still here," he says. "They will say they tried it, they like it, they use it, and it works."

Clear up misconceptions

However, while Edlow is a proponent of the approach, he is not sure that large-scale adoption of the assessment would necessarily make a huge difference in the care that patients with dizziness receive. "A relatively small number of strokes are cerebellar strokes and brain stem strokes, and many of those are going to be obvious anyway," he says. "So would [the technique] make a positive difference? Sure. Is it worth doing? Sure. But I don't know that this is going to revolutionize emergency care of stroke patients."

Edlow does acknowledge that adoption of the approach would make a meaningful dent in the overuse of CT scans for patients with dizziness. "Doctors have a reflex — let's get a CT scan because this is a brain problem," he says. "And not only is it usually not helpful, but it can be harmful in the sense that intellectually people might not know of the limitations of CT. Once you have a test on the chart in your hands, there is a psychological factor where you begin to take things off the table even though you can't or you shouldn't."

Edlow also emphasizes that this is not just an emergency physician issue. "The way we have taught physicians of any specialty to deal with dizziness is, I think, flawed, and comes from work done 40-45 years ago, so I don't know that emergency physicians are that much worse than a general neurologist or a general ENT person," he says. "The reality is that general physicians, family doctors, internists, emergency physicians, and neurologists for the most part are taught that [you arrive at] this dizziness diagnosis by asking patients about the quality of their symptoms."

Edlow adds that when he sees neurology residents examine a dizzy patient, it is clear that they are laboring under the same partial misconceptions as emergency physicians. "The overarching message is that we need to really change the way we teach the diagnosis of dizzy patients to everybody so that people are thinking about it differently," he says. "CT is rarely the best first test."

Prepare for change

One tool that could help with training, or even potentially clinical decision support, is a video-oculography machine. The device, which includes goggles, a web camera, and an accelerometer, can capture the types of eye movements that can be difficult for clinicians to pick up on when assessing patients who present with dizziness. Thus far, FDA approval of the machine is limited to measurement of balance function, and not for diagnosing any particular condition, but Newman-Toker observes that this could change with more study. "Hopefully, we will be at a point in a few years where this is literally like an EKG machine," he says. "You put the goggles on the patient, you do the testing, and it gives you — not a perfect answer, but an approximation of the best evidence."

In the meantime, Newman-Toker is seeking grant funding to create an infrastructure at Johns Hopkins University that is capable of providing the kind of in-depth training necessary to bring all the emergency physicians in Maryland up to speed on performing the eye movement tests. "As the culture changes and moves in this direction, and as people become more committed and convinced that this is the right approach, then more and more people will seek this out," he says.

Further, Newman-Toker is convinced that such methods will become standard practice in the not too distant future. "I don't know yet if the stan-

dard practice is going to be that we have a structured protocol for training people on how to do this the same way we have a structured protocol for training them how to do basic life support, or whether it is going to be that everybody has a set of goggles and the goggles spit out an answer for them in the same manner as an EKG machine," he says. "Either way, I think this is going to become standard practice in the next five years." ■

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Study: ED providers may be missing cases of PID among adolescents

Sexual history, pelvic exam are key to establishing a diagnosis

Even with government efforts aimed at increasing the diagnosis of pelvic inflammatory disease (PID), there are new concerns that emergency providers may be missing the diagnosis in adolescents. In a study published in the *Journal of Adolescent Health*, researchers who reviewed data from the 2000-2009 National Hospital Ambulatory Medical Care Survey found that out of an estimated 77 million visits to the ED by 14- to 21-year-old patients, there were roughly 705,000 diagnoses of PID.[1] This represents a slight decrease in the diagnosis rate since 2002, when the Centers for Disease Control (CDC) in Atlanta, GA, broadened its criteria for diagnosis with the aim of increasing the recognition and treatment of PID cases.

Before 2002, the CDC guidelines noted that patients needed to have both cervical motion tenderness and uterine/sexual tenderness to meet the diagnostic criteria for PID; however, those guidelines were revised so that the presence of either cervical motion tenderness or uterine/sexual tenderness now meets the diagnostic criteria, explains **Monika Goyal**, MD, a pediatrician at Children's National Medical Center in Washington, DC, and the lead author of the study. "The goal was really to not miss women who may have PID," she says.

Obtain a sexual history

While the study does not clarify why the diagnosis rate for PID among adolescents in the ED setting has remained stagnant, the data suggest that ED providers may be overlooking risk factors for the diagnosis. Goyal explains that there are many reasons why providers might fail to consider PID when teenage women present with pain in the lower abdominal area. For instance, there are any number of conditions that can cause pain in that area, ranging from an inflamed appendix or a urinary tract infection to something as simple as a stomach virus or constipation, but Goyal stresses that PID should be on that consideration list as well. Left untreated, PID can cause infertility, chronic pelvic pain, ectopic pregnancy, and pelvic abscesses, she adds.

"My concern is that providers may not even consider PID in the differential diagnosis," says Goyal. "When we evaluate teenagers, oftentimes we may think of them as children rather than

EXECUTIVE SUMMARY

A new study suggests that ED providers may be missing cases of pelvic inflammatory disease (PID) in adolescents, a condition that, when left untreated, can lead to infertility, chronic pelvic pain, ectopic pregnancy, and pelvic abscesses. In an effort to improve diagnosis of PID, the Centers for Disease Control in Atlanta broadened its criteria for diagnosis in 2002, but data show that diagnosis of PID in adolescents has remained stagnant.
• Experts say part of the problem is that providers are often reluctant to query young people about their sexual histories, a crucial element when diagnosing PID.
• While providers may be missing some cases, the study notes that 70% of adolescents with PID are diagnosed in the ED.
• Hospital and ED administrators should consider using IT tools to track the diagnosis and treatment of PID among adolescents, and to drive quality improvement.

adults. We may not even consider the fact that they may be sexually active, so we may not be obtaining sexual histories on teenagers, and especially younger teenagers, even though we would be obtaining sexual histories on adult women."

Maria Trent, MD, MPH, an associate professor of pediatrics in the Division of Pediatrics and Adolescent Medicine at Johns Hopkins University School of Medicine, Baltimore, MD, and a co-author of the study, adds that obtaining a patient's sexual history is a crucial element in the diagnosis of PID. "Those who acquire PID who are not sexually active are really considered rare, and they are often written up in journals as case reports because they have unusual bacterial organisms," she says. "So you have to take a detailed history, and do an exam, which includes a pelvic examination. Many people consider it invasive, but it is really a standard of care for this type of diagnosis."

Trent has found that while the diagnosis of PID is imprecise, the CDC criteria are broad enough to capture most adolescents who have the condition, but putting those guidelines into practice in an emergency environment requires protocols and ongoing safety checks. "Emergency providers are taking care of people who are coming in with traumas, and they're taking care of people who have other significant types of illness as well," she says. "It is, therefore, important that we have a protocol-driven way to approach these patients so that they all receive care, because even though patients [with PID] are difficult to diagnose, the CDC has laid out a nice framework that allows us not to miss people in terms of diagnostic care."[2]

Use IT for quality improvement

While providers may be missing some cases, the study notes that 70% adolescents with PID are diagnosed in the ED. Goyal explains that this finding is consistent with other studies that have shown that adolescents comprise one of the age groups least likely to have a primary care provider.

Trent observes that such care patterns are problematic. "We are no longer hospitalizing adolescents for PID. We are discharging them home … but we know that many of them are not going to come back [for follow-up], and many of them are at extremely high risk," she says. "They need risk-reduction counseling in terms of family planning, prevention of future sexually transmitted infections, and medication adherence."

Goyal is currently developing a computerized sexual health screening tool that could be given to every patient who comes into the ED. "The hope is that by putting this on a computer tablet, teenagers will feel more comfortable answering these types of questions rather than leaving it up to the provider," she explains.

Also in the works is a pilot study to gauge the acceptability of providing universal screening for sexually transmitted infections in the ED, regardless of what a patient presents with, adds Goyal. "If these steps were implemented, then we would be able to diagnose infection earlier and prevent the development of pelvic inflammatory disease by treating earlier," she says.

Trent would like to see more hospitals use their IT tools to track how many cases of PID are being diagnosed in the ED, and what kind of care is being delivered. "Most institutions have quality and safety officers who can help them come up with an easy way to take a snap shot," she says. "It doesn't have to involve every patient. Just look at the PID patients you have seen in the last six months, and see if they got the kind of care they should have." ■

REFERENCE

1. Goyal M, Hersch A, Luan X, Locallo MS, Trent M, Zaoutis T. National trends in pelvic inflammatory disease among adolescents in the emergency department. *Journal of Adolescent Health* 2013;53:249-252.
2. Trent M. Pelvic Inflammatory disease. *Pediatrics in Review* 2013;34:163-172.

SOURCES

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COMING IN FUTURE MONTHS

- Potential of telepsychiatry to reduce LOS
- ED optimization through robust care coordination
- Rising numbers of stimulant-related visits
- Managing children presenting with head traumas

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CNE/CME INSTRUCTIONS

HERE ARE THE STEPS YOU NEED TO TAKE TO EARN CREDIT FOR THIS ACTIVITY:

1. Read and study the activity, using the provided references for further research.
2. Log on to **www.cmecity.com** to take a post-test; tests can be taken after each issue or collectively at the end of the semester. *First-time users will have to register on the site using the 8-digit subscriber number printed on their mailing label, invoice, or renewal notice.*
3. Pass the online tests with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%.
4. After successfully completing the last test of the semester, your browser will be automatically directed to the activity evaluation form, which you will submit online.
5. Once the evaluation is received, a credit letter will be sent to you. ■

CNE/CME OBJECTIVES

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. ■

CNE/CME QUESTIONS

1. According to **Michael Ross**, MD, FACEP, observation patients make up the lion's share of:
A. misdiagnoses and malpractice lawsuits
B. patients who have heart attacks
C. patients with abdominal pain
D. patients exhibiting drug-seeking behavior

2. **Christopher Baugh**, MD, MBA, states that observation units work best when they are:
A. managed by specialists in cardiology
B. managed by hospitalists
C. integrated with the ED
D. open units

3. **David Newman-Toker**, MD, PhD, says there are many reasons why physicians often opt for CT scans when patients present to the ED with dizziness, but probably heading the list is:
A. lack of other resources
B. easy access
C. lack of awareness
D. speed

4. Newman-Toker also states that CT scans miss more than _____ of strokes in patients who present with dizziness in the first 24 hours after symptoms commence.
A. 10%
B. 30%
C. 50%
D. 80%

5. A new study led by **Monika Goyal**, MD, notes that EDs are responsible for diagnosing what percentage of the cases of PID in adolescents?
A. 20%
B. 50%
C. 70%
D. 10%

6. Goyal states that one of the reasons why emergency providers may be missing cases of PID is because they:
A. don't have the time to conduct a pelvic exam
B. are reluctant to ask adolescents about their sexual history
C. are not familiar with diagnostic criteria
D. lack resources for dealing with PID