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New myocardial infarction guidelines will dramatically change your practice

Recommendations are for patients sitting 'right at the very edge' of an MI

Are all your myocardial infarction (MI) patients with ST-segment elevation (STEMI) treated with door-to-needle time within 30 minutes and door-to-balloon time within 90 minutes? And are you giving serial electrocardiograms (ECGs) to symptomatic patients with nondiagnostic ECGs every five to 10 minutes?

If not, you aren't practicing according to new guidelines from the Bethesda, MD-based American College of Cardiology (ACC) and the Dallas-based American Heart Association.

"The guidelines are posted on the ACC web site and should be practiced now," urges **Elliott M. Antman**, MD, FACC, chair of the committee that developed the guidelines and professor of medicine at Harvard Medical School in Boston. (To access the complete guidelines, go to www.acc.org. Click on "Clinical Statements/Guidelines." Under "July 1, 2004," click on "ST-Elevation Myocardial Infarction: ACC/AHA Guidelines for the Management of Patients With."

If you don't change your practice to reflect the new recommendations, you could be facing increased liability risks, he adds. "Liability is a tricky issue since individual patient decision making supercedes guidelines," Antman notes. "But as a whole, we would consider sites that do not practice according to the guidelines as providing inferior care to STEMI patients."

EXECUTIVE SUMMARY

Myocardial infarction (MI) patients with ST-segment elevation must meet door-to-needle time within 30 minutes and door-to-balloon time within 90 minutes, according to new guidelines from the American College of Cardiology and American Heart Association.

- Volunteer to participate in developing new protocols.
- The goal of frequent monitoring is to catch MIs as quickly as possible.
- Serial electrocardiograms (ECGs) must be given every five to 10 minutes for symptomatic patients without diagnostic ECG.

The guidelines are for patients who clinically have symptoms that look like a STEMI but have not yet had a diagnostic ECG change, says **Julie Bracken**, RN, MS, CEN, associate director of nursing staff development at University of Illinois Medical Center in Chicago and former ED clinical nurse specialist at Cook County Hospital. "This is the population that is sitting right at the very edge," she says.

Most of these patients wind up in the ED with symptoms, but definitive diagnosis is difficult as their MI usually is evolving, says Bracken.

"There are quite a few important changes all ED nurses should be aware of in the new guidelines," according to **Marli Bennewitz**, RN, BSN, chest pain center coordinator at St. Jude Medical Center in Fullerton, CA. The new guidelines will be reviewed at the ED's clinical services meeting and the cardiology quality review council, where all necessary changes to the existing protocol and computerized order sets for STEMI will be made to comply with the latest recommendations, she reports.

"The entire ED staff then will be inserviced on the changes," says Bennewitz. "The publishing of these guidelines provides an excellent opportunity for every ED to revisit their existing protocols and again focus on the No. 1 killer of Americans."

To dramatically improve care of MI patients, make the following practice changes based on the new guidelines:

• Keep door-to-needle time within 30 minutes, and keep door-to-balloon time within 90 minutes.

"The time to reperfusion is key, no matter whether it is by pharmacologic- or catheter-based means," says Antman.

Many EDs are not meeting these time frames, he adds. "There are definitely delays, more so for the door-to-balloon issues," says Antman, pointing to recent data from the National Registry of Myocardial Infarction, an observational study sponsored by San Francisco-based Genentech, showing that time from door to balloon in one hospital was more than 185 minutes.

The new guidelines leave no wiggle room for failure to meet these time frames, says Bracken. "While previous recommendations have been giving organizations time to get there, these new guidelines actually take us to where we should be," she underscores.

Obstacles to meeting the time frames include lack of cardiac catheterization lab capabilities and lack of quick access to cardiologists, says Bracken. "For small EDs, the challenge isn't going to be new," she says. "They are just going to do it more quickly than they have in the past."

Door-to-balloon times often are delayed because you have to get the patient into the catheterization lab, notes Bracken. "Depending on what your cardiology facilities are like, you may have to wait until the previous patient is done. Or during an off-shift, staff may have to be mobilized from home, which increases the time," she explains.

Facilities with in-house resources are able to meet the balloon time much more quickly, but this will be a challenge for EDs without 24-hour resources, predicts Bracken. To address this, the guidelines recommend that EDs have agreements with centers that have catheterization labs and cardiac surgery capabilities. "Most facilities probably have these agreements in place, but this is the impetus to encourage those who do not, to develop them," she says.

The guidelines now recommend that patients with cardiogenic shock, severe congestive heart failure,

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and/or a high risk of dying should be transferred to a facility with cardiac catheterization laboratory capabilities, reports Bennewitz. "They specify that the patient should be transferred within 30 minutes," she says. "If you work at a hospital that does not have cath lab capabilities, your guidelines should include a mechanism to transfer a patient to a tertiary facility, if necessary, within 30 minutes."

• Have a multidisciplinary team develop new protocols based on the guidelines.

You need guideline-based, institution-specific written protocols for triaging and managing patients with symptoms suggestive of STEMI, says Bennewitz.

Step forward and volunteer to be a resource to the committee or volunteer to participate, to make a direct impact on the protocol and make sure that the patients are getting the best possible care, urges Bracken.

"ED nurses need to get themselves involved in teams developing the protocols," she says. "And once the protocol has been developed, they need to drive implementation of the ED piece of it."

By being involved in the committee, you can look at outcomes to see the impact on the patient, says Bracken. "It would give you a more global view of the care of the patient from admission through discharge," she says.

• Ensure all patients who present with chest discomfort or anginal equivalent receive a 12-lead ECG and it is shown to an ED physician within 10 minutes of arrival.

If the patient remains symptomatic, serial ECGs every five to 10 minutes or continuous ST-segment monitoring should be performed, says Bennewitz. "They also recommend performing right-sided ECGs on all patients with inferior STEMI," she says.

If the initial ECG is not diagnostic for STEMI, but the patient remains symptomatic and there is a high clinical suspicion, the guidelines state that serial ECGs must be performed at five- to 10-minute intervals, or you must perform continuous 12-lead ST-segment monitoring to check for potential ST segment elevation.

"That will have major impact in the ED, because the majority of them are not doing this at five- to 10-minute intervals," says Bracken. In fact, most EDs have protocols with serial ECGs performed at four- to six-hour intervals, she explains.

Either the ECG has to be done every five to 10 minutes, ST segment monitoring has to be performed (which has not been general practice in the ED), or the patient will have to be moved to a chest pain center or observation bed where this monitoring can occur, says Bracken.

"Whether it will be a nurse or technician that will have to do the serials, it's definitely going to be a reallocation of resources to that specific patient population," says Bracken. "This will have a major impact on ED nurses, because if they are not doing the 12-lead themselves, they will need an ED tech dedicated to that patient pretty quickly and to remain with that patient to continue to do the serial ECGs as recommended."

The goal of the frequent monitoring is to catch MIs as soon as possible for patient who are having symptoms and have not yet had a diagnostic ECG, she explains. "The earlier you implement care, the better the outcome for the patient," says Bracken. ■

Do you know how to care for adults with seizures?

Have you recently held down a flailing, seizing patient to prevent injury, doing your best to calm frantic family members while trying to find out what caused the seizure and determining what interventions are needed? These are the multiple challenges of caring for seizure patients as an ED nurse, says **Lara Merana-Bailey**, RN, MSN, ED educator at Hartford (CT) Hospital.

"All the while, you are trying to control your own emotions," she adds.

New 2004 guidelines for adults coming to the ED with seizures from the Dallas-based American College of Emergency Physicians are giving ED nurses new options for these patients, which comprise approximately 1%-2% of all ED visits.[1]

EXECUTIVE SUMMARY

You must address the underlying cause of a patient's seizure, which can include toxicity, alcohol withdrawal, cerebral compromise, or electrolyte imbalance.

- If trauma has occurred, a head computed tomography scan is needed to determine causes of increased intracranial pressure.
- Place seizure patients where they easily are observed, if possible.
- For patients in status epilepticus, the main goal is to stop them from seizing, which may require multiple doses of lorazepam or, in some cases, intubation.

The cause for the seizure is more of a concern than the seizure itself, stresses **Gabe Gabriel**, RN, ED clinical supervisor/pre-hospital coordinator for St. Joseph's Hospital & Medical Center in Phoenix. "Protecting the patient from injury, helping maintain an airway, and providing supplemental oxygen are the most important things," he says.

You can significantly improve care of seizure patients by taking the following steps:

• Find out if the patient has a history of seizures.

"You want a good nursing assessment from whomever brought the patient in, as to what actually precipitated the seizure," says Merana-Bailey. Ask about medications, past medical history, and allergies, she recommends.

If patients report falling and hitting their heads, that information calls for a very different type of workup than if they have a history of seizures, explains Merana-Bailey. "You would be doing a trauma workup along with a head CT [computed tomography]," she says. "We are looking for masses, bleeds, or anything that would cause increased intracranial pressure leading to a new seizure."

If patients do have a seizure history, you must determine what medications they are on and if they are compliant, says Merana-Bailey. "Patients often come into the ED with a seizure and tell us that they stopped taking [phenytoin] because they haven't had a seizure in a year," she says. "In that case, you would load them up on [phenytoin]."

If the patient has stopped taking his or her medication, you need to explain why this is important, stresses Merana-Bailey. "Tell them, 'You may never have a seizure the rest of your life, but it's *because* you are taking your medicine. You can't just stop taking it because you are not having seizures,'" she says.

• Ensure safety.

While waiting for results of blood tests and CT scan, monitor patients with the bed in the lowest position, guide rails up, and call bells within reach, says Merana-Bailey.

"We place seizure patients in bays that can be directly visualized from the main nurses station," says Gabriel. "This allows for constant observation."

Don't allow seizure patients up to the restroom before determining why they seized or before you have gotten their drug levels to a therapeutic state, advises Gabriel. "Keep the [lorazepam] handy. If they seized once, they are going to seize again," he adds.

If patients have to use the restroom, an ED staff person should accompany them, says Bailey. "Or better yet, have them use the bed pan," she says.

• Know signs of status epilepticus.

This is a life-threatening form of seizure that most often occurs in very old or very young patients, and it generally is defined as seizures lasting for more than one hour, says Gabriel.

"These patients are going from one seizure to the next, which is life-threatening for a few reasons," says Merana-Bailey. The patient isn't breathing well, with increased intracranial pressure to the head, increased blood pressure, and decreased blood sugar and oxygen levels, she says.

The key goal is to try to get them out of their seizure, and the drug of choice typically is either lorazepam or diazepam," says Merana-Bailey. You would push 2 mg IV lorazepam, she says. "If the first dose doesn't get the patient out of status, give more," she says. "And sometimes, patients do need more and may possibly need to be intubated to protect their airway."

• Avoid antecubital sites when placing IV lines.

Antecubital sites are difficult to maintain with tonic/clonic activity, so if possible, place IVs in forearms or hands, recommends Gabriel. "The IV in the forearm is preferred, but the forehand is also an option," he adds. "The advent of phosphentoin has allowed us to be able to use the smaller-sized veins."

• Determine the cause of the seizure.

Here are several causes of seizures and their related treatment protocols, according to Gabriel:

— If the seizure is caused by toxicity from substance abuse or exposure to chemicals, provide basic ABCs and control the seizure.

— Cerebral compromise, such as intracranial bleeding or severe nonhemorrhagic strokes, may lead to seizures. "Diagnosis with CT imaging is of great importance," says Gabriel. "Surgical intervention is often the cure."

— For electrolyte imbalance caused by medications or endocrine disorders, replacement of the electrolytes

SOURCES

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becomes a key concern.

— For patients with alcohol withdrawal, treatment involves minimizing rate of withdrawal and providing sedation.

"In all these cases, seizures would be treated with the regimen of patient safety, airway/oxygen, and medication," says Gabriel.

Reference

1. Huff JS, Morris DK, Kothari RU, et al. Emergency department management of patients with seizures: A multicenter study. *Acad Emerg Med* 2001; 8:622-628. ■

You should take these steps to care for seizure patients

The following steps are taken for seizure patients who present to the ED at St. Joseph's Hospital & Medical Center in Phoenix.

• For patients having active seizure activity involving tonic/clonic movement:

Safety precautions are taken, including using side rails and having suction available. The airway is maintained and oxygen is provided, usually with a 100% nonrebreather mask. An intravenous line access is established, blood is drawn for labs, and glucose levels are checked. The seizure is controlled with lorazepam, continuing with dilantin afterward. For patients in status epilepticus, treatment could include other medications, such as propofol. The patient is monitored for cardiac and oxygen saturation.

• For patients with a first-time seizure:

Labs include complete blood count (CBC) with comprehensive metabolic profile (SMA-20 including calcium and magnesium), toxicology panel with urine and blood screens, and blood to be held for coagulation studies and blood typing, due to the possibility of cerebral bleed that would require coagulation studies or blood transfusion. A basic head without contrast computed tomography (CT) scan is given. Underlying causes are treated, either metabolic or toxic. A neurology consult occurs, with a neurosurgical consult if the CT is positive. A loading dose of dilantin is given. The patient is admitted if the underlying cause necessitates admission or if no underlying cause is found.

• For patients with a seizure history:

Labs include a CBC with basic metabolic panel and drug levels if a patient's medications are known. When lab results are back, subtherapeutic drug levels are treated. If levels are within normal limits, the patient's neurologist or primary care physician is contacted. If neither is available, a neurology consultation is given. The patient is discharged home as long as support mechanisms are in place to ensure that the patient will not be alone and will follow up with a neurologist. ■

Is your restraint use too high? Try patient advocates

(Editor's note: This is the second of a two-part series on psychiatric patients in the ED. This month, we explain how psychiatric advocates can decrease use of restraints, and a related story on p. 127 gives effective ways to avoid placing patients in restraint. Last month, we covered ways to improve care, ensure safety, and maintain throughput.)

As numbers of psychiatric patients continue to increase in many EDs, with more than 2 million treated in EDs in 2002, you might expect use of restraints to rise commensurately. But this is not the case at Springfield, MA-based Baystate Medical Center's ED.

"Not only are they 'safer, kinder, and gentler,' but the numbers of restraints are down," due to the ED's unique psychiatric advocacy program, says **Ann Maynard**, RN, BSN, emergency services manager.

"By having an advocate present, the patient does not feel as though they were forgotten," she says. "They are able to communicate their needs, fears, and concerns, so they do not escalate." **(For more information on the advocate's role in the ED, see box on p. 126.)**

Since the program was implemented, monthly restraint use has decreased from about 20 patients to fewer than 10

EXECUTIVE SUMMARY

Psychiatric advocates or mental health liaisons can meet the immediate needs of psychiatric patients in the ED and can reduce the use and risks of restraint.

- To de-escalate agitated patients, give choices, avoid making demands, and explain procedures.
- Before restraints are removed, make sure the patient understands why they were needed.
- Have one individual speak to the patient while giving instructions to other staff members.

for most months; and while patients used to spend about an hour in restraints, they are now typically removed in fewer than 20 minutes, reports Maynard.

At Arlington Heights, IL-based Northwest Community Hospital, specially trained individuals assess psychiatric patients and help physicians develop a plan of care, says **Carol A. Ziolo**, RN, MA, LCPC, one of the ED's mental health liaison specialists. "The liaison is truly an advocate for the mental health patient in the ED," she says.

To successfully reduce use of restraint with psychiatric advocates, do the following:

• Include input from ED nurses.

Baystate Medical Center's psychiatric advocacy program was developed by ED nurses who were frustrated with their lack of ability to meet the needs of psychiatric patients.

"It truly was a grass-roots effort," says Maynard. "We as nurses realized that we were not doing justice to patients in crisis."

The goal was to make restraint use safer and reduce use and duration of restraints, says Maynard. Psychiatric patients often escalate because they are kept waiting while ED nurses care for patients with emergent medical conditions, she adds. "The advocate prevents that from happening, since psychiatric patients now have a staff person with them all the time and their needs are met," she says.

Less restrictive methods of restraints, such as seclusion or chemical methodsw, are now the first choice unless safety issues demand immediate physical intervention, says Maynard. "When a decision is made that a patient needs physical restraints, the psychiatric advocate is the leader in applying restraints," she adds.

• Have a single person communicate with the patient.

There is always risk of injury when agitated patients need to be restrained, but the advocate decreases the risk by making the situation more controlled, says Maynard.

"We all have a role to play, and we all know exactly what our role is," she explains. "Instead of everyone talking at the patient all at once, the advocate talks with the patient and gives direction to the other staff members."

• Use liaisons to de-escalate agitated patients.

"We get involved with mental health patients as soon as possible, to reduce the number of staff who interact with patients," says Ziolo. "We medicate patients as soon as it is apparent that verbal de-escalation will not be successful and the patient becomes a danger to him or herself or others."

The liaisons quickly develop a treatment plan to remove the patient from the stimulation of the ED as soon as possible, explains Ziolo. To de-escalate an agitated patient, she recommends the following:

— Always use caution when caring for a mental health patient even if he or she appears calm and cooperative. "Staff need to talk in a low, calming voice," says Ziolo.

— Allow the patient to assist in decisions about their care when possible, such as asking the patient to undress and put on gowns. "If the patient refuses, give the option of the patient doing it voluntarily or having the assistance of security," says Ziolo. "The patient can assist with the decision, but the outcome will be the same."

— Always explain any procedures to the patient. "Many times, the patient is experiencing internal turmoil, and this can offer a sense of security," says Ziolo.

— Never demand that a patient do something. "This loss of control can escalate a patient very quickly," says Ziolo.

Role of the ED Psychiatric Advocate

- Continuous in-person observation of the patient.
- Simple reassessment and documentation of mental status every 15 minutes.
- Neurovascular check of the restrained patient's extremities every hour.
- If it is deemed safe for the patient and staff, remove one extremity at a time from restraint, and do range of motion exercise. This step is taken every two hours.
- Assess the need for nutrition and toileting every two hours while awake and every four hours while asleep.
- Take vital signs every four hours.
- Report assessment findings to the primary nurse.

Source: Baystate Medical Center, Springfield, MA.

SOURCES

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— Never remove restraints without evaluating the patient's understanding as to why the restraints were needed and what behaviors are expected for the restraints to be removed. "Always have a staff person or security accompany you when restraints are being removed," Ziolo adds.

• Use liaisons to make staff and patients safer.

Liaisons and all ED nurses are given crisis prevention training to help them recognize when a patient is escalating and how to defuse the situation, notes Ziolo. In addition, policies were developed for having security officers visible, placing patients in gowns, requiring sitters to observe patients in restraint, and removing all belongings from the patient for safety. "These policies have helped the liaison team and ED nurses work more cohesively as a team, to coordinate the best treatment plan for each individual person and his or her family," she says. ■

EDs can do these 3 things to avoid use of restraints

When restraints are needed, it's a dangerous moment in the ED that puts the nurse and patient at risk for serious injury. For many EDs, the number of dangerous moments is rising as the number of psychiatric patients increases dramatically.

"It is a very big problem for us," reports **Susan Key**, RN, director of emergency services at Cape Canaveral Hospital in Cocoa Beach, FL.

Cape Canaveral Hospital does not have a psychiatric unit, and it is not a receiving facility, Key says. "Patients are sometimes in the ED for greater than 24 hours, as we cannot find placement for them," she says. "It is very hard to handle this."

However, if you have a good policy in place, your use of restraints should decrease despite increased volumes of psychiatric patients, as these should be used as a last resort only, stresses Key. "We have a great restraint policy and very rarely use restraints," she says. Instead, alternatives such as dimmed lighting, relaxing music, comfort, and diversional measures are used, says Key.

You can decrease risks of restraint with these suggestions:

• Medicate patients quickly.

If patients present in a psychotic or agitated state, they are medicated right away with an antipsychotic and/or a benzodiazepine, says **Paige Ponte**, LCSW, psychiatric program specialist for the crisis intervention team at University of Utah Hospital and Clinics in Salt Lake City.

Assess the patient's degree of agitation at triage, so medication can be given immediately if needed, Ponte recommends. "This is critical to ensure safety of the patient as well as staff and other patients in the ED," she says. "This often will take the edge off enough so that physical restraint or forced medication does not have to take place."

However, the patient should be placed in a room first so that the physician can "eyeball" them, says Ponte. "If the patient is going to refuse the medication, it is essential that they are in a room, as triage is an unsafe place to deal with this behavior," she adds.

Look for behaviors that signal the need for medication to ensure safety, says Ponte. "If someone who presents with psychosis is fairly paranoid, if they appear to be responding to internal stimuli, if they are pacing, if they won't stay in their room, if they are agitated, if they are being disruptive, then they should be offered medication," she says.

SOURCES

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• Do a "show of force" when necessary.

If patients are potentially violent, crisis workers and security officers enter the rooms, set firm limits with the patients, and outline the consequences if they continue to act out, says Ponte. "Patients do not want to be physically restrained and when a relatively large group of people is at the door of their room telling them in a caring, yet firm way that they need to control their behavior or the consequence will be a shot or physical restraints, they frequently will choose to control themselves and take oral medications if that is appropriate," she says.

• Ask for help if needed.

Don't hesitate to ask for help from security or male staff members when a patient is escalating, advises Ponte. "Agitated, psychotic patients can be volatile and unpredictable," she says. ■

Ready for flu season? Follow new guidelines

It's that time of year again: Around this month, you can expect numbers of flu patients to steadily increase. This year, you'll need to comply with new flu guidelines from the Atlanta-based Centers for Disease Control and Prevention (CDC), which call for free, on-site influenza vaccinations to all ED staff, including night and weekend staff, beginning in October of each year.[1]

In addition, with only 36% of health care workers vaccinated for flu each year, the Bethesda, MD-based National Foundation of Infectious Diseases (NFID) has published strategies to increase flu immunization rates. **(To obtain the CDC and NFID guidelines, see resource box on p. 129.)**

To comply with current recommendations, you should take the following steps:

• Start early.

At Brigham and Women's Hospital in Boston, ED staff begin receiving information about the flu program in September; and in October, dates and sites of vaccination are announced, says **William T. Briggs,** RN, MSN, CEN, ED nurse.

• Bombard ED staff with information.

"We provide lots of education during the key period for immunizing staff," says Briggs. When sending e-mail messages to staff, keep them short and concise, he recommends. "We emphasize that while the flu may not kill them, they can give it to a patient in a vulnerable category, such as elderly or immunocompromised, and it may kill them," he says.

Information also is given on the safety of the vaccine and rate of reactions from the CDC, state health department, or vaccine manufacturer. "These e-mails must have the main message in the first few lines, because that may be all busy people read," he says. "I like to use a bulleted format, with easy-to-read font and color."

Brochures and articles also are placed in staff members' mailboxes and mailed to their homes, where they may have more time to read the material, says Briggs. "We really dog it until everyone has the message."

• Make it easy for ED staff to get the shot.

The NFID recommends making vaccination convenient, educating staff, and selecting a leader to plan and administer a vaccination program.

At Brigham and Women's, staff may receive the vaccine in one of the hospital lobbies from 7 a.m. to 7 p.m. for nine consecutive days. "This is in order to get all three shifts and the people who only work weekends," says Briggs. "This same strategy was very successful for [tuberculosis] testing."

All staff flu shots are free to the employee, and the paperwork is very simple, says Briggs. "The whole process only takes a couple of minutes, as staff consider their time to be very important," he says.

• Give the shot in the ED.

In addition to the flu immunization clinics, all the ED nurse practitioners are authorized to give the flu shot right in the ED, says Briggs. "Staff love this, as so many nurses procrastinate to do it later," he says. "When an occupational health nurse approaches them, they are thrilled."

At the ED for the Lawrenceville, GA-based Gwinnett Medical Center, the flu shot was offered to staff during night and weekend hours as well as day shifts, says **Denise Proto**, RN, nurse educator for emergency services. "I was here one weekend myself to help give them," she says. "We also have ED staff who routinely volunteer to administer the flu vaccines to the public at certain times and dates, such as churches."

• Compare notes with other EDs.

EXECUTIVE SUMMARY

New flu guidelines recommend free on-site vaccinations for all ED staff.

- When sending e-mails to staff about the flu shot, keep the message concise.
- Make sure that the flu shot is offered during night and weekend shifts.
- Offer the vaccine in the ED to make it more convenient for staff.

SOURCES/RESOURCES

For more information on reducing flu exposure, contact:

- **William T. Briggs**, RN, MSN, CEN, Emergency Department, Brigham and Women's Hospital, 75 Francis St., Boston, MA 02115. Telephone: (617) 732-8508. Fax: (617) 278-6977. E-mail: wtbriggs@partners.org.
- **Denise Proto**, RN, Nurse Educator, Emergency Services, Gwinnett Medical Center, 1000 Medical Center Blvd., Lawrenceville GA 30045. Telephone: (678) 442-4414. E-mail: DProto @ghsnet.org.

- **The Centers for Disease Control and Prevention's Advisory Committee on Immunization Practic**es has issued revised recommendations for the prevention and control of flu. To access the new recommendations, go to: www.cdc.gov/mmwr/mmwr_rr.html. Under "May 28, 2004," click on "Prevention and Control of Influenza Recommendations of the Advisory Committee on Immunization Practices (ACIP)."
- **The National Foundation of Infectious Diseases** has published strategies to increase influenza immunization rates in health care settings, available at www.nfid.org. Click on "Improving Influenza Vaccination Rates in Health Care Workers: Strategies to Increase Protection for Workers and Patients."

During the worst part of last year's flu season, there were regular conference calls between many EDs in the area, says Proto. "People shared information about how many adults and pediatric patients with flu-related symptoms they had seen, the status of critical care beds and floor beds, and any other pertinent pieces of information," she says.

The calls helped the ED to realize that everyone was being hit hard, says Proto. "If someone reported seeing a large volume of flu-related visits, we would know it was coming and took precautions to help control it," she says. **(For strategies to reduce exposure, see story on right.)**

Reference

1. Harper SA, Fukuda K, Uyeki TM, et al. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2004; 53:1-40. ■

How to stop the spread of flu in your department

The Bethesda, MD-based National Foundation of Infectious Diseases recommends that EDs implement an aggressive year-round infection control program. To reduce exposure to flu in your ED, use these effective strategies:

• Ask patients to put on masks at triage.

At St. Joseph Medical Center in Towson, MD, a "respiratory etiquette" policy was implemented in the ED. It includes signs asking coughing patients to wear a mask to control the spread of germs and placing antibacterial hand gel in the waiting room.

"We instituted these precautions last year in response to a possible [severe acute respiratory syndrome] scenario, and we have continued it since," says **Vicki Blucher**, RN, BSN, CEN, ED clinical educator. "Patients do not seem to mind [wearing masks]."

Registration staff and volunteers have been educated about the policy, and they automatically give a mask to anyone with a cough, says Blucher.

At Carondolet St. Mary's Hospital in Tucson, AZ, masks are at the triage desk for patients to take, with signs in English and Spanish telling patients to wear a mask and to wash their hands if they have a cough.

"There is also a sign to remind patients to notify us if they have been outside of the United States recently," says **Mary G. Kelley**, MS, ARNP, CEN, the ED's triage coordinator. "We have a large immigrant population from Mexico, and we are getting more immigrants from Asia, so we are asking that population about recent travel also."

• Offer to give flu shot to patients.

St. Joseph Medical Center recently instituted standing orders in which any admitted patient can be given the pneumococcal or flu vaccine if they want it and are eligible to receive it, says Blucher. "This program was designed for admitted patients, but we also can do if requested in the ED," she says. "We ask patients if they have had the flu/pneumonia shot on a routine basis."

• Make the screening process automatic.

Carondolet St. Mary's ED is customizing its ED Information System (EDIS, manufactured by Dallas-based T-System) to improve screening of flu patients, reports Kelley. "We are building the cough, tuberculosis, and travel questions into the system to help remind the nurses to ask them, and for some, we are making it a requirement that they are answered before the patient is discharged," she says.

• Offer prophylaxis.

For last year's flu season, which came early and

SOURCES

For more information on reducing exposure of flu, contact:

- **Vicki Blucher**, RN, BSN, CEN, Clinical Educator, Emergency Department, St. Joseph Medical Center, 7601 Osler Drive, Towson, MD 21204. Telephone: (410) 337-1524. Fax: (410) 337-1118. E-mail: vickiblucher@chi-east.org.
- **Mary G. Kelley**, MS, ARNP, CEN, Triage Coordinator, Emergency Department, Carondelet St. Mary's Hospital, 1601 W. St. Mary's Road, Tucson, AZ 85745. Telephone: (520) 872-2422. E-mail: mkelley@carondelet.org.

was very severe, the antiviral drug amantadine was offered to all ED staff as a 30-60 day supply, says Blucher. "About 60% of ED staff took the drug, and we had very few call-outs," she says. ■

COST-SAVING TIP

Save reimbursement costs for lost patient property

Is your ED too often paying out hundreds or thousands of dollars for lost patient property? That was the case at Harborview Medical Center in Seattle, where 300 incidents occurred in a single year.

"Two or three of those incidents were reimbursable ones where we had no documentation of what happened to the article, even though staff remembered seeing it, or pre-hospital agencies documented that they delivered it," says **Darlene Matsuoka**, RN, BSN, CEN, CCRN, the ED's clinical nurse educator.

In a single year, patients were reimbursed for a $3,000 ring, $1,000 dentures, $1,500-$2,000 hearing aids, necklaces, coats, and prosthetic devices, she reports. "We even reimbursed for a lost plane ticket."

To fix this costly problem, a new system was developed for patient property. A multidisciplinary committee with nurses from the ED and other units was formed to create a system that made staff accountable for the property they dealt with, but also put the onus on the patient to keep track of his/her own property. "They wanted to decrease property loss and make the system efficient enough that anyone could track down property items," says Matsuoka.

The group came up with a radical solution: to put valuables and property in sealed bags, but without inventory of the items. "It is similar to using a safe-deposit box in a bank," she says. Sealed bags are provided, with the ED responsible for whatever is placed in them, but the patient is responsible for whatever is kept out of them. "In other words, a patient could have $2 or $2,000. The money would be put in a valuables envelope, sealed, and not be counted," says Matsuoka.

Patients witness the items being placed in the bag and are asked, "Is this everything you want in this bag?" If the patient is unresponsive, it becomes the responsibility of two staff members to search the clothing for valuables to lock up. Large bags are used for clothing, and small bags are used for money and jewelry. The bags are bright orange so that they are very visible, and they are opaque to hide the contents and discourage theft.

For patients who go to floors with room lockers, the clothing bags travel with them underneath the stretcher, and if the unit has no room lockers, the bags go to a room managed by the transportation department. The smaller bags containing valuables get locked in the ED safe.

Staff document the bags of valuables and clothing on the "property tracking form" with a checklist for contacts, glasses, dentures, hearing aids, canes, walkers, and wheelchairs. "There are columns on the form that allow patients and staff to add or remove bags from the tracking system," says Matsuoka. "There are places for staff signatures, so we can track who dealt with the items." If patients refuse the securing of property, this also is documented.

If clothing is discarded because it was cut, bloodied, or soiled, that is documented on the tracking form with two staff signatures attesting that they searched the pockets for valuables. "When a patient states he has lost an item now, we look at the property tracking

COMING IN FUTURE MONTHS

- ■ Improve care of pediatric trauma patients
- ■ Dramatically cut delays in lab results
- ■ Eliminate dangerous infusion pump errors
- ■ Avoid the most common EMTALA violations

form and can check whether the bags signed in were received, did the staff search the clothing, and did the patient refuse to lock up items," says Matsuoka.

Since the new system was implemented, the ED's incidents of valuables and property loss have cut by more than 50%, with fewer than 10 inquiries per month. "We rarely reimburse because of our thorough documentation," says Matsuoka.

[For more information, contact Darlene Matsuoka, RN, BSN, CEN, CCRN, Emergency Department, Harborview Medical Center, Mail Stop 359875, 325 Ninth Ave., Seattle, WA 98104. Telephone: (206) 731-2646. Fax: (206) 731-8671. E-mail: dmatsuok@u.washington.edu.] ■

WEB ALERT

Site gives free tools to improve care of children

It's a tool that is a common sight in most EDs, but is often used incorrectly: The Broselow Emergency Tape. The tape is part of a system that assigns children to color zones based on a single length or weight measurement, which enables access to appropriate pre-calculated medication dosing and formulations and predetermined equipment sizes necessary in the ED.

"The purpose of the Duke web site is to provide clinicians with a standardized teaching packet on the correct use of the Broselow resuscitation tape for both the 1998 and 2002 version," says **Susan M. Hohenhaus**, RN, project manager of the Enhancing Pediatric Patient Safety program at Duke University Hospital, based in Durham, NC. "Though we do recommend that you switch to the 2002 version, we know lots of folks still have the 1998 version."

The site offers PowerPoint presentations on appropriate use of the tape, and educators can download these and use them for inservicing, she suggests. (Go to www.deps.dukehealth.org. Click on "Clinical Education" and then "Correct Use of the Broselow Tape.") ED nurses also can use the site to learn more about improving care for children who are emergently ill or injured, says Hohenhaus.

"Resources also include a sample guideline for the care of children involved in a mass casualty incident," she says. [Click on "Mass Casualty Preparedness" and "Duke Pediatric Mass Casualty Incident (MCI) Guidelines."] All information is free. ■

Vital Signs
Site: Duke Enhancing Pediatric Safety
Address: www.deps.dukehealth.org
For more information, contact:
Susan M. Hohenhaus, RN, Duke University Medical Center, Box 3055, Durham, NC 27710. E-mail: shohenha@ptd.net.

Audio conference helps protect hospitals' tax-exempt status

Class action lawsuits on behalf of the uninsured have been filed against a number of nonprofit hospitals in multiple states. More suits are expected to follow as this issue draws increasing media and political attention.

If you're like many nonprofit hospitals, you're likely hanging by a financial thread. Do you know what actions you can take to protect your tax-exempt status? And does your staff know about the many alternative services available to help the needy?

Thomson American Health Consultants is offering an audio conference to help you learn where your hospital may be exposed, what policies and procedures you need to reform to preserve your tax-exempt status, and how to continue to provide necessary care for the uninsured.

Billing and Collections Practices Regarding the Uninsured: What You Need to Know to Preserve Your Hospital's Tax-Exempt Status, which will be held on Thursday Sept. 6, 2004, from 2:30-3:30 p.m., ET, will be presented by **Jay Wolfson**, DrPH, JD. He is a professor of public health and medicine at the University of South Florida Health Sciences Center in Tampa and an expert in the field of health care law. He has done extensive research, written numerous books and articles, and given many talks on the subject.

Your facility fee of just $249 entitles you to invite as many participants to listen as you wish. You will receive presentation materials, additional reading, a 48-hour replay of the live conference, and a CD recording of the program upon request at no additional charge. And if you register by Aug. 26, you will qualify for the discounted facility fee of just $199 (a $50 discount off the regular price of $249). To register or to get more information, visit us at www.ahcpub.com, or contact customer service at (800) 688-2421 or by e-mail at customerservice@ahcpub.com.

When registering, please use reference code **T04120-61822.** ■

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 **December** 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 *Do you know how to care for adults with seizures?* and *Ready for flu season? Follow new guidelines,* in this issue.)
- **Describe** how those issues affect nursing service delivery. (See *New myocardial infarction guidelines will dramatically change your practice*.)
- **Cite** practical solutions to problems and integrate information into the ED nurse's daily practices, according to advice from nationally recognized experts. (See *Is your restraint use too high? Try patient advocates.)*

9. Which of the following is recommended when caring for patients with myocardial infarction with ST-segment elevation?
A. Door-to-needle time within 30 minutes
B. Door-to-needle time within 60 minutes
C. Door-to-needle time within 90 minutes
D. Door-to-balloon time within 120 minutes

10. Which of the following is a symptom of patients in status epilepticus, according to Lara Merana-Bailey, RN, MSN, ED educator at Hartford Hospital?
A. Decreased blood pressure
B. Increased blood sugar
C. Increased oxygen levels
D. Increased intracranial pressure to the head

11. Which is recommended to decrease restraint use, according to Carol A. Ziolo, RN, MA, LCPC, a mental health liaison specialist at Northwest Community Hospital?
A. Have two staff members talk to the patient simultaneously.
B. Medicate patients if verbal de-escalation is unsuccessful.
C. Demand that patients respond immediately.
D. Don't give patients options regarding their care.

12. Which is recommended to comply with new flu guidelines from the Centers for Disease Control and Prevention?
A. Vaccinations should be offered only to ED managers, not nurses.
B. Night and weekend staff don't need to be included in vaccine programs.
C. Vaccinations should be offered beginning in October of each year.
D. The flu shot should not be given to staff who care for at-risk patients.

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