

ED

NURSING



THOMSON
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Are children in your ED suffering? Stop untreated pain now, guard accreditation

As an ED nurse, you work hard to stay current with clinical care for pediatric patients. But are you effectively treating pain in infants and children? According to a just-published study, very young children with serious injuries often are undertreated for pain in the ED. The study compared pain medication use in children younger than 2 and school-age children, and it found that younger children often were not treated for pain, despite obviously painful conditions such as fractures and burn injuries.¹ According to the Washington, DC-based National Safe Kids Campaign, 99,400 children ages 14 and younger were treated in EDs for burn-related injuries in 2001.

In addition, a 2002 survey of 123 EDs conducted by Maywood-based Illinois Emergency Medical Services for Children reported that only 50% of EDs offered analgesics to every pediatric patient who reported moderate to severe pain.²

These dramatic findings indicate that EDs could endanger their accreditation status with the Joint Commission on Accreditation of Healthcare Organizations, which is closely evaluating pain management in EDs, sources warn. (See **"Increase staff knowledge of pain management, *ED Nursing*, January 2001, p. 38.**) Additionally, undertreatment of pain in pediatric patients can negatively affect your patient satisfaction scores, nurses say.

"When a parent presents with a child in pain, their anxiety is heightened, anyway," says **Lynn Daum**, RN, BSN, staff nurse in the ED at Cincinnati Children's Hospital Medical Center, who adds that more than half of pediatric patients require some form of pain management. "If pain continues, that makes it worse."

If you control the child's physical pain, you control the parents' emotional

EXECUTIVE SUMMARY

According to a new study, pain is undermanaged in very young children who present to the ED with painful conditions such as fractures and burns.

- Effective options include EMLA and ELA-Max topical creams, vapocoolants, and Numby Stuff.
- Sucrose pacifiers are a nonpharmacological method to decrease crying and distress of infants during painful procedures.
- Allow ED nurses to initiate pain interventions without a physician's order.

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pain, Daum points out. "If the parent feels the child is adequately cared for, patient satisfaction scores increase," she says.

You have another powerful incentive to improve pediatric pain management: A patient's length of stay may increase if children's pain is not managed, says Daum. "If the child is uncomfortable and crying, the parents may not be willing to go home," she explains.

To dramatically improve pain management of pediatric patients, make these changes:

- **Develop a "pain-free" policy for children.**

At Boston Medical Center, a PainFree Pediatrics Committee was formed to raise consciousness about pediatric pain and to identify practical, easy-to-use interventions, says **Joan Meunier-Sham, RN, MS**, the facility's ED pediatric clinical nurse specialist.

The multidisciplinary committee includes nurses, physicians, pharmacists, and child-life specialists, says Meunier-Sham. A PainFree Pediatrics Protocol was

developed to give nurses effective options when performing a painful procedure. (**See chart listing procedural pain management options for nurses on p. 115.**)

Before the protocol was initiated, ED nurses documented pain management interventions for children only 16% of the time, but they now are documented for 70% of patients, reports Meunier-Sham.

The ED at Children's Medical Center in Dallas has a "Pain-Free Zone" program that stresses that pain is the fifth vital sign, says **Linda L. Williams, BA, RN, CEN**, education program manager.

According to the ED's policy, nurses document vital signs every two hours, including pain assessment, says Williams. "Our charting form has a place for pain assessment that must be filled out every two hours," she adds.

- **Give nurses several practical options for pain reduction.**

"There are many quick methods of pain reduction that can be implemented in the ED," emphasizes Meunier-Sham.

Here are several options that work:

- **Eulectic Mixture of Local Anesthetics (EMLA) Cream (AstraZeneca, Wilmington, DE).**

This emulsion of lidocaine and prilocaine is applied to intact skin, covered with an occlusive dressing, and can be used on infants older than 32 weeks of age, says Meunier-Sham.

"EMLA must be left in place at least one hour, and it provides deeper anesthesia if left on up to three hours," she says.

Because of this time factor, EMLA cream is most commonly used in the ED for lumbar punctures and for children with chronic illnesses such as sickle cell disease, says Meunier-Sham.

- **Numby Stuff.** A battery-operated device delivers a solution of lidocaine with epinephrine through the skin's surface and is used for children needing intravenous line (IV) placement, says Meunier-Sham. An electrode with medication is applied where the needlestick will be needed, and a second electrode is required to ground the current, she adds.

Application time varies from 10-20 minutes, and burning sensations and local irritation may occur, says Meunier-Sham. "Some patients experienced discomfort with the use of Numby Stuff, and therefore nurses tend to use it less," she adds.

Numby Stuff, manufactured by Salt Lake City, UT-based Iomed, is not used for infants or nonverbal children because you must be able to assess discomfort, she says. "If children cannot tell you that the Numby Stuff is uncomfortable or feels like it is burning, then it should not be used," says Meunier-Sham.

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Continued on page 116

Source: Prepared by Joan Meunier-Sham, RN, MS. Excerpted from *Procedural Pain Management in Neonates through Adolescents Guidelines*, Boston Medical Center.

SOURCES

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— **ELA-Max**. This is a lidocaine cream applied to the procedure site, and it is the newest product available for pediatric procedural pain, says Meunier-Sham. An occlusive dressing is not required, but it can decrease the risk of the child removing the bandage, she says.

The procedure site is numb within 20 minutes, and anesthesia will increase for up to two hours, says Meunier-Sham.

ELA-Max is favored over EMLA cream because ELA-Max has rapid onset of action, she reports. However, ELA-Max (Ferndale Laboratories, Ferndale, MI) does not have approval from the Food and Drug Administration for use in children younger than 1 year of age, she notes.

— **Vapocoolants**. These refrigerants are sprayed on the skin surface and provide an immediate cooling that only lasts for 5-10 seconds. They are used for venipuncture and IV line placements in the ED, says Meunier-Sham. "Therefore, following application, the area should be cleansed with an alcohol swab, immediately followed by the needlestick," she says.

Vapocoolants are very cold, and if applied for too long, they can cause frostbite, she warns. "Vapocoolants should not be used in anyone with peripheral vascular disease," says Meunier-Sham.

— **Sucrose pacifiers**. Administering these to infants up to three months of age decreases grimacing, crying, and tachycardia during painful procedures, says Meunier-Sham.

Up to 2 cc of solution is slowly administered to the infant, with smaller volumes used for premature infants, says Meunier-Sham. "During the procedure, the infant may suck on a gloved finger or pacifier dipped in the remaining solution," she says.

At Children's, the ED recently began using oral sucrose for neonate pain control before invasive procedures, says Williams. "This has allowed us to perform needle punctures and placement of urinary catheters without a cry from many young babies," she says.

— **Lidocaine, epinephrine, and tetracaine cream**.

Before lacerations are cleaned, ED nurses apply this topical gel, says Williams. "This product has substantially reduced the pain of irrigation and cleaning of these wounds," she says.

• **Designate a pain resource nurse**.

The goal is to ensure that every child receives timely, appropriate management of his or her pain, says **Lori Vinson**, RN, pain resource nurse for the ED at Children's Medical Center of Dallas.

All ED nurses complete a pain management competency on an annual basis, says Vinson, who gives ongoing education on pain management topics such as sucrose pacifiers.

"I serve as a resource to the nurses when they have questions about pain management," she says. "I am also an advocate with the nurse by working with the physician and the pharmacist for a plan of care that includes pain management."

• **Have ED nurses start interventions directly**.

Although ED nurses often initiate painful procedures, a physician order was needed for pharmacologic agents, says Meunier-Sham. To address this, a "nurse-driven protocol" was developed, with a preprinted order for "PainFree Protocol Measures" allowing nurses to choose and initiate procedural pain management, she explains.

"This empowers ED nurses to use pharmacological and non-pharmacological interventions to decrease procedural pain," she says. "Nurses have the autonomy to choose the appropriate option for use, as long as they follow the protocol."

From the moment the child is triaged, pain is assessed and pain control measures are put in place, says Williams. For example, triage nurses may splint, elevate, and apply ice to a fractured extremity, or may administer acetaminophen or ibuprofen, she says.

"Topical EMLA is applied to potential IV sites or to the lower back if a lumbar puncture is anticipated at triage, or applied immediately when the child is

placed in a treatment room,” says Williams.

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1. Alexander J, Manno M. Underuse of analgesia in very young pediatric patients with isolated painful injuries. *Ann Emerg Med* 2003; 41:617-622.
2. Illinois Emergency Medical Services for Children. *Pediatric Pain Management Survey and Quality Improvement Monitor*. 2002. Web: www.ems-c.org/Products/frameproducts.htm. ■

Don't overlook mental status changes in elderly

An 85-year-old woman comes to the ED with an ankle fracture. An elderly gentleman complains of chest pain.

Would you assess the mental status of both these patients? If not, you could be missing important information that could adversely affect patients' outcomes, says **Karen Hayes** PhD, ARNP, professor at the school of nursing at Wichita (KS) State University.

“It is essential that the ED nurse perform a mental status exam on each elderly patient,” stresses Hayes.

A recent study found that although mental status impairment is very common in older ED patients, this impairment often goes unrecognized. Of 271 ED patients aged 70 years or older, 74 had impaired mental status, but this status was recognized in only 28 of the patients, and of 19 patients with delirium, five were discharged to home from the ED.¹

Hayes says that your goal is to determine two things: Does impairment in cognitive ability or affective functioning exist? If so, is the impairment new in onset, or does it reflect the patient's existing mental ability?

To significantly improve assessment of mental status for elderly patients, do the following:

- **Observe closely.**

EXECUTIVE SUMMARY

You should perform a mental status exam on all elderly patients to avoid overlooking emergent conditions.

- If an impairment exists, you must determine whether the change is sudden, so family members or the patient's physician can be consulted.
- Don't assume that mental status changes are a result of normal aging.
- Conditions such as infection and dehydration can result in mental status changes.

SOURCES AND RESOURCE

For more information about assessing mental status in elderly patients, contact:

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- **Karen Hayes**, PhD, ARNP, School of Nursing, Wichita State University, 1845 Fairmount, Wichita, KS 67260. Telephone: (316) 978-5721. E-mail: Karen.Hayes@wichita.edu.

The Mini-Mental State Examination is a brief, quantitative measure of cognitive status in adults, which can be used to screen for cognitive impairment, to estimate the severity of cognitive impairment at a given point in time, to follow the course of cognitive changes in an individual over time, and to document an individual's response to treatment. An introductory kit with 50 test forms and a user's guide costs \$44, plus \$8 shipping charge. To order, contact: Psychological Assessment Resources, 16204 N. Florida Ave., Lutz, FL 33549. Telephone: (813) 968-3003. Fax: (813) 968-2598. E-mail: custserv@parinc.com. Web: www.parinc.com.

During the history and physical exam, closely observe the patient's awareness, orientation, cognitive ability, and mood, Hayes advises. “In addition, observation of physical appearance, behavior, and responses to questions give clues to functional ability,” she says.

• **Don't assume mental status changes are caused by aging.**

Many emergent conditions present themselves as changes in mental status or acute confusion, including infection, electrolyte abnormalities, and dehydration, notes Hayes. “Remember that acute delirium or confusion caused by a physical problem is generally reversible when the physical problem is corrected,” she says.

In any elderly patient with a change in mental status, a thorough metabolic work-up must be considered, says Hayes. “Too often, we assume normal aging causes mental status changes, which it does not,” she emphasizes.

• **Involve others as needed.**

You may need to double-check your observations by consulting with another source who is familiar with the patient, says Hayes. “I like to clarify the functional status of an elder with a family member or friend,” she

EXECUTIVE SUMMARY

Pulmonary embolism is often misdiagnosed in the ED because symptoms are nonspecific.

- Symptoms include chest pain, shortness of breath, anxiety, cough, sweating, and syncope, and you should consider risk factors such as deep vein thrombosis.
- Diagnostic tests include D-dimer marker tests, whole blood cell tests, ventilation-perfusion (V/Q) lung scan, and spiral computed tomography scan.
- Carefully assess for symptoms of internal bleeding if patients are given fibrinolytic therapy.

says. “For example, I may see disorientation to place or time. A family member could tell me if that was usual for the patient or a new finding.”

If no family members are available, contact the patient’s primary physician, recommends Hayes. “I place a lot of calls to doctors’ offices to get information about an older patient,” she says. “The primary care physician is in a better position to tell me if my assessment of mental status is accurate.”

• Give patients a Mini-Mental State Examination.

A Mini-Mental State Examination is a brief, standardized measure of mental status and takes about 10 minutes to administer, says **Cynthia Bautista**, PhD, RN, CNRN, neuroscience clinical nurse specialist at Yale New Haven (CT) Hospital. (See resource box, p. 117, for ordering information.)

The test measures five areas of cognitive function: orientation, registration, attention and calculation, recall, and language, says Bautista.

“The Mini-Mental State Exam is effective as a screening instrument to separate patients with cognitive impairment from those without it,” she says.

Changes in cognitive function often call for prompt and aggressive action, says Bautista. “Cognitive functioning may decline during illness or injury,” she says. “Your assessment of a patient’s cognitive status is instrumental in identifying early changes in physiological status and ability to learn, and in evaluating responses to treatment,” she says.

Patients with visual impairment and immobilized limbs usually are able to complete most of the items, but the accuracy is questionable if the patient has less than an eighth-grade education or is not fluent in English, and it is very difficult to obtain an accurate score if the patient has a severe hearing impairment, notes Bautista.

“The exam relies heavily on verbal response, reading and writing skills,” she says. “If elderly patient is hard of hearing and visually impaired, they may perform poorly even when cognitively intact.”

Reference

1. Hustey FM, Meldon SW, Smith MD, et al. The effect of mental status screening on the care of elderly emergency department patients. *Ann Emerg Med* 3003; 41:678-684. ■

Are you missing patients with pulmonary embolism?

If a patient came to your ED complaining of fever, anxiety, or coughing, would you suspect a pulmonary embolism? When 39-year-old NBC News

reporter David Bloom died in April of a pulmonary embolism while covering the war in Iraq, a spotlight was put on this condition, with which 600,000 patients are diagnosed each year.¹

Patients with pulmonary embolism often slip through the cracks in the ED, precisely because the symptoms are so vague, says **Marla Gain**, RN, BS, MICN, clinical educator for emergency services at University of California — Irvine Medical Center in Orange. “Many pulmonary embolisms are missed completely or misdiagnosed initially in the ED,” she says.

A 2003 clinical policy from the Dallas-based American College of Emergency Physicians gives new recommendations for patients with pulmonary embolism.²

“You’ll be seeing changes in diagnostic testing protocols and administration of fibrinolytic therapy to specific patients,” says **Julie Bracken**, RN, MS, CEN, associate director of nursing staff development for University of Illinois Medical Center and former director of nursing education at Cook County Hospital, both based in Chicago.

To dramatically improve care of patients with pulmonary embolism, do the following:

• Look for nonspecific symptoms.

Have a high index of suspicion, as patients may not present in a way that you expect them to, warns Gain, pointing to a recent case of a 35-year-old man who had a deep vein thrombosis with very mild shortness of breath.

“They decided to do a spiral CT [computed tomography], and lo and behold, he had an extensive pulmonary embolism,” she says. “He had a very positive outcome without deficits.”

Nonspecific symptoms may include chest pain, shortness of breath, anxiety, cough, sweating, and syncope, says Gain. “ED nurses need to keep a high level of suspicion secondary to risk factors, such as deep vein thrombosis, bed rest, long trips, surgeries, cancer,

birth control pills, and pregnancy," she says.

Since you are the primary collector of history and assessment data, you must carefully assess symptoms and signs of deep vein thrombosis and pulmonary embolism, says Bracken. "This leads to quicker suspicion, work-up, diagnosis, and treatment," she stresses.

You may not pinpoint the actual diagnosis in triage, but the goal should be to determine the patient's acuity so he or she can be seen in a timely and appropriate order, says Gain. "You need to look at the complete, subtle picture the patient is painting," she advises. "At times, your antenna should be raised for patients with nonspecific complaints."

The patient's lung sounds may be clear bilaterally, and oxygen saturation levels can be more than 95%, notes Gain. "They may be mildly tachycardic, anxious, or have a fever, but again, these are nonspecific," she says. "Unless the patient is in extremis and has a huge pulmonary embolism, physical findings are nonspecific — just like their complaints."

• **Stay current with cutting-edge diagnostic testing.**

Diagnostic tests for pulmonary embolism include D-dimer marker tests, whole blood cell tests, ventilation-perfusion (V/Q) lung scan, and CT scan, says Bracken.

D-dimer marker tests consist of five types: enzyme-linked immunosorbent assay, latex agglutination assay, whole blood assay, turbidimetric assay, and immunofiltration assay, says Bracken. Immunofiltration assay can be performed at the bedside, similar to urine pregnancy, notes Bracken. "This potentially could be delegated to the ED nurse," she says.

Currently, the V/Q lung scan is the most frequently ordered diagnostic test for pulmonary embolism, says Bracken. "You can expect this test to continue to be the most often ordered, except now it may be combined with venous ultrasound and/or D-dimers in low-to-moderate pretest pulmonary embolism probability patients," she notes.

Spiral CT studies have shown increased identification of pulmonary embolism, says Bracken. "This test should gain in popularity," she predicts.

All patients who come to the ED with suspected pulmonary embolism are closely monitored and transported on a cardiac monitor with an intravenous line, oxygen, and pulse oximetry, says Gain. Once the electrocardiogram and chest X-rays are completed, arterial blood gas and D-dimers are drawn and sent, she says.

Arteriograms are the gold standard, says Gain. "These can be considered definitive. However, these are not commonly used," she says. "This is because they are invasive, they are not timely, they're costly, and patients must have good renal function."

Treatment consists of aspirin, low molecular weight heparin or intravenous heparin, and tissue plasminogen

SOURCES

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activator for patients in acute crisis, says Gain. "They will hopefully be discharged home after a few days on [warfarin]."

• **Assess the patient's response to treatment.**

According to clinical trials and consensus reports, fibrinolytic agents are useful only in treating patients with hemodynamic instability, especially with persistent systemic hypotension, says Bracken. "Therefore, you must constantly assess the patient's response to treatment in this difficult population," she advises.

Because fibrinolytic agents are given to patients with systemic hypotension, there is a danger of missing side effects of internal bleeding, Bracken explains.

These symptoms include shortness of breath, tachypnea or tachycardia, sudden onset of pleuritic chest discomfort, cough, diaphoresis, syncope, crackles, new onset right-bundle branch block on electrocardiogram, and arterial blood gas changes with a drop in oxygen pressure and partial pressure of carbon dioxide, says Bracken.

"The symptoms usually recognized for internal bleeding are the same as those for systemic hypotension," she says. "Diligence is required to monitor for this side effect of fibrinolytic therapy."

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2. American College of Emergency Physicians. Clinical policy: Critical issues in the evaluation and management of adult patients presenting with suspected pulmonary embolism. *Ann Emerg Med* 2003; 41:257-270. ■

Do you give phone advice to patients? Learn the risks

Do you ever give callers medical advice when they call the ED asking for help? If so, you are facing increased liability risks, warns **Peter Alan Bell**, DO, FACOEP, FACEP, professor of emergency medicine at Ohio University College of Osteopathic Medicine in Columbus.

“Emergency personnel can be held liable for statements that are made either in person or on the phone that result in a poor medical outcome,” he says.

Many EDs have adopted a “no-telephone-advice rule” to reduce risks, Bell says. “You have no existing relationship with the caller, and most callers don’t even identify themselves,” he notes.

There is also a risk of misunderstandings, says Bell. “Who said what to the caller? Did both parties understand each other?” he asks. “Often, the medical questions we ask as health care providers make perfect sense to us, yet convey a different understanding to the patient.”

When patients call the ED asking for medical advice, do the following to reduce risks:

- **Don’t give advice over the phone.**

“The rule of thumb is to say, ‘If you think you are having an emergency, hang up and dial 911,’” Bell says. “While we want to be customer-friendly, we do not want to violate the privacy rules, nor do we want to misdirect the patient.”

At NorthCrest Medical Center in Springfield, TN, all ED nurses are educated about the risks of giving medical advice over the phone, says **Shelley Cohen**, RN, CEN, the facility’s ED educator. The ED’s policy is posted at the nursing station and includes the following scripted statement:

“I understand that you are concerned. However, it is not safe nor is it in your best interest to be given medical

EXECUTIVE SUMMARY

To reduce liability risks, don’t give medical advice over the phone.

- Post a scripted statement at the nurses’ station to inform callers of their options.
- Warn nurses about the legal risks of giving advice over the telephone.
- An exception can be made if callers recently have been seen in the ED, but document specific information about the call in the patient’s medical record.

SOURCES

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advice over the phone. You do have three options:

- If you think this is an emergency, hang up now and dial 911.

- If you have a doctor, please call them or whoever is on call for them.

- Go to your closest emergency room.”

Having scripted statements by the phone in the ED allows an unlicensed person to route the calls, she says.

- **Make sure that nurses know the risks.**

Nurses will be less likely to give advice over the phone if they understand the risks of a nurse giving medical advice without signed protocols from a physician, advises Cohen.

“If you can’t give a patient two Tylenol without a doctor’s written, verbal, or standing order, what makes you think it is within the scope of practice for a nurse to give medical advice without the same?” asks Cohen.

- **Give patients clear discharge instructions.**

To reduce the number of patients calling for medical advice, give preprinted or computer-generated discharge instructions to every patient, says Bell. “These standardized templates avoid confusion regarding what the patient is supposed to do,” he says.

- **Have a different system for patients previously seen in ED.**

If a patient was seen recently in the ED and is calling with questions about a prescription or exacerbation of symptoms, it is appropriate to talk with them, says Bell. Ask the callers for their Social Security number and other identifying information to verify their identity, and document the phone conversation, he advises. “I limit my conversation to answering questions that are pertinent to their current condition, and I often use the discharge instructions as my guide,” he says.

If in doubt, ask the patient to return to the ED for a

re-evaluation, says Bell. "While I prefer to personally take same-shift calls from my patients, our nurses are trained to follow this same protocol," he adds.

There should be a clearly defined procedure when patients call for medical advice that already have been seen in the ED, says Cohen. She gives the example of a man who was treated for a hand injury in the ED the previous day. He is calling because the orthopedic physician he was referred to will not accept his insurance, and his pain is worse today. The following steps are taken, says Cohen:

— Get the name and phone number of the patient, and let him or her know a nurse will call them back shortly.

— Retrieve the medical record. You will need to verify this is the patient you spoke with. Review the record and content.

— Collaborate with the ED physician on duty. Work together to determine what is best for the patient.

In the above case, options include having the patient return to the ED for a recheck, referring to another orthopedist that will accept the patient's insurance, or referring to an appropriate clinic, says Cohen.

A licensed person should handle the call, and the ED physician on duty at the time of the call should be consulted, says Cohen. In addition, you should document the following information in the patient's medical record, she advises: date/time of call, name of caller, questions/advice requested, response given, and name of physician that gave verbal order for the advice.

"Is this more work? Sure it is. But it beats trying to validate that what the patient claims you told them to do were not your words," says Cohen. ■



Use these tips to make pediatric procedures easier

Do you often encounter frightened, squirming children when attempting to start intravenous lines or care for lacerations? Their fright and movement can make care difficult to deliver, says **Teri Howick**, RN, nurse educator for the ED at McKay Dee Hospital in Ogden, UT.

For example, infants or young children can loosen

EXECUTIVE SUMMARY

Make pediatric procedures easier by using tips for distraction, bandaging, and positioning.

- Reduce pain of intramuscular shots by positioning children so their deltoid muscles are relaxed.
- To distract young children during procedures, draw a "hand elephant."
- Use a "boxing-glove" dressing to lessen the chance of removal.

dressings or laceration repairs, she notes. "Sometimes, you are just short of putting them in one of those veterinary collars that look like a lampshade to keep them from gnawing the stitches out," says Howick.

To make children more comfortable and facilitate procedures, use these tips:

• **Lessen pain of intramuscular (IM) shots.**

If children are getting IM shots in the deltoid, have the patients place their arms behind their backs with their elbows bent at a 90-degree angle or less, says Howick. "This makes it difficult to tighten the deltoid, and the shot will be less painful going into a relaxed muscle," she says.

• **Use the "hand elephant" to divert children's attention.**

If a painful procedure has to be performed, Howick suggests drawing an elephant on a child's hand with a marker, using the index finger as the trunk, and the web space between the index and the thumb for the mouth. The head of the elephant covers most of the side of the hand, with the ear extending up to the wrist, she explains.

"I have them name the elephant and practice grasping things, like a pencil, with the index-finger trunk, and opening and closing the mouth by extending their thumb," she says. "I've even drawn elephants on both hands so they can 'interact' with each other."

• **Use "the Pickens Sling" for elevation.**

This sling is for patients who need to have a hand elevated, as in the case of finger lacerations, or nerve or tendon repairs, to reduce swelling, says Howick. Follow these steps, she recommends:

Measure a length of muslin stockinet 1½ the length of the patient's arm.

Fold it in the middle, and make a cut halfway through.

Slide the patient's arm through the cut so the arm is covered and the cut opening just covers the elbow.

Have the patients cross their covered arms across their chests so that their hand is up on their shoulders. Bring the other end of the stockinet around their

SOURCES

For more information on pediatric procedures, contact:

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backs, and tie both ends high on the scapula.

“The arm will be elevated, and it nestles nicely in the stockinet cradle,” says Howick.

- Use the “boxing-glove” dressing.

To prevent children from removing dressing for a hand laceration, do the following, says Howick:

Cut a piece of stockinet then length of the patient’s arm from elbow to fingertip, and slide it onto the forearm so it goes from elbow to wrist. Take a ½- to 1-inch piece of nonstretchy cloth tape, wrap it around the stockineted wrist at the narrowest part, and circle it twice, she says.

“Do not stretch or make it constrictive in any way,” Howick says. “Just lay it on the stockinet.”

Next, dress your wound as necessary, applying ointments and nonadherent gauze dressing, says Howick. Place 2x2s between the second, third, and fourth digits, and place a large, rolled gauze in the palm of the hand so the thumb reaches around it, says Howick. “Wrap it all with a gauze bandage so the patient maintains the position of function. No tape is necessary,” she says. “Now pull the stockinet over the entire ball of wax.”

Tie a knot in the end to enclose the dressing and cut off any excess, says Howick. This dressing is absorbent and should be rechecked every day to check for signs and symptoms of infection, she advises.

“It is not occlusive in any way, and the patient can’t pull it off,” she says. “Most children can’t loosen the knot with one hand or their mouth.”

- **Calm children when starting an intravenous line.**

When starting an intravenous line (IV) in a frightened child, explain to the child that this is a straw to give their body a drink, suggests **Deby Campbell**, RN, MSN, clinical nurse specialist for the pediatric ED at Banner Desert Medical Center in Mesa, AZ. “This is especially

effective when the child has been vomiting,” she says.

Next, explain that there is a little needle in the straw, but you will take it out and make a big bandage when it is all done, she says. “During the procedure, I always make a loud comment when my catheter is advanced and in place that ‘the needle’ is gone,” she says. “Now, it is time for the bandage.”

Compliment the child on how well he did, she says. “Children always need recognition, so a sticker or a decorated bandage is now in order,” she says.

Never blame children for problems with insertion or expect young children to hold perfectly still, she stresses. “Don’t say things like, ‘Since you moved, I have to do it again,’” she says. “They are too scared. We are the grownups, and we can take the blame. Say, ‘I’m sorry, this one didn’t work,’ or ‘It wasn’t your fault, but I have to do it again.’” ■



Make eye irrigation less painful for patients

While performing irrigation to flush the eye after foreign body or chemical irritation, the ophthalmic anesthetic usually gets washed away, and the patient begins to complain about pain of irrigation.

Janice C. Taylor, RN, BSN, CEN, an ED nurse at St. Joseph’s Hospital in Bellingham, WA, offers the following solution: Put some of the anesthetic in a syringe so you periodically can inject some of the anesthetic into the irrigation solution to keep the patient comfortable, she suggests. Prior to its use, you should clarify that the patient is not allergic to the “caines” class of local anesthetics, including lidocaine, marcaine, tetracaine, or alcaine, Taylor advises.

“Just inject 0.5 cc every two or three minutes,” says Taylor. “This can be done for manual irrigations or in conjunction with the Morgan lens.”

The Morgan lens looks like a contact lens attached to intravenous (IV) tubing, she explains. “You connect a bag of IV solution to regular IV tubing and [connect] that to the lens,” she says.

[Editor’s note: For more information, contact Janice C. Taylor, RN, BSN, CEN, Emergency Department, St. Joseph Hospital, 2901 Squalicum Parkway, Bellingham, WA 98225. E-mail: JTaylor@peacehealth.org.] ■



JOURNAL REVIEWS

Curran GM, Sullivan G, Williams K, et al. **Emergency department use of persons with comorbid psychiatric and substance abuse disorders.** *Ann Emerg Med* 2003; 41:659-667.

Patients with both psychiatric disorders and substance abuse are linked to significantly increased use of the ED, says this study from Central Arkansas Veterans Healthcare System and University of Arkansas for Medical Sciences, both based in Little Rock, and Baylor College of Medicine and Ben Taub General Hospital, both based in Houston.

Researchers looked at 12,212 patients who were diagnosed with a primary psychiatric disorder in the ED over four years. Patients in this group without a substance abuse disorder had a mean number of 2.8 ED visits, whereas patients in the group with a substance abuse disorder had a mean number of 5.2 ED visits.

The study's findings suggest that improved detection, referral, and treatment of substance abuse disorders is needed for ED patients with psychiatric disorders, say the researchers. They recommend the following:

- improving identification, referral, and treatment of substance abuse disorders in patients with psychiatric disorders;
- performing a brief intervention for substance abuse problems;
- linking patients to needed services, including substance abuse treatments. ▼

Meldon SW, Mion LC, Palmer RM, et al. **A brief risk-stratification tool to predict repeat emergency department visits and hospitalizations in older patients discharged from the emergency department.** *Acad Emerg Med* 2003; 10:224-232.

Elderly ED patients with two or more risk factors on a triage screening tool are at significantly higher risk for hospitalization, nursing home admission, and subsequent ED use, according to this study from MetroHealth Medical Center, Cleveland Clinic Foundation, and the Benjamin Rose Institute, all based in Cleveland.

The researchers evaluated 650 patients ages 65 or older presenting to two urban EDs with a simple, six-item ED nursing triage risk-screening tool. The tool assessed cognitive impairment, difficulty walking, the number of medications taken, and recent ED use and hospitalization. Patients who were defined as high risk by the screening tool were more likely to require ED use or admission to hospital or nursing home. The risk was highest in the first 30 days after the initial ED visit.

The researchers note the importance of making the screening tool quick and easy to use. They report that the screening tool has been readily accepted by ED nurses at both facilities and is routinely used as a standardized age-appropriate triage assessment tool. The screen takes only one to two minutes to complete. ▼

Grant MS. **The effect of blood-drawing techniques and equipment on the hemolysis of ED laboratory blood samples.** *J Emerg Nurs* 2003; 29:116-121.

When ED nurses drew blood through intravenous catheters, this resulted in significantly more red blood cell damage than drawing blood with straight needles, says this study from Johns Hopkins University School of Nursing in Baltimore.

The study surveyed ED nurses and ED clinical technicians over 19 days, and questionnaires were submitted with each blood sample sent to the laboratory for diagnostic testing. A total of 454 surveys were included in the study. The researcher found that 32% of the blood samples had some degree of hemolysis, and 13% were so hemolyzed that the laboratory canceled tests. Blood drawn with straight needles was less likely to result in hemolysis and test cancellation, and using a combination of intravenous catheter and Vacutainer (Becton Dickinson, Franklin Lakes, NJ) caused more hemolysis than using an intravenous catheter with a syringe.

To change ED nursing clinical practice, an ED guideline was revised to encourage staff to draw blood with a syringe through the intravenous catheter, instead of a Vacutainer, and then transfer the blood to a tube via the special needleless connector.

The EDs conducted an audit for 15 consecutive months after the study, and found that average cancellation rates from the laboratory decreased from 13% to 4.8%. ■

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CE instructions

Nurses participate in this continuing education program by reading the article, 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 2003 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 objectives/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 children in your ED suffering? Stop untreated pain now, guard accreditation; Are you missing patients with pulmonary embolism?* in this issue.)
- **Describe** how those issues affect nursing service delivery. (See *Use these tips to make pediatric procedures easier.*)
- **Cite** practical solutions to problems and integrate information into the ED nurse's daily practices, according to advice from nationally recognized experts. (See *Don't overlook mental status changes in elderly.*)

5. Which of the following interventions is most effective for reducing the pain of needlesticks in young children, according to Joan Meunier-Sham, RN, MS, ED pediatric clinical nurse specialist at Boston Medical Center?
 - A. EMLA Cream
 - B. Numby Stuff
 - C. Vapocoolants
 - D. Sucrose pacifiers
6. Which is recommended for assessment of mental status in elderly patients, according to Karen Hayes, PhD, ARNP, professor at the school of nursing at Wichita State University?
 - A. Mental status should only be assessed for patients who appear confused.
 - B. Mental status should be assessed for every elderly patient
 - C. The patient's baseline level of functioning is not relevant.
 - D. Acute delirium is not reversible, even when the physical problem is corrected.
7. Which of the following is considered definitive to diagnose pulmonary embolism, according to Marla Gain, RN, BS, MICN, clinical educator for emergency services at University of California — Irvine Medical Center in Orange?
 - A. Arteriograms
 - B. D-dimer marker tests
 - C. Whole blood cell tests
 - D. Ventilation-perfusion lung scans
8. Which of the following is recommended for pediatric patients, according to Teri Howick, RN, nurse educator for the ED at McKay Dee Hospital?
 - A. For intramuscular shots, have children tighten their deltoid muscle.
 - B. Make gauze bandages constrictive to avoid dressings being pulled off.
 - C. Absorbent dressings do not need to be rechecked.
 - D. Lessen pain of intramuscular shots by positioning children so their deltoid muscle is relaxed.

Answers: 5. C; 6. B; 7. A; 8. D.