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Are elderly patients undertriaged? Don't miss life-threatening conditions

Comorbid and chronic conditions put patients at risk

If a 78-year-old woman came to your ED with lower abdominal pain and bloating, but had normal vital signs without chest pain, would you suspect a myocardial infarction (MI)?

When this patient was placed on a monitor, ED nurses at Carondelet St. Mary's Hospital in Tucson, AZ, saw large ST-elevation in most leads, and point-of-care testing revealed positive myoglobin, creatine kinase, and troponin levels.

"The MI was of unknown time since she never had chest pain," says **Mary G. Kelley**, MS, ARNP, CEN, triage coordinator. "She also had an infarcted bowel and died within the week from overwhelming sepsis."

At the same ED, a 94-year-old woman complained only of tiredness. "She looked great, without any complaint of chest pain and no history of any health problems," she recalls. "I was quite surprised when her heart rate during triage was 28." The patient was given a temporary pacemaker in the ED, admitted to the hospital, and subsequently discharged home without problems.

When triaging elderly patients, it is easier to miss common signs and symptoms of an acute problem, says Kelley. "Frequently, geriatric patients have many comorbid conditions that make it difficult to paint a picture," she says. "Also, elderly patients may have a problem over a long time, and their body compensates until it is unable to maintain homeostasis."

Older trauma patients are at high risk for being undertriaged, adds **Linda J. Scheetz**, EdD, APRN, BC, CEN, assistant professor at the College of Nursing at Rutgers, The State University of New Jersey in Newark. She points to a study

EXECUTIVE SUMMARY

Elderly patients may be undertriaged or misdiagnosed in the ED due to comorbid conditions or a blunted response to trauma.

- Even if trauma injuries appear minor, perform thorough reassessments.
- Consider age-related physiologic changes when taking vital signs.
- Find out what is different from the patient's normal behavior or health.

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showing that older patients were admitted to nontrauma centers more often than younger patients with comparable injuries. "This was possibly an inappropriate level of care given their injury severity," she says.¹

Never assume that elderly patients have only minor injuries because they were taken to a nontrauma center ED, warns Scheetz. "Accurate triage in the ED according to accepted standards of practice is imperative," she says. She recommends using a five-level triage system for early identification of patients at risk for poor outcomes. **(For more information on five-level triage scales, see "Pick the right five-level triage system: Here's how," *ED Nursing*, April 2004, p. 66.)**

Older trauma patients often have a blunted physiologic response, so you may not see the typical "red flags" of

hemodynamic instability, says Scheetz. This is due to a natural decline in immune system function associated with aging, and beta-blockers and angiotensin-converting enzyme (ACE) inhibitors may aggravate it, she explains. Additional factors that make accurate triage difficult include confusion, which may have been present before the traumatic event occurred, diminished hearing, a reluctance to admit pain, and a desire to avoid "burdening" ED staff, says Scheetz.

Even if injuries appear minor, perform thorough reassessments to check for delayed changes in physiologic status that indicate more serious injury, she advises.

Always obtain a clear history of an accident, fall, or motor vehicle crash, because this may raise your index of suspicion for internal injuries even if patients aren't manifesting symptoms, says Kelley. She points to the example of a 78-year-old man who reported a headache after a fall, was given a computed tomography (CT) and discharged, but returned two days later with severe hip pain unable to walk. At this time, the patient's wife informed ED nurses that he had fallen off the roof after drinking. "The patient had a hip fracture that was missed because the mechanism of injury was not fully explored," says Kelley.

To significantly improve assessment of geriatric patients, do the following:

- **Take into account age-related physiologic changes.**

Here are age-related changes to consider when assessing vital signs:

- Geriatric patients are less likely to be tachycardic and tachypneic because of decreased maximum heart and respiratory rates, says **Steven D. Glow, RN, MSN, FNP**, adjunct assistant professor at the College of Nursing at Montana State University-Bozeman in Missoula.

- Hypovolemia in a patient with pre-existing hypertension can result in relative hypotension that falls within a "normal" blood pressure range, says Scheetz.

- Don't assume that renal function is normal in a patient because urine output is good and blood urea nitrogen and creatinine are within normal limits, says **Karen Hayes, PhD, ARNP**, faculty at the School of Nursing at Wichita (KS) State University. "Because muscle mass declines with age, renal function can be impaired despite a serum creatinine level in the normal range," she explains. "When a creatinine level is even a little high, the renal function may be very marginal."

- If a patient still is awake after head trauma, this doesn't mean you can rule out a large subdural hematoma, says Hayes. The elderly are at more risk for this because of the stretched cerebral veins caused from brain atrophy, so you must monitor closely for any changes in mental status, Hayes explains.

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"If subtle signs of mental status changed are missed in the ED, the subdural may grow to press on vital brain structures causing serious brain damage," she says. "This is particularly dangerous if the patient is discharged."

— Aggressively treat a low hematocrit in patients with significant cardiac and/or pulmonary dysfunction, says Hayes.

"Elders who compensate for poor cardiac or respiratory function with increased hematocrit will decompensate quickly when they enter a blood loss state," she says. "The ED nurse must recognize the potential for danger and monitor closely until the blood loss can be stopped or blood replaced."

Most elderly patients take blood thinners, such as aspirin to prevent strokes or maintain patency after angioplasty, notes **Linda Whitt**, RN, BSN, CEN, ED nurse at Bon Secours DePaul Medical Center in Norfolk, VA. "Some are on more potent thinners like [warfarin] or [clopidogrel], so they are much more likely to bleed from injuries, specifically to their heads."

— Elderly patients with chest trauma may have rib fractures and/or pulmonary contusion even if this isn't initially apparent on X-ray, says Hayes. "Because the chest wall may be frail in an elder, rib fractures and

resulting pulmonary contusion may occur with minimal trauma," she says. "If missed, respiratory difficulties may ensue."

• **Allow patients to explain what brought them to the ED.**

You will get more information by listening carefully than by firing a bunch of questions at the patient, Kelley advises. For instance, if a patient tells you that his groin pain came on suddenly and is not radiating into the flank, this could mean the difference between a diagnosis of abdominal aortic aneurysm vs. a kidney stone, she says.

• **Ask "what is different today?"**

Ask family members "what are you seeing now that is different from this patient's normal behavior, such as level of functioning, mental status, or speech?" or ask the patient, "What is different about how you feel now compared to your normal state of health?" suggests Glow.

These questions can help you determine if altered mental status such as memory loss, confusion, and altered gait are normal for the patient or signs of altered electrolytes or altered glucose, says Glow.

If a patient's complaint is an acute exacerbation of a chronic problem, ask what occurred recently that caused the condition to worsen, advises Glow. For example, many patients with chronic obstructive pulmonary disease are always short of breath, but knowing that the client had a sudden change in sputum color might point to pneumonia as the cause of increased dyspnea, Glow explains.

Without this information, the patient's condition may be difficult to assess correctly, says Glow. "Stroke symptoms such as slurred speech, weakness, or facial droop are treated very differently if they have been present for an hour vs. several years," he adds.

Reference

1. Scheetz LJ. Trauma center versus nontrauma center admissions in adult trauma victims by age and gender. *Prehosp Emerg Care* 2004 Jul-Sep; 8:268-272. ■

Heart attack! Don't delay ED care for women

(Editor's note: This is the second article in a two-part series on chest pain in the ED. Last month, we gave strategies to speed door-to-needle time. This month, we cover treatment delays due to atypical presentation.)

Would you ever believe that women could be waiting longer than men to receive life-saving treatment in

EXECUTIVE SUMMARY

According to a new study, female ED patients with heart attacks wait longer for treatment than men. Possible reasons are patients experiencing atypical signs and symptoms and women waiting longer to come to the ED.

- Have a high index of suspicion for patients with fatigue, nausea, heartburn, or shortness of breath.
- Educate women about atypical signs and symptoms.
- Activate cardiac catheterization labs faster to reduce door-to-balloon times.

your ED? Researchers looked at records of 1,551 heart attack patients who had emergency angioplasty and found that women on average waited more than 118 minutes for treatment, compared with 105 minutes for men.¹

“We need to do a better job in making sure that both men and women recognize and react to heart attack symptoms as quickly as possible, and that our emergency medical professionals work to ensure immediate diagnosis and treatment,” says **Mauro Moscucci**, MD, the study’s lead author and director of interventional cardiology at the University of Michigan Cardiovascular Center in Ann Arbor. “These delays result in worse outcomes, and there should be no gap between the genders.”

The study found that only 25% of female patients underwent emergency angioplasty within the recommended 90 minutes, as compared with 34% of male patients.

A delay in diagnosis or treatment leading to worse outcomes poses potential liability risks, Moscucci warns. Take these steps to reduce treatment delays for female heart attack patients:

• Watch for atypical symptoms.

The gender gap identified by the study could be partly because women tend to have less of the “typical” symptoms of heart attack, such as crushing chest pain and left arm pain, says Moscucci.

“Remember that females do not always present with the classic signs and symptoms of an MI [myocardial infarction],” says **Kimberly Henson**, RN, a nurse in the emergency center chest pain unit at Spartanburg (SC) Regional Healthcare System. “Women are more difficult to diagnose but are becoming more and more common.”

Any patient who complains of pain in the left arm, jaw, chest, or abdomen, if diabetic, could be having an MI, underscores **Lori Pelham**, RN, clinical nursing supervisor at University of Michigan’s ED in Ann Arbor.

“At triage, the patient’s chief complaint may not necessarily be chest pain, but if their symptoms are

significant enough in combination with their chief complaint, they are sent directly to the treatment areas and care is started,” says Pelham. If atypical symptoms are overlooked, there will be a delay in door-to-needle or whatever intervention is needed, she adds.

Suspect MI whenever women present with symptoms of fatigue, nausea, heartburn, or shortness of breath, says Moscucci. “The first step toward making a timely diagnosis of acute myocardial infarction is to consider the possibility of such diagnosis,” he emphasizes. Among other steps, your initial approach should include a prompt electrocardiogram with appropriate interpretation, he adds.

Educate nursing staff on typical clinical presentation of MI, but also on atypical presentation, says Moscucci. “The educational program should focus on the ‘time is muscle’ concept and the need to avoid any delay,” he says.

• Educate women about atypical symptoms.

“As patient advocates, ED nurses need to teach families and staff the different signs and symptoms of a possible MI,” says Henson.

Women with heart attack or cardiac ischemia may delay coming to the ED because their symptoms are not typical, says Pelham. In the study, the women’s symptoms started on average 105 minutes before they got to the ED, compared with only 85 minutes for the men.

The symptoms may be vague to the women, Pelham says. They rationalize it is not chest pain and delay in presenting to the ED, she says. “It’s just like with

SOURCES

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stroke,” Pelham says. “We need to make people understand that we only have a small window of time when we can help them without damage occurring.”

Patients need to know the full range of symptoms that could mean a heart attack, emphasized Pelham. “And when they do come to the ED and it’s not a heart attack, we should remind them that it’s better to be safe than sorry,” she says.

- **Activate the cardiac catheterization lab faster.**

To reduce delays, Moscucci recommends that electrocardiograms be read or transmitted during patient transport, and that ED physicians, not just cardiologists, are allowed to activate the cardiac catheterization lab when patients present with acute ST-segment elevation MI.

“Faster activation of the cath lab would result in shorter door-to-balloon time for both women and men,” he says.

Reference

1. Moscucci M, Smith DE, Jani S, et al. American Heart Association Scientific Sessions Abstract Oral Presentation Session 98.1, Abstract 3692. New Orleans; Nov. 9, 2004. ■

Be creative teaching nurses to do neuro assessments

Your head trauma patient bounces back and seems fine after an epidural bleed and temporary loss of consciousness, but lapses into a profound coma — all in a matter of minutes.

Your elderly Alzheimer’s patient has gone from confused to aphasic, and suddenly can’t move her left side.

Both these scenarios illustrate the importance of performing a quick neurological assessment in the ED,

says **Teri Howick**, RN, nurse educator for the ED at McKay Dee Hospital in Ogden, UT. **[See related story on the Glasgow Coma Scale (GCS) on p. 54.]**

“We see so many patients that are neurologically altered, whether from injury, drugs, hypoxia from pneumonia, delirium from fever, or acute insulin reactions,” says Howick. “Neuro baselines are a noninvasive way to cue you in to changes.”

To ensure that all ED nurses know how to perform a neurological assessment, take these steps:

- **Give nurses a test on the GCS.**

At McKay Dee’s ED, nurses take a self-administered test on the GCS using a CD-ROM tool developed internally, with results kept in nurses’ education files. “Joint Commission surveyors loved it,” she says. “They were very impressed with our education documentation.” **(See box on p. 54 to order a copy of the tool.)**

Although the GCS was developed primarily for head trauma patients, it can be used for all patients with decreased neurological status, says Howick. “This includes drug-impaired patients, senile or Alzheimer’s patients, intoxicated patients, and head injuries,” she says.

The scale provides a baseline assessment, which is important in determining if your patient is improving or getting worse, says Howick. This is especially critical for head injuries, but it also is helpful for overdose or chemically impaired patients, she adds.

“It is very easy to learn and is a quick assessment to let you know where the patient is at this time,” she says. “The patient’s condition may change within minutes, and those changes are what’s important, as well as any changes from their normal status.”

- **Have nurses practice by scoring patients.**

Nurses review case studies and score patients, and charts are reviewed for accuracy by the ED’s trauma coordinator, says Howick. Results are kept in education files, and she follows up with individual nurses as needed.

- **Start a “neuro education” series.**

At St. Joseph’s Hospital and Medical Center in Phoenix, a series of neurological inservices will be given to ED nurses, says **Keri J. Hohm**, RN, BSN, clinical supervisor for emergency services. “I am going to do the educating myself by providing a short 10- to 15-minute presentation to the staff,” she says. “This gives them opportunities to ask questions and practice on each other.”

The informal sessions will be held in the ED during slow periods, with three to four nurses at a time, says Hohm. “After the presentation, staff will practice by performing a complete neuro assessment on each other or observing one if there is a patient with neuro deficits present at the time,” she says.

EXECUTIVE SUMMARY

Every ED nurse should be able to perform a neurological assessment using the Glasgow Coma Scale to obtain a baseline score and determine if the patient’s condition is getting better or worse.

- Have nurses take a self-administered test, and keep results in education files.
- Hold a series of inservices on neurological topics.
- Give nurses scenarios involving neurological impairment, and ask for possible diagnoses.

SOURCES/RESOURCE

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A 32-minute video demonstrates how to use Glasgow Coma Scale scores to evaluate patients with traumatic head injury, including how to properly score eye, verbal, and motor responses in adults and children. The cost, including instructor guidelines, pre- and post-tests and answer sheet, is \$50 including shipping. The tool also is available in a CD-ROM format that costs \$10 including shipping. To order, send a check made out to "GCS Video" to:

- **Suzanne Day**, RN, MA, Trauma Coordinator, LDS Hospital, Eighth Avenue and C Street, Salt Lake City, UT 84143. Telephone: (801) 408-3631. E-mail: ldsday@ihc.com. Web: www.ihc.com/traumaeducation.

The first part of the series will cover the use of the GCS and how to check pupils and cranial nerves, says Hohm. To prepare the presentations, Hohm will draw on her experience in a neurological intensive care unit and include material from neurological text books and web sites.

"Also, since we have the Barrow Neurological Institute here in-house, I use the nurses and physicians as references when I have questions I cannot find an answer to," she says.

Topics will include different types of brain injuries such as subarachnoid hemorrhages, epidural and subdural hematomas, acute cerebrovascular accidents, herniation, and the placement of ventriculostomies. "We will also cover how each of these injuries should be managed in the acute onset stage, including management of blood pressure, intracranial pressure, and cerebral perfusion pressure," says Hohm.

• **Have nurses act out patient scenarios with neurological symptoms.**

Howick says she's a fan of fun education. "It improves retention and makes it memorable," she says. "It's a riot to see nurses portray patients."

Nurses are given a diagnoses and signs and symptoms, such as "You are a transient who frequently comes in intoxicated and combative. A car struck you earlier in the evening. Now you have a headache, vomiting, blurred vision, and can't walk a straight line. There is an abrasion on your temple. You can answer questions regarding yourself, until you become confused and unresponsive."

Other nurses then are asked to name the patient's possible diagnosis, which in this case is an intracranial bleed. You also can have nurses complete self-learning packets listing scenarios and options for diagnosis, suggests Howick.

• Create an "education cart."

At St. Joseph's, a cart contains educational information that ED staff members have created, including a handout on neurological assessment.

"It is kept in a closet and brought out only when it's going to be used, so that things don't disappear," says Hohm. ■

Tips to teach nurses to do neuro assessments

You should perform a neurological assessment for any patient whose history or mechanism of injury indicates a possible neurological problem, says **Cynthia Bautista**, PhD, RN, CNRN, neuroscience clinical nurse specialist at Yale-New Haven (CT) Hospital.

These patients include any who reports a loss of consciousness or change in level of consciousness; patients with head injuries; patients who are not oriented to time or place; patients whose pupils appear sluggish to light; patients whose pupils are more than 2 mm different in size; and any patient in whom a decrease in motor strength, facial droop, and slurred speech are present, says Bautista.

To improve your neurological assessment of patients, consider the following:

• **Trend in level of consciousness.** Reassessing the level of consciousness helps you to determine if the patient is getting better or worse, says Bautista. "The GCS [Glasgow Coma Scale] helps you determine when you need to call the physician," she says. "When there is a change in the GCS score, it is the earliest sign that further neurological problems may occur."

Score the patient's best possible response for eye opening, verbal, and motor response, and be sure to

SOURCE

For more information on use of the Glasgow Coma Scale, contact:

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stimulate the patient sufficiently to get the best possible response, notes Bautista. “Only score a 1 in each category when the patient has been stimulated for 30 seconds and there is still no eye opening, verbal, or motor response,” she says.

When assessing eye opening and the eyes are swollen shut, the letter “C” may be used to indicate eyes closed by swelling, says Bautista. Orientation to time and place will be lost before orientation to person, says Bautista. “When assessing motor response, use the command ‘Show me two fingers.’”

• **Pupillary response.** Note the size of the pupils, and shine a penlight into the eyes to assess whether the patient’s reaction is brisk, sluggish, or fixed, says Bautista. Dilated pupils may indicate brain herniation or hypoxia, constricted pupils may be due to narcotics or a pontine infarct, and fixed pupils may indicate brain herniation, she adds.

• **Motor strength.** Motor strength is assessed by how well the extremity can move against gravity and resistance, says Bautista. “Ask the patients to lift their arm or leg up into the air and then push against resistance,” she advises. ■

Do on-call physicians put patients at risk? Act now

It’s been more than 30 minutes, and you’re still waiting for the on-call surgeon to evaluate an elderly trauma patient for internal bleeding. When you page him again, he says curtly, “I’ll get there when I get there.” What do you do next?

Do you believe it’s not your responsibility to take action when physicians fail to comply with the “on-call” requirements of the medical staff bylaws? This is a dangerous assumption, says **Shelley Cohen**, RN, CEN, a consultant and educator for Health Resources Unlimited, a Hohenwald, TN-based consulting

company specializing in ED triage and health care leadership.

“Some nurses believe it is not their problem, but the fact is, if it is their patient, it has now become their problem,” Cohen says. According to a survey of 1,427 EDs conducted by the Dallas-based American College of Emergency Physicians (ACEP), two-thirds of EDs are reporting shortages of on-call specialists, such as neurosurgeons, orthopedists, and obstetricians.

According to some of the EDs surveyed, the lack of needed specialist backup is causing delays in patient treatment, increases in patient transfers, and concerns that lack of timely access to specialists may be placing patients at risk of harm.

The decrease in the number of medical specialists willing to be on call in the nation’s ED is a looming national health care crisis, warns **J. Brian Hancock**, MD, immediate past president of ACEP. “If this is happening in your ED, you are not alone,” he says.

A delay in care or transfer may result in an adverse outcome despite your efforts to provide the best level of care possible, says Hancock. “When a person has a traumatic head injury, they need access to a neurosurgeon right away, because delays can result in further brain damage and even death,” he says.

Notify others about violations

If you are aware that a physician is not compliant with the on-call requirements and you don’t take appropriate action, such as informing your shift supervisor or manager, and the patient has a bad outcome, you have a bigger problem than just a violation of the Emergency Medical Treatment and Labor Act (EMTALA), says Cohen. “That nurse is now going down the path of not meeting a standard and not acting in the best interest of the patient,” she warns.

While you don’t have the power to make the physician comply, you do have the duty to notify appropriate individuals that the on-call needs of the patient are

EXECUTIVE SUMMARY

If an on-call physician does not respond as required by the Emergency Medical Treatment and Labor Act, you are obligated to notify appropriate individuals.

- Develop a reporting form for ED nurses to document incidents.
- Document times of conversations with ED and on-call physicians.
- Know your facility’s policies for lack of compliance.

SOURCES

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not being met, says Cohen.

“Even if there were no EMTALA statutes, you are still be responsible to act as the advocate for the patient and take further steps to ensure her needs were being met,” says Cohen. These steps should include:

1. Use the chain of command.

You are expected to use all of your resources to notify the supervisor or administrator on call that the needs of a patient are not being met, says Cohen. “The EMTALA statute also has very specific language to support the decision of an ED physician who may have to choose to transfer a patient to where the needed specialist is available, when the one at their facility cannot present in a time that meets the needs of the patient,” she adds.

2. Use an incident report form to document details of the scenario.

Obtain a copy of the medical staff bylaws with the on-call physician requirements, and work with risk managers to develop an EMTALA compliance tool for ED nurses to document incidents in which physicians were not in compliance, recommends Cohen.

The tool should have a similar format to incident reporting forms, with checkboxes for nurses to identify the category of concern, whether on-call, transfer, or medical screening examination, says Cohen. Once the nurse completes the form, a copy should go to the ED manager, and the original should go to the medical staff chief, the chief of the department the on-call physician is under, the facility risk manager, or the ED medical director, depending on your facility’s policy. “Of course, the form will be useless without a policy that clearly outlines the repercussions of those who do not comply,” she adds.

3. Document times of discussion with the on-call physician and the ED physician.

Your documentation should be factual and free of opinion with a focus primarily on the time and the

action that was carried out, advises **Jeff Strickler**, RN, MA, clinical director of emergency services at University of North Carolina Hospitals in Chapel Hill. For example, “2100 — Dr. Neurosurgeon notified, 2100 — Dr. Neurosurgeon answered page, advised will be there when he can, ED attending notified.”

“This documentation should be either in nursing notes, established paging logs, or the institution’s incident report forms,” says Strickler.

On the patient record, you should only document pertinent information that relates to the patient, advises Cohen. She suggests the following with your initials:

1015: Dr. Jones paged.

10:25: Dr. Jones called and states “I will be there in 30 minutes.”

11:02 ED physician, Dr. Smith, notified that Dr. Jones has not arrived.

“Discussions with nursing supervisors or administration do not belong on the medical record,” she notes. “These notes are best suited for an internal form such as an incident report.” ■

Are nurses still using ‘do-not-use’ abbreviations?

A recent report from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) revealed that hospitals were almost 100% in compliance with all the National Patient Safety Goals, with one exception: the requirement to avoid use of unauthorized abbreviations, which fell to 85% compliance.

The goal requires you to standardize abbreviations, acronyms, and symbols used and develop a list of which not to use. (For JCAHO’s minimum “do-not-use” list,

EXECUTIVE SUMMARY

To improve compliance with the National Patient Safety Goal to avoid use of unauthorized abbreviations, educate nurses with pocket cards, fliers, and inservices.

- Audit charts to check for unauthorized abbreviations.
- Inform agency nurses about the requirement.
- Begin with a list of 10 abbreviations so nurses are not overwhelmed.

go to www.jcaho.org. Click on “National Patient Safety Goals and FAQs,” “Implementation Tips to Eliminate Dangerous Abbreviations,” “Prohibited Abbreviations,” and scroll down to the list.)

This is one of the most difficult of the safety goals for EDs to comply with, says **Karol Edwards**, RN, nursing director of the ED at Upper Chesapeake Medical Center in Bel Air, MD. “This was a big challenge for ED nurses,” Edwards says. “We are creatures of habit, and this was a change in practice that some of us have been doing for many years.”

5 steps to compliance

To reduce use of unauthorized abbreviations in your ED, do the following:

- **Use pocket cards.**

Small pocket cards were given to each ED nurse with a list of accepted abbreviations, says **Barb Baughman**, RN, director of emergency services at Harford Memorial Hospital in Havre de Grace, MD.

- **Use fliers to address current trouble spots.**

Bulletin boards are updated continually to remind nurses of specific abbreviations currently being watched, she says.

- **Audit charts.**

At Upper Chesapeake, two ED nurses review five sets of admission orders per month, says Edwards. “It is easy to accomplish this on any day, as we have so many admissions through the ED,” she adds.

The inpatient floor secretaries do a second check when they are taking off the orders for admitted patients. “They are always double-checking the abbreviations as they know what is approved and what is unacceptable,” says Edwards.

If the secretaries find any unapproved abbreviation, they immediately notify the ED nurse and send the order sheet back to the ED to be corrected by the nurse who wrote the orders. “This helps us make sure that we are in compliance as close to 100% of the time as possible,” she explains. “It is a good system and keeps us all on our toes.”

The information from the audit tools are submitted monthly to a designated person who puts them into a departmental and hospitalwide report, and monthly, quarterly, and yearly reports are generated, says Edward.

Although unauthorized abbreviations are rarely found, charts still are monitored regularly so that Joint Commission surveyors can see that compliance is continually tracked, she notes.

- **Make sure agency nurses are informed.**

Agency nurses working in Upper Chesapeake’s ED are given the same list of unauthorized abbreviations used by ED nurses, and the list was sent out in a mailer

SOURCES

For more information about the “do-not-use” abbreviations, contact:

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with paychecks, says Edwards.

“It is the expectation that agency nurses function under the same guidelines, protocols, and policies as the staff or pool nurses,” she says. “It is truly a patient safety issue.”

- **Start with a small list of abbreviations.**

At Northeast Medical Center in Concord, NC, a list of 25 unauthorized abbreviations was developed, but nurses felt overwhelmed because the list was too long, says **Sherry Walter**, RN, MSN, CCRN, clinical director of the emergency care center. After the list was cut down to the 10 most frequently misused abbreviations, staff showed dramatic improvements, she reports.

Bright yellow cards were posted at every workstation and in bathrooms as a reminder, says Walter. “The more people saw the unapproved abbreviations, the more they remembered not to use them.”

Also, ED coders reviewed every record for unapproved abbreviations until staff consistently showed compliance, she adds. “Now that we have mastered these, we will soon begin to tackle some more.”

The coders monitored 100% of charts, paying particular attention to handwritten medication orders since that is what the Joint Commission goal originally required, says Walter. “We did not do a baseline study prior to implementation of unapproved abbreviations, but we did a three-month review of ED charts for our 10 identified abbreviations, and we were consistently between 99%-100% compliant,” she reports.

The JCAHO’s modified 2005 requirements for standardizing medical abbreviations now apply to pre-printed

forms as well as handwritten documentation, but apply only to orders and medication-related documents. "As far as pre-printed forms being in compliance, this step has already been taken, so this will not be an issue for our organization," says Edward. ■

Dramatic rise in CA-MRSA: What it means for your ED

There is an alarming increase in community-associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA) cases in ED patients seeking treatment for skin and soft tissue infections, according to a new study.¹

"Despite the well-documented emergence of CA-MRSA in the U.S., evidence of its prevalence among otherwise healthy emergency patients has not been explored," said lead author **Bradley W. Frazee, MD**, assistant clinical professor at the department of emergency medicine at Alameda County Medical Center in Oakland, CA.

Researchers found 51% of skin and soft tissue infections in Alameda's ED were caused by CA-MRSA.

EDs see dramatic increase

While MRSA was once thought to be acquired mostly in health care facilities, a surge in patients with MRSA acquired in the community is being seen in ED waiting rooms, reports Frazee. "The good news is that compared to hospital-associated MRSA strains, community-associated MRSA is susceptible to a broader array of antibiotics," he says. "The bad news is that CA-MRSA may be more virulent than typical hospital strains."

Although researchers found few demographic similarities among the infected patients, the patients were more likely to be white, and their infections were more likely to take the form of a boil.

"We now need to consider what measures are needed to reduce its spread in the community as well as among ED patients," says Frazee. "Until we have detailed guidelines regarding how to handle likely CA-MRSA patients, standard universal precautions probably are adequate."

Once MRSA infection is identified, patients typically are isolated, but due to overcrowding in EDs, it may be difficult to isolate all of the CA-MRSA patients, he notes. "Remember, this bug is spreading naturally in the community, and it is associated for the most part with minor skin infections," says Frazee. "Most of

these patients are not admitted, and as long as nurses wear gloves and wash their hands, it is unlikely that the pathogen will spread to staff or between patients during a short-term ED stay."

[Editor's note: For more information, contact: **Bradley W. Frazee, MD**, Assistant Clinical Professor, Department of Emergency Medicine, University of California, San Francisco, Box 0208, San Francisco, CA. 94143-0208. Telephone: (510) 437-8323. Fax: (510) 437-8322. E-mail: bfrazee@hghed.com.]

Reference

1. Frazee BW, Lynn J, Charlebois ED, et al. High prevalence of methicillin-resistant *Staphylococcus aureus* in emergency department skin and soft tissue infections. *Ann Emerg Med* 2005: In press. ■



JOURNAL REVIEWS

Marek M, Lindsell CJ, Jauch EC, et al. **Effect of education and guidelines for treatment of uncomplicated dental pain on patient and provider behavior.** *Ann Emerg Med* 2004; 44:323-329.

Implementing guidelines for dental pain and giving patients resources for alternative treatments can reduce return visits and decrease narcotic prescriptions, says this study from the University of Cincinnati College of Medicine.

Dental pain is one of the most common complaints bringing patients to the ED and uses significant resources, but patients with uncomplicated dental pain are best served by primary care dentists due to lack of suitable resources and more expensive care, say the researchers.

To address this, guidelines were developed for ED care of uncomplicated toothache emphasizing the use of nonsteroidal anti-inflammatory drugs (NSAIDs) instead of narcotics, and giving patients a listing of local dental clinics that charge on a sliding scale based on income. The list was given to patients at triage, during evaluation, or at discharge.

After the guidelines were implemented, researchers reviewed 5,930 ED dental pain visits and found that return visits for toothache decreased by 10.6% within two months, and opiate prescriptions were reduced by 20.1%.

"Establishing guidelines that include information about available community dental resources and about effective nonprescription pain medications and that encourage the prescribing of nonsteroidal

anti-inflammatory drugs for uncomplicated detail pain appears to reduce the prescribing of narcotic pain medications by physicians and reduces the burden of dental pain on the ED,” the researchers conclude. ▼

Gorelick MH, Yen K, Yun HJ. **The effect of in-room registration on emergency department length of stay.** *Ann Emerg Med* 2005; 45:128-133.

In-room registration reduces patients’ total length of stay significantly, says this study from the Children’s Hospital and Health System in Milwaukee.

The researchers compared ED visits from 2000-2003 after implementing a process in which patients were placed directly into a room after triage, and registration was completed after being seen by a physician. In-room registration resulted in an average decrease of length of stay of 15 minutes. The time savings was greater than expected, since the act of registration takes only five minutes, note the researchers.

“We speculate that this effect may be a result of a change in the mindset of the ED staff, from seeing the waiting room, and waiting in general, as acceptable and even expected to a view of expediting care in all phases of the ED visit,” they wrote.

The researchers noted that previous studies have shown similar benefits, but generally with changing multiple processes simultaneously. “Changing a single process of care — going from a serial to a parallel, in-room registration process — was associated with a significantly decreased length of stay in an academic pediatric ED, even with adjustment for other factors found to influence length of stay, including ED census, admissions from the ED, hospital occupancy, and month of the year,” they conclude. ■

ED nurses must prepare for a strange flu season

Beware: It is not over yet!

This year is a wild card, and anything still could happen. First, we had a dangerous shortage of influenza vaccine, followed by many high-risk people

who couldn’t get or decided to forgo immunization. Fortunately, this has been a mild flu season — *so far*.

But February and March are the historical peak months for influenza activity, and the large numbers of high-risk unprotected people make this a potential recipe for disaster. Influenza vaccine shortages and delays are a recurring problem, and at some point, we inevitably will face another influenza pandemic.

Are you and your hospital prepared if we run out of luck? Do you know where to turn for guidance and help? Do you know how to prevent the spread of this infectious disease? Or how to handle major staff shortages due to record absenteeism?

Thomson American Health Consultants, publisher of *ED Nursing*, has developed an influenza sourcebook to ensure you and your hospital are prepared for what could happen this flu season — or the next flu season.

Hospital Influenza Crisis Management provides the information you need to deal with ED overcrowding, potential liability risks, staff shortages, and infection control implications for staff and patients. This sourcebook addresses the real threat of a potential pandemic and the proposed response and preparedness efforts that should be taken in case of such an event. Major guidelines and recommendations for influenza immunization and treatment are included, along with recommendations for health care worker vaccination and the efficacy of and criteria for using the live attenuated influenza vaccine.

Hospital Influenza Crisis Management will offer readers continuing education credits. For information or to reserve your copy at the price of \$199, call (800) 688-2421. Please reference code **64462**. ■

BINDERS AVAILABLE

ED NURSING has sturdy plastic binders available if you would like to store back issues of the newsletters. To request a binder, please e-mail **ahc.binders@thomson.com**. Please be sure to include the name of the newsletter, the subscriber number and your full address.



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COMING IN FUTURE MONTHS

■ New recommendations for pediatric sedation

■ Documentation tips to prevent lawsuits

■ Tips for identifying psychiatric emergencies

■ What Joint Commission surveyors ask EDs about patient flow

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CE instructions

Nurses participate in this continuing education program by reading the issue, using the provided references for further research, and studying the questions at the end of the issue.

Participants should select what they believe to be the correct answers, then refer to the list of correct answers to test their knowledge. To clarify confusion surrounding any questions answered incorrectly, please consult the source material.

After completing this semester's activity with the **June** issue, you must complete the evaluation form provided in that issue and return it in the reply envelope provided in order to receive a certificate of completion. When your evaluation is received, a certificate will be mailed to you. ■

CE questions

After reading this issue of *ED Nursing*, the CE participant should be able to:

- **Identify** clinical, regulatory, or social issues relating to ED nursing. (See *Are elderly patients undertriaged? Don't miss life-threatening conditions* and *Do on-call physicians put patients at risk? Act now.*)
- **Describe** how those issues affect nursing service delivery. (See *Heart attack! Don't delay ED care for women.*)
- **Cite** practical solutions to problems and integrate information into the ED nurse's daily practices, according to advice from nationally recognized experts. (See *Be creative teaching nurses to do neuro assessments.*)

9. Which is accurate regarding assessment of geriatric patients in the ED, according to Karen Hayes, PhD, ARNP?
 - A. If a head trauma patient is awake, a large subdural hematoma can be ruled out.
 - B. The majority of older patients have increased heart and respiratory rates.
 - C. If serum creatinine levels are within normal limits, assume that renal function is normal.
 - D. Low hematocrit levels should be treated aggressively in patients with significant cardiac and/or pulmonary dysfunction.
10. Which is recommended to reduce delays in treatment for heart attack patients, according to nurse Kimberly Henson?
 - A. Give electrocardiograms only to patients presenting with chest pain.
 - B. Educate women about atypical symptoms of myocardial infarction.
 - C. Advise patients not to come to the ED if their only symptom is jaw pain.
 - D. Allow only cardiologists to activate the cardiac catheterization lab.
11. Which is true regarding use of the Glasgow Coma Scale, according to Teri Howick, RN, nurse educator?
 - A. The scale only should be used by ED physicians.
 - B. Only head trauma patients can be assessed with the scale.
 - C. The scale is not reliable for patients with severe neurological impairments.
 - D. The scale can be used for all patients with decreased neurological status.
12. To comply with the Emergency Medical Treatment and Labor Act, which is recommended when an on-call physician fails to report as required, according to Shelley Cohen, RN, CEN, consultant and educator?
 - A. No action by the emergency nurse is needed.
 - B. The patient must be transferred immediately.
 - C. Appropriate individuals must be notified.
 - D. The problem should be reported only if the patient's life is in danger.

Answers: 9. D; 10. B; 11. D; 12. C.