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IN THIS ISSUE

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Are dangerous errors occurring during change of shift? Use these strategies

'Handoffs' are most dangerous time in EDs

(Editor's note: This is the first of a two-part series on improving "handoff" communication in EDs. This month's story focuses on change of shift. Next month, we'll cover handoffs involving patients being transported from the ED to other areas of the hospital, including diagnostic testing and inpatient units.)

After a stressful 12-hour shift in the ED, have you ever forgotten to tell the oncoming nurse about a patient's pending lab test results, pain medications given but not documented, the fact that a medication is hung on an intravenous pole but not yet infused, or the need for contact precautions?

"Change of shift is the riskiest time in the ED, as the handoff process is not perfect and information may be lost," warns **Patricia Scott**, RN, BSN, CEN, former ED director at Martin Memorial Medical Center in Stuart, FL.

If key pieces of information are missed, this can result in problems ranging from patient dissatisfaction to major adverse events, says **Trisha Flanagan**, RN, MSN, CEN, ED nurse manager at Beth Israel Deaconess Medical Center in Boston. "This is particularly true in the chaotic environment of the emergency department," she says. "Our nurses give report in the clinical area, where they can be interrupted and distracted by patients, their families, and medical staff."

EXECUTIVE SUMMARY

A new National Patient Safety Goal from the Joint Commission on Accreditation of Healthcare Organizations requires you to improve "handoff" communication. The ED is at especially high risk for communication errors occurring during change of shift, which can cause adverse outcomes.

- Give oncoming nurses an opportunity to ask questions when report is given.
- Avoid illegible handwriting and use of tape recorders to give report.
- During walking rounds, introduce the new nurse to the patient and confirm the plan of care.

Communication lapses were the No. 1 root cause of sentinel events reviewed by the Joint Commission on Accreditation of Healthcare Organizations from 1995 to 2004. As of Jan. 1, 2006, a newly added National Patient Safety Goal will require a standardized approach be used for handoffs, with an opportunity for staff to ask and respond to questions.

Handoffs are an especially high-risk time in EDs, due to factors including high volumes and the nursing shortage, says **Peter Angood**, MD, vice president and chief patient safety officer for the Joint Commission's International Center for Patient Safety. "The ED is a highly complex environment with a constellation of pressures that create the opportunity for adverse events and errors to occur," he says. "With the combination of communication lapses and not fully trained staff, there is a strong potential for errors to occur during handoffs."

Red flags that an ED isn't complying with the goal's requirements include use of tape recorders to give report, illegible handwriting, use of nonstandardized forms, and the inability to contact a nurse for follow-up if needed, says Angood. "Ideally, there should be a good face-to-face communication," he says.

To improve communication during change of shift, consider these strategies implemented at EDs:

• Create a protocol.

At Beth Israel Deaconess, the ED nurse manager, clinical educator and ED nurses created a "safe handoffs" protocol for change of shift. "Our goal is to reduce the risk that critical information is overlooked or omitted when patient care is passed from one nurse to the next," says Flanagan. The protocol requires oncoming and off-going nurses to review the following:

— critical interventions such as medications administered, vascular access, cardiac monitoring, and oxygen saturation;

— communication including cognitive status and hearing/visual aids;

— psychosocial needs, family needs, and location of family members or visitors;

— dual verification with two patient identifiers;

— code status;

— precaution status;

— injury risk;

— plan of care and the patient's understanding of plan of care;

— the patient's belongings accounted for;

— need for specialized equipment such as bariatric or padded side rails;

— equipment checks completed.

"For the first month as we roll this out, we plan to have leadership presence on the unit during our two biggest shift changes, 7 a.m. and 7 p.m.," says Flanagan. "I think that our support will help staff work through what is a new process for shift change while ensuring compliance and identifying any barriers that exist."

Senior ED nurses who helped design the protocol will act as informal peer leaders and assist in the education and implementation processes, adds Flanagan.

• Switch to electronic documentation.

Lori Pelham, RN, clinical nursing supervisor for the ED at University of Michigan in Ann Arbor, says that staff members give report to each other in front of a computer. "We can pull up all of our documentation related to that patient while we are talking to each other," Pelham says. "This includes triage notes, assessment, and even past records."

Since implementing an electronic tracking board at Northwest Community Hospital in Arlington Heights, IL, the ED nurses can easily view the primary nurse assigned for all patients. "This has eliminated communication gaps at shift change, and ensures that all patients are 'accounted for,' including those that arrive during the

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Editorial Questions

For questions or comments, call Joy Daughtery Dickinson at (229) 551-9195.

DAY-SHIFT

Emergency Services Report Worksheet/Checklist
Date: _____

Staffing	
Equipment	
Education	
Bed issues	
Unusual occurrences	
Crash carts signed off?	
Are tech quality control items done?	
Are we on ED saturation?	
Check charge phones	
Check floor stock/discrepancies	
Enter medic runs	
Check return to pharmacy drawer	
Return all meds in med room	
Is the department clean?	
Any X-ray/culture discrepancies?	
Complete daily assignment sheet	

NOC-SHIFT

Emergency Services Report Worksheet/Checklist
Date: _____

Staffing	
Equipment	
Education	
Bed issues	
Unusual occurrences	
Crash carts signed off?	
Are tech quality control items done?	
Are we on ED saturation?	
Check charge phones	
Check floor stock/discrepancies	
Enter medic runs	
Check return to pharmacy drawer	
Return all meds in med room	
Is the department clean?	
Any X-ray/culture discrepancies?	
Complete daily assignment sheet	

Source: Paradise Valley Hospital, National City, CA.

shift change," says **Sharon Chesney**, RN, MS, clinical specialist for the ED.

Now, the tracking board lists an assigned nurse for each patient, and at change of shift, the oncoming nurse must log in and assign herself to the patients she is responsible for, she says. "We now quickly skim the board to confirm that each patient has an assigned nurse, and that the nurses that are assigned are 'on duty.'"

• Use a checklist.

At Paradise Valley Hospital in National City, CA, a checklist was created for ED nurses to document key pieces of information at changes of shift. **Stephanie J. Baker**, RN, BSN, CEN, MBA/HCM, director for emergency services, says "That prompts them so they don't forget anything. And since they are signing off on it, it gives them accountability." **(See the ED's checklist, above.)**

The checklist reminds nurses to follow up with work orders for equipment in need of repair or replacement. "For example, if a monitor has to be off the unit for a day because they are fixing it, the nurse writes `The portable monitor in Room 2 is in Biomed,' so the oncoming nurse doesn't wonder where the monitor is," says Baker.

Previously, charge nurses sometimes forgot to tell oncoming nurses about pending lab results, says Baker. "It's not because any of us are trying to be inconsistent," she says. "It's just that there is so much to remember, and those were getting missed." The form gives accountability that they have done it, Baker says.

The checklist also reminds nurses to check for X-ray results that are pending, in the event that the radiologist sees something the following day that the ED physician missed, says Baker. "Also, portable phones were constantly being lost because nobody had accountability," she adds. "With the checklist, nurses now make sure both charge nurse phones are there."

• Have the off-going charge nurse give a brief overview to oncoming nurses.

In addition to giving a full report to the oncoming charge nurse, a "shift report huddle" is done with nurses coming on shift, says Baker. "After the oncoming charge nurse makes assignments, those nurses go directly to check the rooms to make sure all equipment is in working order, before they even get report from the outgoing nurses," she explains. "We have found that if you delay doing that until later in the shift, you get busy and never get to it."

SOURCES

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- **Patricia Scott**, RN, BSN, CEN, Emergency Department, Martin Memorial Medical Center, 300 Hospital Ave., Stuart, FL 34994. E-mail: scottpg@adelphia.net.

• Do "walking rounds" with oncoming nurses.

Walking rounds are much more effective than verbal reports, says Baker. "It introduces the new nurse to the patient, and they can verify that all the charting was done," she says. "If any medications are missing but not charted, you can ask if they were actually given."

At Martin Memorial's ED, the following is done during walking rounds:

— The new nurse is introduced to the patient. For example, the patient is told, "Mr. Jones, we are changing shifts and reviewing the care plan for all of our patients. This is Mary Johnson. She is your nurse for the next shift."

— At the bedside, the patient's identity is confirmed using two identifiers.

— An oral report is given to confirm the plan of care. "By reviewing the patient chart during walking rounds, any missing information such as history, allergies, or treatments can be corrected," Scott says. ■

Are you giving poor care to sickle cell patients?

Complications can occur

A 33-year-old man with sickle cell disease complains of severe pain in his right arm and reports that attempts to treat the pain at home were unsuccessful. Since the man appears calm and vital signs are normal, the triage nurse gives the patient a low priority. But after waiting for more than an hour, the patient can't tolerate the pain any longer — and reports to the triage area with loud, belligerent demands for service.

This is an all-too-common scenario in EDs, says **JoAnn Beasley**, RN, an ED nurse and sickle cell clinical manager at Grady Hospital in Atlanta, which treated more than 4,600 sickle cell patients in 2004.

The problem is that the patient's reports of pain were not believed, Beasley says. "He had obviously attempted to control his pain prior to presenting to the ED," she says. "We now have a hostile patient in severe pain who probably will need additional medication because of the added stress of having to deal with unempathetic health care providers."

Sickle cell patients treated for pain in an urban ED had significantly lower general satisfaction scores when compared to nonsickle cell patients who presented with acute pain, a recent study found.[1] "Sickle cell pain episodes are not considered an emergency in most EDs, with priority given to the cardiac, respiratory, and trauma patients," says Beasley.

But patients in severe pain have the need for emergent relief or they would not have presented to the ED in the first place, she insists. "Many of them have already self-medicated at home until they cannot bear the pain any longer, and then present to the ED," she says.

A struggle still continues between ED nurses and

EXECUTIVE SUMMARY

Sickle cell patients often are given poor care in EDs, due to inadequate pain management and treatment delays.

- At triage, give patients an oral intravenous dose of pain medication and apply anesthetic cream.
- If patients present with fever, give antibiotics within 60 minutes.
- Give pain medications on a fixed schedule instead of prn.

patients because of the nonacceptance of the patient's report of pain, says Beasley. "Patients are dissatisfied because they are not believed, and medications are either being withheld or they are undermedicated for pain," she says. **(For more information on this topic, see "Are your sickle cell patients in danger? Follow new pain management guide," *ED Nursing*, July 2001, p. 113.)**

To significantly improve care, do the following:

• Give pain medications on a fixed schedule.

"When prn dosing occurs, medication is given as needed or requested, and can result in delays and negative interactions with patients," Beasley explains. She gives the example of a patient given 10 mg intravenous (IV) dose of morphine more than four hours ago, but experiences only minimal relief. "The patient's medication should have been ordered on a fixed schedule, especially with the report of minimal relief on the initial dosage," says Beasley. "Now after four hours, they will have to start the process all over again of getting a handle on the pain."

Prompt control of pain with adequate medications ordered on a schedule consistent with drug duration, given on a fixed dosing schedule, will better control pain by maintaining adequate blood levels, says Beasley.

• Initiate treatment rapidly.

Sickle cell crises can lead to complications including stroke, organ damage, blindness, and potentially death, so rapid treatment must be given, says **Marianne Hatfield**, RN, system director of emergency services at Children's Healthcare of Atlanta. "Our first goal is to place patients in a treatment room as soon as possible — preferably immediately," she says.

If this isn't possible, the triage nurse applies anesthetic cream and gives an oral dose of acetaminophen with codeine or hydrocodone-acetaminophen, says Hatfield. Once the patient is in a treatment room, the nurse can give IV ketorolac tromethamine prior to physician assessment.

"This is the one protocol in which the nurse can give an IV pain medication prior to being seen by a physician," she notes. "The physicians then usually will add a stronger medication such as morphine when they examine the patients." **(See ED's protocol, above right.)**

Blood is drawn for specific labs immediately upon placement in a treatment room, says Hatfield. "Unfortunately, sickle cell patients usually have had to endure quite a few blood draws, and they become the expert on which vein will be easiest to access, so we ask them if they have a preference," she says.

Complications may occur suddenly and can rapidly become severe, warns Hatfield. "Children with any type of sickle cell disease are susceptible to overwhelming sepsis," she says.

Use this protocol for sickle cell patients in your ED

When sickle cell patients meet certain criteria, ED nurses perform specified interventions at Children's Healthcare of Atlanta. The criteria includes patients with known sickle cell disease or thalassemia with splenectomy with the following symptoms: Fever or history of fever 38° C or 100.5° F, no respiratory distress, systolic blood pressure appropriate for age, capillary refill less than three seconds, and red acuity (urgent — requires emergent care as soon as possible). Exclusion criteria: Blue acuity (life-threatening — requires immediate care), abnormal/unstable vital signs or altered mental status. For these patients, the protocol is not utilized. Instead, the patient is immediately assessed by a physician who will direct treatment.

When patients meet the criteria, ED nurses do the following:

- A full set of vital signs is taken (including blood pressure and pulse oximetry).
- The patient is placed on a cardiac monitor.
- Topical anesthetic cream is applied to two to three potential intravenous (IV) sites.
- Peripheral IV access is established.
- Labs are drawn for complete blood count differential, reticulocyte count, and blood cultures.
- Ceftriaxone/Rocephin 75 mg/kg IV is administered, unless the patient has a known allergy to ceftriaxone or penicillin. Maximum dose is 2 g.
- An IV fluid order is obtained. ■

• Give antibiotics rapidly if patients present with fever.

Sickle cells can damage the spleen, which may make the patient more vulnerable to infections, says Hatfield. "Rapid administration of an antibiotic is indicated for sickle cell patients with fever," she says. "Our current goal is to administer antibiotics within 60 minutes of arrival to the ED."

For sickle cell patients with fever, the ED nurse does the following:

1. establishes IV access;
2. draws the following labs for stat resulting: Complete blood count with differential, reticulocyte count, and peripheral or central venous line blood cultures;
3. administers IV ceftriaxone (75mg/kg) unless patient has a known allergy to ceftriaxone or penicillin;
4. notifies the physician to obtain an IV fluid order.

Protocols are not initiated if a patient is found to be unstable with signs of respiratory distress, decreased

SOURCES/RESOURCE

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Protocols developed by the Georgia Sickle Cell Center can be accessed at no charge at www.scinfo.org. Click on "Health Care Providers Online Resources and Guidelines" and then "Sickle Cell Disease in Children and Adolescents: Diagnosis, Guidelines for Comprehensive Care, and Care Paths and Protocols for Management of Acute and Chronic Complications."

systolic blood pressure, prolonged capillary refill, or compromised neurological status, says Hatfield. "These patients are immediately assessed by a physician, and care is directed at that time," she says.

Reference

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Discharge instructions adequate? Don't risk a suit

If a patient claimed that you never told him how to care for a wound that became infected, would you be able to prove otherwise?

"I have seen many malpractice cases where there is good documentation on admission, but then poor documentation prior to discharge from the ED," says **Jackie Ross**, RN, BSN, CPAN, a Chagrin Falls, OH-based risk management consultant who specializes in health care.

Inadequate discharge instructions may result in return visits to the ED, worsening of symptoms, and serious complications — all of which put you at risk for being named in malpractice lawsuits, says **Patricia Iyer**, RN, MSN, LNCC, president of Flemington, NJ-based Med League Support Services, a legal nurse consulting firm specializing in malpractice and personal injury cases.

Stephen A. Frew, JD, vice president and risk consultant with Johnson Insurance Services, a Madison, WI-based company specializing in risk management for health care professionals, says, "Clear discharge instructions are extremely important in defense of malpractice and EMTALA [the Emergency Medical Treatment and Labor Act] claims." warns. **(See article on p. 139 with details of two cases involving the ED.)**

Always document that the instructions were received and understood by the patient, says **Kathie Eberhart**, BSN, RN, CEN, legal nurse consultant based in Santa Rosa, CA. If the patient refuses to read the instructions or leaves against medical advice without receiving discharge instructions, document it, says Iyer. "In general, juries believe that patients should follow instructions and are often reluctant to find nurses negligent if the patient did not follow the advice of health care providers," she adds.

If there is a language barrier, be sure to document that an interpreter was present and instructions were understood, recommends Eberhart. Document which family members are present when discharge instructions are given, especially if the patient received any sedation or narcotics, says Ross.

Ask the patient to sign a form stating that they received discharge instructions, recommends Frew. "You may need solid proof that the patient actually received the instructions," he says.

What to include

Discharge instructions should include the following: The steps required to manage the illness or injury, medications prescribed in the ED, available community

EXECUTIVE SUMMARY

If inadequate discharge instructions result in adverse outcomes, malpractice lawsuits may occur.

- Have patients sign that they received discharge instructions.
- Avoid illegible handwriting and using medical terminology.
- Identify activities for patients to avoid.

resources, and warning signs that signify the need for further treatment, says Iyer.

Pre-printed instructions may be used, as long as the information is given directly to the patient, says Iyer. "Encourage the patient to read through the information and ask questions before signing the form," she advises.

To reduce liability risks, take the following steps when giving discharge instructions:

• Clearly identify any activities that the patient should *not* do.

"People often don't know what limitations are important to their recovery," says Frew. "These need to be laid out in black and white, to assure that the patient does not later suggest that they were injured because they did not know that an activity was dangerous to their condition."

If patients don't follow your instructions, your documentation will clearly show that they were warned, says Frew.

• Give clear instructions for how to care for a condition.

Many malpractice lawsuits involve claims that the patient was unaware of how to treat a wound or who to contact for this information after discharge from the ED, says Ross. "It is important that accurate information, including at least two contact phone numbers, are included on the discharge instructions," she says.

If you give an instruction sheet, include a copy in the patient's record also, advises Frew. "You are using more paper now, but it will save tons of effort later if a claim ever arises," he says. "Years after the fact, it is often difficult to recover the exact form that was used for instructions unless it is in the record itself."

• Make sure instructions are legible and in layman's terms.

In the past few years, Frew has reviewed thousands of medical records from EDs and find a very pronounced trend toward totally illegible nurse entries, says Frew. "I have generally relied upon legible nurses' notes to help me through the physician's entries, but currently the legibility of many nurses' handwriting has become as bad as the physician handwriting," he says.

If you use complex medical terminology or illegible writing, patients may claim they could not understand your instructions, says Frew. "Discharge instructions are totally useless, both from a patient's perspective and from a defense perspective, unless the instructions are in language the patient can understand and in a form that the patient or the jury can actually read," he says.[1]

One solution is to utilize discharge summary programs that offer a comprehensive range of instructions, says Frew.

"Go with a system that has a large number of operating sites using the program and more than a year in application at those sites," he suggests. "Do your homework by checking those sites and talking to people who actually use the software before buying."

SOURCES

For more information on discharge instructions and liability risks, contact:

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Reference

1. Clarke C, Friedman SM, Shi K, et al. Emergency department discharge instructions comprehension and compliance study. *Can J Emerg Med* 2005; 7(1):5-11. ■

2 lawsuits for poor ED care have different outcomes

These cases illustrate the impact that discharge instructions given to ED patients have on the outcome of a malpractice lawsuit:

• After a man with abdominal pain was diagnosed with possible gastritis or gastroenteritis, ED nurses gave him oral and written instructions to see a doctor within two days. However, he did not follow these. Instead, he returned to the ED six days later with a perforated appendix complicated by gangrene, which required an emergency appendectomy with partial colon resection, primary anastomosis, and small bowel resection.

The man filed a lawsuit and claimed that his printed instructions were inadequate and that he didn't recall the oral instructions because he was under the influence of Demerol at discharge. ED documentation

enabled the defense to show that the patient was alert and oriented at discharge and that he signed discharge instructions clearly advising him to seek medical follow-up within two days. As a result, the hospital won the case.[1]

• A man was treated in an ED for a sprained finger without being given any specific instructions about symptoms that would require immediate medical care. Unfortunately, the surgery he required could only have been performed within seven to 10 days of injury, and he was left unable to move or flex his finger. The defense claimed that oral instructions were provided that informed the patient that he had a tendon injury and should contact an orthopedist within one to two days. The jury awarded the plaintiff $110,000.[2]

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2. Laska, L. Injury to ring finger. *Medical Malpractice Verdicts, Settlements and Experts* 1998; 14:16. ■

Do you put CAP patients at risk in your facility?

New antibiotic can improve compliance

If an elderly patient with community-acquired pneumonia (CAP) came to your ED and left with a prescription for antibiotics, would you expect the patient to take the medication? What if the patient has no transportation to a pharmacy, forgets to take the pills, or stops taking the drug because they are feeling better?

"Sometimes we identify these patients, but it is frustrating," says **Lisa Kosits**, RN, clinical inservice instructor of the division of education and organizational development at Montefiore Medical Center in Bronx, NY.

The hospital pharmacy cannot fill the prescription, nor can the hospital dispense it, because their pharmacy is not authorized to dispense medications for patients to take home, she says. "Oftentimes, social service can intervene and find a pharmacy that will deliver to their home, but it is a time-consuming process."

A new study reports that Zmax (Pfizer, New London, CT; azithromycin extended release), a newly approved single-dose oral antibiotic, is as effective as a seven-day course of levofloxacin for CAP patients and dramatically improves compliance for patients at risk,

EXECUTIVE SUMMARY

ED patients with community-acquired pneumonia often are noncompliant with antibiotic treatment regimens. A new one-dose oral antibiotic can improve compliance.
- Patients can take the entire treatment regimen while in the ED.
- Return visits due to worsening symptoms are reduced.
- Remind patients that the medication will take time to provide relief.

according to **Daniel M. Jorgensen**, MD, MPH, head of Pfizer's clinical research and development.[1] According to Pfizer, the average wholesale cost of Zmax is $41.51 per regimen.

With typical multidose regimens, there is no way to ensure that a patient will be compliant with subsequent doses after being discharged from the ED, says Jorgenson. "With Zmax, patients will be able to take their entire treatment regimen as a single oral dose while under observation in the ED," he says. "This ensures 100% completion of therapy."

Patients are at risk

Often, patients return to the ED with worsening symptoms such as shortness of breath, tachypnea, dyspnea, or hypoxia, because of failure to fill their prescription or follow the treatment regimen, says Kosits.

"This is a wonderful breakthrough in the treatment of CAP," she says. Cost is a factor as well, Kosits says. "If we can administer this single dose to patients in the ED, then we can reduce the number of return visits for lack of compliance," she says. Montefiore's ED treated 2,147 cases of CAP in 2004, says Kosits.

Since CAP is a potentially serious illness that could result in hospitalization or death if not adequately treated, it is reassuring to know that the patient already received treatment when leaving the ED, especially when adequate follow-up care not always is guaranteed, says Jorgensen.

With multidose regimens, patients may skip or miss doses, share medication with others, save medication for future use, or simply refuse to get the prescription filled, he notes. "Patients who use an ED for their primary care services are more likely to engage in these noncompliance activities than those who use a primary care clinic," Jorgensen adds.

Noncompliance can lead to treatment failure, and

SOURCES

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when this failure happens, patients tend to visit an ED for subsequent care, regardless of where they were initially diagnosed and treated, adds Jorgensen. "This is especially true for a potentially serious illness, such as CAP," he says. "If not adequately treated, CAP patients could end up in the hospital or could die."

Remind patients who take single-dose Zmax that even though the therapy has been completed, improvement of signs and symptoms may not be immediately apparent on the first day, says Jorgensen.

This is true for all antibiotics; they need time to get to the site of the infection to kill the bacteria, he says. "The difference is that once Zmax begins to work, it continues to work without the need for additional doses, unlike multidose regimens, which must be given every day even after the patient starts feeling better."

It is this time, when the patient starts feeling better, that noncompliance is most likely to occur, says Jorgensen. "That is, patients figure they are already cured and feel there is no need to take additional medication."

With the growing problem of noncompliance and the consequences of treatment failure and drug resistance, it may feel like an uphill battle for ED nurses, he says. "The best possible way to ensure that these patients receive adequate therapy is to administer the entire regimen in the ED in a directly observed fashion," Jorgensen says.

Reference

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Study: 5-level triage scale is safe for pediatrics

New research focuses on children

Has your ED switched to a five-level triage system, or are you in the process of doing so? If so, you're probably familiar with ample research showing its validity in adult patients. But until now, no studies have focused on children.

"All of the original work on the Emergency Severity Index [ESI] was done with patients greater than 14 years of age, and then later in a mixed pediatric and adult population with a small number of pediatric patients," says **Tania D. Strout**, RN, BSN, research nurse for the department of emergency medicine at Maine Medical Center in Portland, ME.

When the ED was beginning to decide on a new triage system, there were concerns about whether the tool would work in pediatric patients. "It's difficult to keep one triage instrument for kids and have a separate one for adults," she says. "As we see a good portion of pediatric patients here, we were concerned that the ESI would not be reliable or valid in that population."

Researchers at Maine Medical set out to assess the tool's validity when used to assess acuity levels in children. "Our paper is the first to evaluate the ESI specifically in pediatric patients," says Strout. "Like other EDs, we were unsure if the tool would work in pediatric patients. Our study showed that the tool is safe and effective to use with both adult and pediatric patients."[1]

According to a 2003 survey done by the National Center for Health Statistics, 20% of U.S. EDs now are using a five-level system. "I hope that our work will help EDs that were holding off, to decide to go ahead

EXECUTIVE SUMMARY

Although many studies have shown that five-level triage systems are valid for adult patients, there has been no research on pediatric patients. Now a study has confirmed that the Emergency Severity Index (ESI) is safe and effective for children.

- Vital signs are considered when assigning a triage level.
- There is less danger of undertraige with the ESI, according to ED nurses.
- Use pediatric cases during inservices for five-level triage systems.

SOURCES

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and make the change," says Strout. "I think that many EDs will be moving forward with the switch." The primary benefit for ESI in the pediatric patient is less undertriage, which results in safer care, according to **Trish Murray**, RN, BN, CEN, ED nurse manager at Houlton (ME) Regional Hospital. The Houlton ED is implementing the ESI in adult and pediatric patients.

"In the three-level system, criteria for emergent, urgent, and nonurgent were so subjective and left too much to that 'gut feeling,'" she says. The ESI uses a systematic approach to consider all of the symptoms and vital signs to determine an appropriate triage category, while still taking into account your gut feeling," says Murray.

Two-hour inservices were done in groups of five or six nurses. The nurses were given an overview of ESI and looked at 40 cases including several pediatric cases such as fever, toxic ingestion, and dehydration, followed by completion of a competency test. Close attention was paid to vital signs and how these affected the ESI triage level, says Murray.

"Some triage models don't look at vital signs, but this is an important piece of the triage nursing assessment, especially in neonates, infants, and toddlers," she says. "You might have a perfectly healthy appearing 2-week-old infant in front of you, but a fever makes them a high-risk situation." This patient would be classified as ESI Level 5 if there was no fever, but is classified as Level 2 due to the presence of fever, she explains.

Similarly, a child with a vague respiratory illness might not initially be an apparent high-risk situation, but when you look at their respiratory rate, temperature, and oxygen saturation, it can prompt you to assign a higher triage level, says Murray.

"Based on the case studies done in our ED, I think that we are more likely to overtriage with the ESI," she says. "That means that when that one child surprises you with a diagnosis you'd never expect, you're safer in your triage process."

Reference

1. Baumann MR, Strout TD. Evaluation of the emergency severity index (version 3) triage algorithm in pediatric patients. *Acad Emerg Med* 2005; 12:219-224. ■

Be on the lookout for signs of sepsis in female patients

Cases may present without fever

Due to five deaths from serious bacterial infection and sepsis after use of mifepristone (Mifeprex, manufactured by New York City-based Danco Laboratories) and misoprostol for nonsurgical abortion, the drug's manufacturer has revised the safety information for the drug's label and issued a letter to ED directors. *(Editor's note: To read the letter, go to www.earlyoptionpill.com/pdfs/ER%20Director.pdf.)*

The deaths occurred from September 2000 through June 2005, with more than 460,000 estimated users during that time.

Be on the lookout for women of childbearing age who present with some or all of the following complaints: excessive vaginal bleeding, stomach or pelvic pain, weakness, dizziness, nausea, vomiting, and/or diarrhea, with or without fever, reports **Gail McWilliams**, RN, CCRN, CEN, clinical nurse specialist for the ED at Shore Health System in Cambridge, MD.

"The most recent cases mentioned all presented without fever," she notes. "The three cases that were reported to the FDA demonstrated refractory hypotension, multiple pleural effusions, hemoconcentration, and profoundly elevated white blood cell counts."

Any woman presenting with a recent history of taking mifepristone and any or all of these complaints should be triaged as an emergent and suspected of having an evolving septic shock until proven otherwise, says McWilliams. "If ED physicians are unaware of the connection, it is nursing's role as a patient advocate that makes it imperative to push for rapid assessment and symptomatic treatment," she stresses.

Triage nurses should be aware of the potential for serious consequences if a patient states she has taken mifepristone, says **Mary G. Kelley**, MS, ARNP, CEN, triage coordinator for the ED at Carondelet St. Mary's Hospital in Tucson, AZ. "We have a protocol for sepsis to help identify and prompt bed placement," she says.

SOURCES

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"Someone who came in with symptoms of sepsis would meet the criteria, would be promptly placed, and the sepsis initiative started."

The ED's sepsis protocol does specify fever as a criteria, but ED nurses have been alerted about the fact that these cases may present without fever, says Kelley.

Because symptoms may be ambiguous, careful history taking is key, says McWilliams. "Many women forget to mention birth control pills, shots, or patches when asked about regular medications," she says.

Ask every woman of potential childbearing age about any medications related to contraception, says McWilliams. "It is only by knowing that a woman has taken mifepristone and misoprostol that a health care provider can make the connection and diagnose a potentially fatal disease process," she says. ■

Can you quickly identify patients at risk of falls?

Assessing patients for fall risk is an accreditation requirement and a 2005 National Patient Safety Goal, but this is difficult for EDs because time is limited, unlike at other hospital units that perform in-depth assessments, says **Teresa Sumner**, BSN, RN, CDONA/LTC, geriatric clinical nurse specialist and wound care coordinator at Lenoir Memorial Hospital in Kinston, NC.

Sumner developed a one-page checklist to assess ED patients for fall risk. "If any one of the items in the review is noted, the person is at risk for falls and a red band is applied to the patient," she says. As a result of the checklist, ED nurses are applying arm bands more often to identify patients at risk for falls, reports Sumner. **(See the ED's checklist below.)**

Nurses also implement prevention measures more often, such as moving patients to rooms nearby the triage station, leaving doors and curtains open when appropriate, and allowing family members to sit with patients.

The checklist was just updated to include benzodiazepenes and antiepileptics as risk factors. ■

Use checklist for fall assessment in your ED

At Lenoir Memorial Hospital in Kingston, NC, ED patients that meet one or more of these criteria are to be considered as at risk for falls and have a red band placed on the wrist:

- ages 80 years old and older;
- ages 1 to 5 years old;
- recent history of falls (last three months);
- current use of walker, cane, wheelchair, or other assistive device;
- diagnosis or symptoms of Alzheimer's disease, dementia, cerebrovascular accident, transient ischemic attack, altered mental status, syncope, delirium, or head injury;
- visually impaired;
- drug or alcohol intoxication;
- use of any of the following drugs: Benzodiazepenes: Xanax (alprazolam), Librium (chlordiazepoxide), Klonopin (clonazepam), Tranxene (clorazepate), Valium (diazepam), Dalmane (flurazepam), Ativan (lorazepam), Versed (midazolam), Serax (oxazepam), Restoril (temazepam), Halcion (triazolam), and Buspar (buspirone). Antiepileptics: Tegretol (carbamazepine), Depakote (divalproex), Dilantin (phenytoin), Carbitrol (carbamazepine), Solfoton (phenobarbital), Lamictal (lamotrigine), Felbatol (felbamate), Zarontin (ethosuximide), Neurontin (gabapentin), Cerebyx (fosphenytoin), Mysoline (primidone), Topamax (topiramate), Gabitril (tiagabine), Keppra (levetiracetam), Trileptal (oxcarbazepine), and Zonegran (zonisamide). ■

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 *Are dangerous errors occurring during change of shift? Use these strategies* and *Are you giving poor care to sickle cell patients*? *Stop treatment delays* in this issue.)
- **Describe** how those issues affect nursing service delivery. (See *Study: 5-level triage scale is safe for pediatrics.)*
- **Cite** practical solutions to problems and integrate information into the ED nurse's daily practices, according to advice from nationally recognized experts. (See *Discharge instructions adequate? Don't risk a suit.)*

13. Which is recommended to comply with the new National Patient Safety Goal to address "handoff" communications, according to Peter Angood, MD, vice president and chief patient safety officer for the International Center for Patient Safety?

A. Face-to-face communication, with an opportunity to ask questions.
B. Use of tape recorders to give report.
C. Relying solely on nursing documentation during high-volume periods.
D. Read information about the patient from an electronic tracking board.

14. Which is recommended for sickle cell patients, according to JoAnn Beasley, RN, an ED nurse and sickle cell clinical manager at Grady Hospital?

A. Give only an initial dose of pain medication.
B. Give pain medications on a fixed schedule.
C. Avoid giving antibiotics in the ED.
D. Give antibiotics at triage if patients are unstable with signs of respiratory distress

15. Which is recommended for discharge instructions, according to Stephen A. Frew, JD, vice president and risk consultant with Johnson Insurance Services?

A. Avoid using preprinted instructions.
B. Give instructions verbally unless patients request written instructions.
C. Avoid having patients sign discharge instructions.
D. Specify activities that should be avoided by the patient.

16. What did a recent study published in *Academic Emergency Medicine* find regarding use of a five-level triage system in pediatric patients?

A. Three-level triage was safer and more effective.
B. Five-level triage was safe and effective for children.
C. Five-level triage increased wait times significantly.
D. Five-level triage puts children at risk for undertriage.

Answers: 13. A; 14. B; 15. D; 16. B.