

ED NURSING™

Vol. 3, No. 2

Inside

Special Report: RVS and Children in the ED

- **New testing requirements:**
Guidelines for Management of
Bronchiolitis 15
- **Update on RSV medications:**
Latest research findings 17
- **Controversy over
bronchodilators:** Should you give
these to RSV patients? 18
- **Tips for managing RSV:**
Suction and oxygenate babies
before you start IVs. 19
- **Pertussis and RSV:** How to tell
the difference 20

■ **Guest Column:** The legal risks
of delegating tasks to techs and
UAPs. 22

■ **Risk management:** Know high
risk areas for the ED. 22

■ **Tip of the month:** Use order sets
for chief complaints. 24

■ **Inserted in this issue:**
— Home instruction form for RSV
— 1999 index of stories

December
1999

American Health Consultants® is
A Medical Economics Company

Are you putting children through unnecessary trauma in your ED?

New guidelines say RSV testing isn't usually necessary

When a child comes to your ED wheezing and congested, it may be standard practice to test for respiratory syncytial virus (RSV). But testing for RSV is painful, costly, and unnecessary in many cases, argues **Jennifer Dearman**, RN, BN, charge nurse at the pediatric ED at Loma Linda (CA) University Medical Center and Children's Hospital.

Bronchiolitis is caused by RSV in 85%-90% of cases, notes Dearman, and it can be life-threatening in some children. However, new guidelines published by the Alexandria, VA-based National Association of Children's Hospitals and Related Institutions (NACHRI) state that — contrary to common practice — not all children with bronchiolitis symptoms should be tested for RSV. (See resource box, p. 14, for information on obtaining the guidelines.)

During RSV testing, nurses obtain a nasopharyngeal wash, which is a traumatic and invasive procedure, explains Dearman. "It involves introducing a catheter into the nose to the nasopharynx, instilling saline, and aspirating the

EXECUTIVE SUMMARY

According to new National Association of Children's Hospitals and Related Institutions guidelines, respiratory syncytial virus (RSV) testing is only necessary when children meet specific criteria, including children with congenital heart disease, bronchopulmonary dysplasia, immunosuppression, and chronic lung disease.

- Bronchiolitis is caused by RSV in 85%-90% of cases and is life-threatening for some children.
- During RSV testing, nurses obtain a nasopharyngeal wash, which is a traumatic and invasive procedure.
- Chest X-rays should not be automatically ordered for all children with crackles or asymmetry.

EDN NOW AVAILABLE ON-LINE!

Go to www.ahcpub.com/online.html for access.

RESOURCES

National Association of Children's Hospitals and Related Institutions (NACHRI) Practice Opportunity/Benchmark guidelines, *RSV Laboratory Evaluations for Patients with Uncomplicated Bronchiolitis* and *RSV Laboratory Evaluations are not Routinely Done in the ED to Determine Admission and/or Bed Placement*, both developed by NACHRI's Emergency Department Focus Group, are available to focus group hospitals. For more information about focus groups, contact:

- **Gregory Frangello**, Director, Applied Consulting Services, NACHRI, 401 Wythe St., Alexandria, VA 22314. Telephone: (703) 684-1355. Fax: (703) 519-8553. E-mail: gfrangello@nachri.org. Web site: www.childrenshospitals.net.

For more information about management of respiratory syncytial virus in the ED, contact:

- **Darlene Bradley**, RN, MSN, MAOM, CCRN, CEN, Emergency/Express Care, Loma Linda University Medical Center and Children's Hospital, 11234 Andersen St., Loma Linda, CA 92354. Telephone: (909) 478-8077. Fax: (909) 824-4641. E-mail: dbradley@ahs.llumc.edu.
- **Jennifer Dearman**, RN, BN, Pediatric Emergency Department, Loma Linda University Medical Center and Children's Hospital, 11234 Andersen St., Loma Linda, CA 92354. Telephone: (909) 824-4344. Fax: (909) 824-4054. E-mail: 5dearman@gte.net.
- **Carol Ledwith**, MD, FAAP, The Children's Hospital, B-251, 1056 E. 19th Ave., Denver, CO 80218. Telephone: (303) 837-2844. Fax: (303) 764-8694. E-mail: ledwith.carol@tchden.org.

saline," she says. "Children always gag during this procedure."

There is also a risk of laryngospasm for asthmatic children, she adds.

A hospitalwide committee that included representation from epidemiology, infectious diseases, administration, pediatrics, and the ED, looked at the number of

cases tested for RSV. "Of the children tested in the ED in 1998, only 12% were positive for RSV," reports Dearman. "We revised our policy on testing, due to the fact that we were obviously overtesting."

Previously, all small children who came to the ED had to be cultured with the results returned before they could be admitted, explains **Darlene Bradley**, RN, MSN, MAOM, CCRN, CEN, clinical director for emergency/express care at Loma Linda. "This created many delays in the admission process, more expense waiting for labs that may not have been necessary, and prolonged holds in the ED until an isolation bed on the pediatric unit could be made available," she recalls. (See story on preventing transmission of RSV, p. 20.)

The practice impeded patient flow significantly, Bradley says. "Children with RSV have been like a plague to us for many years," she stresses. (See story on medications, p. 17; the use of bronchodilators, p. 18; and distinguishing between pertussis and RSV, p. 20.)

It used to be common practice to test all children during the winter/flu season before bed placement could be provided. "We then worked with pediatrics, epidemiology, and emergency services to change that standard," says Bradley. "We now save children the discomfort of the procedure and the family the expense."

Most children don't need an RSV test

At Loma Linda, children are only tested for RSV if they are less than three years old and have a fever without focus and/or respiratory signs and symptoms (rhinorrhea, wheezing, increased work of breathing, respiratory distress, cyanosis, and apnea).

At The Children's Hospital ED in Denver, RSV tests are not given in most cases, reports **Carol Ledwith**, MD, FAAP, an attending physician in the ED.

"We will only test if we think the results will significantly change management," she explains. "Any child who comes to the ED with clinical bronchiolitis will not automatically get tested, whether they are getting admitted or going home."

There is no reason to do this test outside of specific criteria, based on the guidelines set forth by NACHRI, Ledwith stresses. Any invasive procedure such as nasal

(Continued on page 16)

COMING IN FUTURE MONTHS

- Oral rehydration for children
- Steps for a mini-neuro exam
- Protect yourself from hepatitis
- News update on strokes

Guidelines for the Management of Bronchiolitis in the Emergency Department at The Children's Hospital

Definition: Previously well child with no history of reactive airways disease, less than two years of age, with acute, often febrile, lower respiratory tract infection, typified by tachypne retractions or grunting and diffuse wheezing or crackles. Diagnosis is clinical, and viral etiology is not necessary to confirm the diagnosis.

Differential Dx: Foreign body, bacterial pneumonia, airway anomaly, pertussis, reactive airways disease, congestive heart failure (myocarditis or congenital heart disease).

Management and Evaluation

I. Ancillary studies

A. Oximetry. Yes!

- Excellent for documentation.
- Difficult for even experienced physicians to accurately predict the oxygen saturation of infants and children.
- Oxygen saturation may be the single best predictor of severe disease.

B. Chest X-ray usually not necessary.

Consider chest X-ray if:

- temperature is $>39.5^{\circ}\text{C}$;
- history of choking episode consistent with possible foreign body aspiration;
- markedly and consistently asymmetric chest exam;
- illness not following the expected course of resolution over five to seven days;
- concern for cardiac abnormality.

Note: It is not necessary to obtain a chest X-ray for every hospitalized patient or every patient with an oxygen requirement, persistent wheezing, or crackles.

C. Nasal wash usually NOT necessary:

- Overwhelming majority of cases are caused by respiratory syncytial virus (RSV).
- Nasal washes are not necessary for cohorting purposes.
- Nasal washes are not necessary for all hospitalized patients.

Consider nasal wash if:

- patient has clinical symptoms suggestive of pertussis;
- patient is less than 3 months of age and chlamydia is suspected by history or clinically;
- patient has a history of prematurity, bronchopulmonary dysplasia (BPD), cardiac disease, immunosuppression, or other chronic lung disease, and ribavirin therapy would be considered;

- impending respiratory failure;
- hospitalized infants less than 4 to 6 weeks of age for whom a sepsis workup is being considered and may be omitted if documentation of RSV would help make the caretakers more comfortable that this is the source for the fever;
- infants with apnea. RSV is an etiology for apnea and this diagnosis alleviates the need for pursuing an aggressive apnea workup.

Additional comments:

Diagnosis of bronchiolitis may be made clinically, and complete blood counts are not routinely indicated, nor are they helpful.

An infant with bronchiolitis does not fall into the category of fever without a source. Babies with fever without a source, under 4 to 6 weeks of age, will most likely be managed with a full sepsis workup. However, if the diagnosis of bronchiolitis has been made, the full sepsis workup is not necessarily indicated.

II. Treatment. Guidelines for treatment of bronchiolitis include:

A. Nebulized albuterol

A trial of albuterol by nebulization is indicated for the patient with bronchiolitis who is showing any signs of associated respiratory distress. Approximately 30% may improve, and 30% may worsen.

An adequate trial consists of one to two nebulizer treatments of 0.5 ml of albuterol. This dosage may be used for infants of any age weight as the younger infants actually receive less of the medication being delivered by the nebulizer.

An albuterol nebulizer treatment is not necessary for every baby with bronchiolitis. A baby who is self-hydrating, alert, interacting without hypoxia, and without significant associated respiratory distress may be treated symptomatically.

Patients with respiratory distress to whom an albuterol nebulizer treatment is given do not need to have continued treatments unless they show a clear and documented response and decrease in their level of distress following the treatment. If the patient does not respond to a trial of nebulized albuterol, there is no benefit in continuing repeat treatments.

Arrange for a home nebulizer for patients who require and respond to treatments and meet discharge criteria (listed on next page).

B. Albuterol syrup

Not an effective therapy. May increase side effects, such as tachycardia, without benefit to the patient.

If an ill patient responds to nebulized albuterol, arrange for home nebulizer therapy.

C. Intravenous fluids

Only indicated for clinically dehydrated patients who are unable to maintain hydration even after treatments, deep nasal suctioning, and/or oxygen therapy (if indicated).

Intravenous access is indicated for patients with severe distress apnea.

Intravenous access is not necessary for all hospitalized patients.

D. Oxygen

In Denver's altitude, the oxygen requirement has been defined, based on experience, as a room air saturation consistently less than 88%, following nebulizer trial and deep nasal suctioning.

E. Deep nasal suctioning

This is clinically very helpful in many outpatient and hospitalized cases.

F. Steroids

These are of no benefit in the routine treatment of infants with bronchiolitis.

G. Antibiotic therapy

This is not routinely indicated unless there is documentation of a concurrent bacterial process.

III. Indications for hospitalization after treatment and observation:

A. Oxygen requirement as defined above.

(Home oxygen is currently being evaluated.)

B. Respiratory distress, defined as severe retractions or respiratory rate consistently in the 70s or higher

C. Altered level of consciousness/poorly responsive

D. Inability to self-hydrate

E. Apnea

F. Consider hospitalization for the high-risk patient:

- history of prematurity, BPD, cardiac disease;
- very young (less than 4 weeks of age);
- patient with borderline saturation who lives at high altitude;
- patient with poor social situation.

IV. Patients with bronchiolitis may be managed as an outpatient if:

1. They are feeding and are well-hydrated.
2. They are alert.
3. They are not significantly distressed.
4. Room air saturation greater than 88%.

Note: Encourage the use of home nebulizers for patients who respond to their trial of albuterol nebulizer treatments in the ED.

Source: The Children's Hospital, Denver.

suctioning should not be done without considering the benefit for the patient and implications for management, she adds.

The Children's Hospital created guidelines based on the new testing requirements, with representation from the ED, pulmonary, respiratory therapy, nursing, and infectious disease. (**See guidelines for management of bronchiolitis in the ED, p. 15 and above.**)

When should you test for RSV?

The Children's Hospital guidelines state that only the following children should be tested in the ED:

- high-risk children who may need antiviral therapy;
- children with congenital heart disease;
- premature infants;
- children with bronchopulmonary dysplasia;
- children with immunosuppression;
- children with chronic lung disease;
- infants less than eight weeks of age who are febrile;
- infants who require hospitalization to establish the

source of fever and/or avoid unnecessary testing and treatment.

For example, an extremely ill infant having apneic episodes should be tested, Ledwith explains. "In that case, if you know it's RSV, then you might not have to do extensive further testing, such as CAT scans or upper GIs," she says.

RSV testing can also avoid children being worked up for sepsis and pneumonia, which includes getting complete blood counts and blood cultures, says Ledwith. A full sepsis workup will usually be done for babies with fever without a source. "But you don't need to work these kids up routinely for fever without a source, if the diagnosis of bronchiolitis has been made," she explains. (**See story on management tips for RSV, p. 19.**)

The diagnosis for bronchiolitis can be made clinically, eliminating the need for further testing, she explains.

If a child is a premature baby or has congenital heart disease, or you are considering the use of Ribavirin (virazole), manufactured by ICN Pharmaceuticals in Costa Mesa, CA, you should document if it's RSV. "But

those are the minority of our cases,” stresses Ledwith.

Every child with bronchiolitis does not need a chest X-ray, says Ledwith. In general, a chest X-ray is warranted for an infant who is not resolving his or her symptoms over the expected natural course of the illness, which would be five to seven days, Ledwith says.

“The average bronchiolytic peaks at day three to five and is done by day seven,” she notes.

Don't order a chest X-ray for every child

If the child has a higher fever than expected, consider obtaining a chest X-ray, Ledwith recommends. “Chest X-rays are also appropriate if you have a history of a possible choking episode and want to rule out a foreign body, or a history consistent with congenital heart disease that hasn't been picked up.”

All children with crackles used to receive chest X-rays automatically. “But the fact is, crackles are very common with bronchiolitis, probably more so than wheezing,” Ledwith says. “The presence of crackles

alone does not mean the child should get a chest X-ray.”

The presence of some asymmetry is also not reason enough to order a chest X-ray, Ledwith advises. “Bronchiolitis is by nature very asymmetric and rapidly changing,” she says. “If you listen to those kids, one minute they are different from the next and may be intermittently quite asymmetric.”

If the patient's chest exam is markedly asymmetric, such as clear on one side, and with dense crackles in a focal area on the other, a chest X-ray would be indicated, Ledwith recommends. “But people overuse that rule and tend to get a lot of chest X-rays. Often, the X-ray tells you only that it is consistent with bronchiolitis. That doesn't change the management, and is a significant expense.”

Children with bronchiolitis may be referred to the ED specifically for a chest X-ray, notes Ledwith. “They're sent in for a chest X-ray as if it's the standard workup, but it's not,” she says. “That's a dogma that has been passed on for 20 years and probably needs to be changed.” ■

Special Report: RSV and Children

Know RSV medications: Here is what's new

There are several advances in medications for respiratory syncytial virus (RSV) that ED nurses should be aware of. Here are updates on research that may impact your clinical practice:

• Steroids.

The use of steroids has been well-studied, but there is no evidence of benefits for routine use in children with RSV under a year old, particularly with a first-time episode, says **Carol Ledwith, MD, FAAP**, an attending physician in the ED at the Children's Hospital ED in Denver.

“Some kids come in on albuterol syrup and steroids, when neither of those medications is helping them,” she notes. “This is a disease that needs to run its course.”

Consider steroids in some cases

However, if the physician strongly suspects the child has reactive airway disease, such as in a child with a history of more than one episode of wheezing, who has demonstrated an excellent response to β_2 -agonist medication, steroids should be considered, Ledwith adds.

• Racemic epinephrine.

Racemic epinephrine has been found to be more effective than albuterol in RSV patients, notes **Jennifer Dearman, RN, BN**, charge nurse at the pediatric ED at Loma Linda (CA) University Medical Center and Children's Hospital.¹

“Be aware that albuterol is not the only option with these kids,” Dearman emphasizes. “A trial of racemic epinephrine is worthwhile if a child isn't responding to albuterol.”

However, benefits of racemic epinephrine are limited in the ED, since the treatment can't be continued at home. “We don't currently use that as standard care for bronchiolitics in the ED,” says Ledwith. “There is not much benefit to giving a trial of racemic; because even if they get better, they would not use it on an outpatient basis. This would be an excellent study for future directions of care.”

• Prophylaxis.

There are two medications that are now approved by the Food and Drug Administration for prophylaxis with children considered at risk, notes Dearman. Respigam (respiratory syncytial virus immune globulin intravenous) manufactured by MedImmune in Gaithersburg, MD, is IV and given monthly throughout the RSV season, and palivizumab is an intramuscular monoclonal antibody that is also given monthly throughout the season, she says.

Both medications reduced hospitalization for RSV patients by 55% and decreased length of stay for RSV patients who were admitted, notes Dearman. “Days in

SOURCE

For more information on medications used for respiratory syncytial virus, contact:

- **Maggie Huey**, RN, BSN, MHA, Emergency Services, Cook Children's Medical Center, 801 Seventh Ave., Fort Worth, TX 76104. Telephone: (817) 885-4092. Fax: (817) 870-7499. E-mail: maggiehu@cookchildrens.org.

the hospital decreased by 42%, and intensive care unit requirement was reduced by 57%," she says. "Also, oxygen requirement of patients decreased by 40%."^{2,3}

When taking a history, find out whether the child has been immunized for RSV, Dearman advises. "If they have been given one of those medications, one would expect that their course of illness would be better than if they had not received the medication."

At Cook Children's Medical Center in Fort Worth, TX, Respigam and Synagis (palivizumab), also manufactured by MedImmune, are given once a month during RSV season, from November through April, says **Maggie Huey**, RN, BSN, MHA, medical director of emergency services. "For high-risk children, such as premature and low birth-weight babies, it's believed that this prevents contraction of RSV," she reports.

• Heliox.

Heliox is a mixture of helium and oxygen used to nebulize medications and has been effective in treating severe cases.⁴ "This is an area we are currently investigating in our ED — as there is little research — and we have had great success with asthmatics and heliox," says Dearman.

• Ribavirin.

Recent studies do not support the use of Ribavirin (virazole), manufactured by ICN Pharmaceuticals in Costa Mesa, CA, according to Dearman. The Elk Grove Village, IL-based American Academy of Pediatrics (AAP) modified its recommendation for its use in 1996, she says. "The recent reports do not indicate that it decreases the length of stay in the ICU or hospital."

The drug is extremely expensive and has significant risks to patients and health care workers, she notes.⁵

The initial guidelines from the AAP recommended that ribavirin should be used to treat RSV, says Dearman. "Unfortunately, the early studies that this was based on did not evaluate ribavirin in severely ill kids on ventilators. Those studies also didn't show significant differences in lengths of stay in the hospital or ICU."^{6,7,8}

Dearman says there have been recent studies that demonstrated ribavirin is not effective in lessening the

severity of the RSV course.^{9,10}

"Based on those studies and the cost of ribavirin, the AAP now states that ribavirin 'may be considered,' stating that its use is based on the clinical situation," she adds.

The AAP also states that more studies are necessary to determine conclusively if it is useful, Dearman notes. "There are likely still smaller hospitals that continue to use ribavirin."

References

1. Klassen TP, Menon K, Sutcliffe T. A randomized trial comparing the efficacy of epinephrine with salbutamol in the treatment of acute bronchiolitis. *J Pediatr* 1995; 126:1,004-1,007.
2. American Academy of Pediatrics Policy Statement. Prevention of respiratory syncytial virus infections: Indications for the use of palivizumab and update on the use of RSV-IGIV. *Pediatrics* 1998;102:1,211-1,216.
3. American Academy of Pediatrics Policy Statement. Respiratory syncytial virus immune globulin intravenous indication for use (RE 9718). *Pediatrics* 1997; 99:645-650.
4. DeNicola G. Bronchiolitis. *Jacksonville Medicine* 1998; 49:394-398.
5. American Academy of Pediatrics Policy Statement. Reassessment of the indications for ribavirin therapy in respiratory syncytial virus infections. *Pediatrics* 1996; 97:137-140.
6. Wheeler JG, Wofford J, Turner RB. Historical cohort evaluation of ribavirin efficacy in respiratory syncytial virus infection. *Pediatr Infect Dis J* 1993; 12:209-213.
7. Meert KL, Sarnaik AP, Gelmini MJ, et al. Aerosolized ribavirin in mechanically ventilated children with respiratory syncytial virus lower respiratory tract disease: A prospective double blind randomized trial. *Crit Care Med* 1994; 22:566-572.
8. Law BJ, Wang EE, Stephens D. Ribavirin does not reduce hospital stay (LOS) in patients with respiratory syncytial virus lower respiratory tract infection. *Pediatr Res* 1995; 37:110A.
9. Moler FW, Steinhart CM, Ohmit SE, et al. Effectiveness of ribavirin in otherwise well infants with respiratory syncytial virus-associated respiratory failure. *J Pediatr* 1996; 128:422-428.
10. Law BJ, Wang EE, Stephens D. Ribavirin does not reduce hospital stay in patients with respiratory syncytial virus lower respiratory tract infection. *Pediatr Res* 1995; 37:110A. ■

Special Report: RSV and Children

Controversy: RSV patients and bronchodilators

The use of bronchodilators such as albuterol is controversial because most respiratory syncytial virus (RSV) patients do not respond to them, says **Jennifer Dearman**, RN, BN, charge nurse at the pediatric ED at Loma Linda (CA) University

Medical Center and Children's Hospital.

Specifically, albuterol is not widely supported as a medication that has positive effects, Dearman explains. Still, bronchodilators are still the first line of treatment in the ED.

"It is appropriate to give them a trial when a child comes in as a first-time wheezer to assess their response," she says. It is worth a trial, because staff are not sure if the problem is RSV when the child first presents to the ED with wheezing and hypoxia.

RSV testing has a one-half hour turnaround time, notes Dearman. "In that time, a bronchodilator treatment may be initiated," she says. If hospitals are giving continuous bronchodilator treatments without effect, that is inappropriate. "But a trial in the ED is not inappropriate."

Minority responds to albuterol

Only about 30% of children with RSV will respond to albuterol, says **Carol Ledwith**, MD, FAAP, an attending physician in the ED at the Children's Hospital ED in Denver. "So it's perfectly reasonable to try, but it's not appropriate to keep giving kids albuterol unless they show a clearly documented clinical response."

If after one or two β_2 -agonist nebulizer treatments, the child's pulse oximetry reading, respiratory rate, and other definable parameters on their exam do not improve, the albuterol should be discontinued, stresses Ledwith.

RSV is a virus that produces symptoms similar to asthma, but the diseases are not the same. "Bronchiolitis was treated just like asthma. So any wheezing child used to be given β_2 -agonist nebulizers, which is the standard nebulizer used for asthma," says Ledwith. "The problem is that most asthma responds to albuterol inhalers, but bronchiolitis is a different disease. Not all of those kids have a component of reactive bronchospasm."

Asthma requires management with repeat nebulizers and steroids, but that's not appropriate therapy for bronchiolitis. "It's not the same disease, and management is not the same," stresses Ledwith. "RSV is an acute viral illness, and only time will tell if that patient will go on to be labeled an asthmatic."

It is reasonable to be more suspicious of asthma than bronchiolitis if there is a strong family history; if they are highly reactive to β_2 -agonist nebulizers; if they have a personal history of eczema or atopy; and if wheezing is a much greater component than crackling, Ledwith says.

There is no indication whatsoever for albuterol syrup, Ledwith emphasizes. "It has fallen out of favor because it causes tachycardia without having any benefits." ■

Here are hot tips for management of RSV

Respiratory syncytial virus (RSV) is highly contagious and causes significant morbidity and mortality in very young children, notes **Jennifer Dearman**, RN, BN, charge nurse at the pediatric ED at Loma Linda (CA) University Medical Center and Children's Hospital.

"It is the most common isolated pathogen in patients hospitalized with bronchiolitis," she adds.

Children at high risk of complications are premature infants and children under two with chronic lung disease, says Dearman. Eighteen to twenty percent of infants who are in the hospital with bronchiolitis will develop apnea, she reports.¹

Here are some tips to consider when managing RSV in the ED:

- **Consider that infants under 2 months old may have apnea.**

Those patients may be sicker than other children with RSV because of the apnea, says **Carol Ledwith**, MD, FAAP, an attending physician in the ED at the Children's Hospital ED in Denver. "But that doesn't mean you have to admit every child under two months of age that you think has bronchiolitis," she cautions. "You don't have to admit them all, but be aware that there is a higher risk of apnea."

Take a thorough history to ensure the child is not having problems associated with apnea, Ledwith advises. A longer period of observation in the ED may be necessary.

- **Suction the child's nose.**

One of the most helpful interventions you can do for children with RSV is deep nasal suctioning, stresses Ledwith. "It is amazing what that local therapy of getting congestion eased can do for those kids," she says. "In my opinion, it probably helps more patients than nebulizers. Their nasal passages get so clogged, and it's one of our main reasons for admissions." Deep suctioning can't be done at home, and the congestion may prevent a child from being able to feed.

- **Send children home with nebulizer treatments.**

If a child with RSV gets better after a nebulizer treatment in the ED, set the patient up with a home nebulizer machine, advises Ledwith. "It is preposterous to give them a nebulizer treatment, make them better, but then send them home on albuterol syrup, just because it is easier," she says. "That it is not appropriate therapy."

About 30% of children will get better from nebulizer treatments; about 30% will get worse; and the remainder will show no effect, Ledwith notes.

- **Start babies on IVs after interventions.**

When babies are feeding poorly, they may be hypoxic and congested. “But if you suction them out and put them on some oxygen, a lot of them will start feeding great. So they really don’t need to have an IV put in first,” says Ledwith.

Evaluate the baby’s hydration status after you control their respiratory status with these two interventions, she recommends.

- **Document the child’s pulse oximetry.**

“It has been well studied that the ability of physicians and nurses to accurately predict pulse oximetry levels is poor,” notes Ledwith.²

“Obviously, the patient’s respiratory rate and behavior are valuable pieces of information, but oxygen saturation may be the single best predictor of severe disease,” she stresses. “It is a cheap, easy, noninvasive test, and should be documented on the chart.”

However, don’t assume a child is fine just because the oxygen saturation level is good, cautions Ledwith. “If the child looks great, the pulse oximetry will support that assessment.”

- **Warn caregivers that the child may get worse.**

Families need good follow-up instructions to inform them about what to expect. (See **home instruction sheet, inserted in this issue.**)

“RSV is a frustrating illness for all of us,” Ledwith says. “There is not a medication that will make it go away, and the medications we do have only help a minority of kids.”

Caregivers need to understand that if they brought the child in on day one or two of the illness, the child will probably get worse. “Let them know that if the child stops feeding or starts getting irritable, they need to come back in,” says Ledwith. “The natural progression of RSV is to get worse before it gets better.”

- **Instruct family members not to smoke.**

Babies that are exposed to smoke will have longer courses of RSV, says Ledwith. “If the caregiver insists they don’t smoke around the baby, that is hogwash,” she emphasizes. “They need to not smoke anywhere at all in the house or the car, because it makes the wheezing worse.”

References

1. American Academy of Pediatrics Policy Statement. Reassessment of the indications for ribavirin therapy in respiratory syncytial virus infections. *Pediatrics* 1996; 97:137-140.
2. Shaw K. The outpatient assessment of infants with bronchiolitis. *Am J Dis Child* 1991; 145:151-155. ■

How to prevent transmission of RSV

Respiratory syncytial virus (RSV) is known to be transmitted within the hospital setting, warns **Jennifer Dearman**, RN, BN, charge nurse at the pediatric ED at Loma Linda (CA) University Medical Center and Children’s Hospital.

“Patients should be identified early for testing, and isolated and cohorted in a timely manner,” she says. “Careful handwashing and isolation procedures will minimize transmission.”

RSV is transmitted by droplet from infected patients when direct or close contact with contaminated secretions occurs, Dearman explains. “The virus can exist on surfaces as well as the hands of health care personnel.”

Mask, gown, gloves, wash

The best way to prevent the transmission of RSV is by making sure you wear a mask, gown, and gloves, and by making sure physicians and nurses wash hands and stethoscopes, says **Carol Ledwith**, MD, FAAP, an attending physician in the ED at Children’s Hospital in Denver.

If a child is suspected to have RSV, they are not put in a room with another child unless they have been tested, says **Maggie Huey**, RN, BSN, MHA, medical director of emergency services at Cook Children’s Medical Center in Fort Worth, TX. The hospital has four negative flow rooms in the ED, she says.

“When the nurse in triage identifies a possible candidate, we take them straight back to one of those rooms,” Huey says. “Some of those kids come in respiratory distress, so we need to stabilize them first; but at the same time, be thinking about RSV transmission.” ■

Is it pertussis or RSV? Here’s how to tell

The differentiation between an early pertussis infection and respiratory syncytial virus (RSV) can be very difficult, says **Nancy Eckle**, RN, MSN, CEN,

program manager for emergency services at Children's Hospital in Columbus, OH.

"In areas experiencing a pertussis outbreak, the possibility of pertussis should be considered in all infants and children with respiratory illnesses that are not fully immunized," she adds.

Follow these tips

Here are some things to consider when differentiating between RSV and pertussis:

- **Don't assume that wheezing means RSV.**

Not all wheezing in infants is RSV. It may be pertussis. "Although wheezing is not commonly described as a symptom of pertussis we see it fairly routinely," notes Eckle. "The impact is that we have to isolate infants with wheezing that have not been fully immunized differently than those who have had the full initial series of vaccines."

- **Take appropriate isolation precautions.**

Pertussis is spread by droplet transmission when the patient coughs, sneezes, or is talking, says Eckle. "Patients with suspected pertussis are placed in droplet precautions," she explains. Droplet precautions include the following, she says:

- placing the patient in a private room;
- wearing a mask if within 3 feet of the patient;
- hand washing.

RSV is spread through direct contact. Patients with suspected RSV are placed on contact precautions, notes Eckle. These include:

- placing the patient in a private room;
- wearing gloves at all times when in the room;
- wearing a gown at all times;
- hand washing with an antimicrobial agent.

Use isolation precautions

When pertussis and RSV are suspected, combined droplet and contact isolation precautions are needed, recommends Eckle. "To prevent transmission of RSV

and/or pertussis, isolation precautions should ideally be initiated upon the patient's arrival in the ED."

- **Know which patients are at risk for contracting pertussis.**

Pertussis can occur at any age, but is most common in young children and adults, notes Eckle. "Infants and children who are not fully immunized [those who have not received at least three DPT vaccine doses] are at greatest risk for contracting pertussis. Older children and adults are also at risk for the disease, because immunity from vaccines diminishes over time."

Three stages of infection

- **Be familiar with the signs and symptoms of pertussis.**

Pertussis begins with mild upper respiratory symptoms that progress to severe paroxysms of cough, Eckle notes. Patients may have other respiratory illnesses at the same time, she adds. For example, it is possible for the patient to have an RSV infection/bronchiolitis and pertussis concurrently. The three stages of a pertussis infection are as follows:

Stage 1 (Catarrhal stage). Duration: One to two weeks. Communicability is most likely in this stage. Begins to diminish with the onset of paroxysmal coughing, but might last as long as three weeks.

Symptoms/history are:

- mild upper respiratory tract symptoms;
- cough;
- conjunctivitis;
- nasal discharge;
- inflammation of nasal mucous membranes.

Stage 2 (Paroxysmal stage). Duration: Two to four weeks. Symptoms/history are:

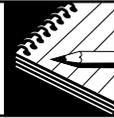
- increasingly severe cough;
- prolonged spasm of coughing (paroxysms). Parent may describe as not being able to catch breath between coughs;
- vomiting following coughing episodes;
- inspiratory "whoop" sound following a coughing episode (caused by a sudden inflow of air). The "whoop" may be absent in infants younger than 6 months and in older children and adults;
- apnea may occur in infants less than 6 months of age;
- fever is absent or minimal;
- wheezing and signs of respiratory distress exclusive of coughing episodes might be present with concurrent viral respiratory infection.

Stage 3 (Convalescent stage). Duration: Four to six weeks. Symptom: Intensity of cough gradually decreases. ■

SOURCE

For more information on differentiating between respiratory syncytial virus and pertussis, contact:

- **Nancy Eckle, RN, MSN, CEN**, Program Manager for Emergency Services, Children's Hospital, 700 Children's Drive, Columbus, OH 43205. Telephone: (614) 722-4353. Fax: (614) 722-6890. E-mail: EckleN@chi.osu.edu.



Delegating tasks: Know the legal risks

By **Sue Dill Calloway, RN, MSN, JD**
Nurse Attorney
Mount Carmel College of Nursing
Columbus, OH

Delegation is the transfer of responsibility for the performance of a selected nursing activity from a licensed nurse authorized to perform the activity to another individual. This practice is growing, as is the controversy that surrounds it. Some insist that only nurses should perform nursing tasks, while others argue that delegating tasks to unlicensed assistive personnel (UAPs), which include aides, techs, emergency medical technicians, and paramedics, is necessary to contain rising health care costs. **(See related article about high-risk areas, right.)**

There are two underlying principles inherent in the art of delegation: First, one cannot delegate what one does not legally have. Therefore, a nurse could not delegate acts of medical diagnosis since the nurse can not medically diagnose.

Second, if one already has the legal authority to perform a task or activity, delegation is not necessary. The latter is sometimes referred to as **indirect delegation**. Indirect delegation provides that tasks or activities from an approved list contained within the policies and procedures of the facility can be performed. For example, the ED tech who is trained to draw blood, do an

EXECUTIVE SUMMARY

There are specific legal risks of delegating tasks that ED nurses must be aware of.

- Know your state's specific law or rules on delegation.
- Be familiar with the Emergency Nurses Association position statement on *The Use of Non-RN Caregivers in Emergency Care and Standards of Emergency Nursing Practice*.
- Assess the patient before any care is delegated.
- Be familiar with the skills and knowledge of the unlicensed assistive personnel (UAP).

EKG, vital signs, or instruct patients in obtaining a clean catch urine.

Direct delegation occurs when the nurse determines the task that can be delegated. The nurse retains accountability and should assess the competency of the individual performing the task.

The nurse delegating the task must provide adequate supervision of the UAPs. The task should not require complex observations or critical decision making. The consequences of performing the task improperly are minimal and not life-threatening. The nurse must evaluate and document on an ongoing basis the nursing needs of the patient.

The Des Plaines, IL-based Emergency Nurses Association (ENA) has several documents that discuss the issue of delegation. Nurses should be aware of all national position statements since they can be introduced into the courtroom to demonstrate the acceptable standard of care. **(See resources, p. 23, for more information.)** All policies and procedures should be consistent with the standard of care.

You need to know these high-risk areas

ED nurses should be aware of common areas of liability in their area of practice, stresses **Sue Dill Calloway, RN, MSN, JD**, a nurse attorney at the Mount Carmel College of Nursing in Columbus, OH.

"Knowledge of hot legal issues can assist the nurse in taking extreme care when faced with one of these areas to avoid liability," she says.

Dill says common errors in the ED include:

- patient falls;
- medication errors;
- error in treatment;
- use of defective equipment;
- deferring improper orders;
- timely notifying the physician of a change in the patient's condition;
- abandonment;
- confidentiality;
- conscious sedation monitoring;
- restraint injuries;
- mistaken identity of patient;
- informed consent;
- blood consent;
- inadequate documentation;
- failure to know policies and procedures. ■

The ENA *Standards of Emergency Practice* (1997) recommend that triage be performed by an RN. ENA also recommends that only nurses educated in the practice of triage with a minimum of six months in emergency nursing be allowed to triage. ENA also has a position statement on *The Use of Non-RN Caregivers in Emergency Care*.

In 1996, a study was performed by ENA of 1,373 EDs as to the types of employees. The results were as follows:

- RNs were employed in 98%;
- LPNs were employed in 43%;
- UAPs were employed in 24%;
- physician assistants were employed in 16%;
- nurse practitioners were employed in 7%.

Direction from ENA

ENA has concurred with the Chicago-based National Council of State Boards of Nursing on several issues:

- The non-RN caregiver cannot re-delegate a delegated act (no subcontracting).
- Boards of nursing should develop clear rules on the competence of persons to perform delegated nursing tasks.
- While employers and administrators may suggest what tasks may be delegated, it is the RN who ultimately makes the decision and is ultimately accountable. The nurse can be disciplined by the state board for improper delegation.

RESOURCES

Standard of Emergency Nursing Practice (3rd ed.) delineates the role and function of the ED nurse and provides criteria to evaluate the quality of emergency nursing practice. The cost is \$22.95 for members of the Emergency Nurses Association (ENA) and \$27.00 for nonmembers, plus \$4.00 for shipping and handling.

Position statements are available from the ENA on *The Use of Non-Registered Nurse (Non-RN) Caregivers in Emergency Care* (1995). Single copies of position statements are available at no charge. All ENA position statements can be accessed from the ENA Web site: www.ena.org. Or to obtain copies, contact:

- **Emergency Nurses Association**, 915 Lee St., Des Plaines, IL 60016. Telephone: (800) 243-8362 or (847) 460-4000. Fax: (847) 460-4001.

• Nonnursing and managerial personnel must not coerce the nurse into compromising patient safety by requiring the nurse to delegate.

The ENA believes that the performance of professional nursing activities by non-RN caregivers constitutes practicing nursing without a license. It is also not in the interest of quality care, nor the health, safety, and welfare of the public. All non-RN caregivers should be directly supervised by an RN. There should be a written job description that delineates appropriate duties of the UAP.

There should always be one RN in the ED at all times. Like most — if not all — national organization position statements, ENA believes it is the nursing profession that defines and supervises the education, training, and utilization of any non-RN caregivers.

[Editor's note: For more information, contact Sue Dill Calloway, RN, MSN, JD, Mount Carmel College of Nursing, 127 S. Davis Ave., Room 208, Columbus, OH 43222. Telephone: (614) 234-5007. Fax: (614) 234-2892. E-mail: sdill@mchs.com.] ■

Subscriber Information

Customer Service: (800) 688-2421 or Fax (800) 284-3291.
World Wide Web: <http://www.ahcpub.com>.
E-mail: customerservice@ahcpub.com.

Subscription rates: U.S.A., one year (12 issues), \$299. With approximately 18 CE contact hours, \$349. Outside U.S., add \$30 per year, total prepaid in U.S. funds. One to nine additional copies, \$239 per year; 10 or more additional copies, \$179 per year. Missing issues will be fulfilled by customer service free of charge when contacted within 1 month of the missing issue date. Back issues, when available, are \$48 each. (GST registration number R128870672.) Photocopying: No part of this newsletter may be reproduced in any form or incorporated into any information retrieval system without the written permission of the copyright owner. For reprint permission, please contact American Health Consultants®. Address: P.O. Box 740056, Atlanta, GA 30374. Telephone: (800) 688-2421 ext. 5491, Fax: (800) 284-3291.

ED Nursing™ (ISSN 1044-9167) is published monthly by American Health Consultants®, 3525 Piedmont Road, N.E., Six Piedmont Center, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodical postage paid at Atlanta, GA. POSTMASTER: Send address changes to ED Nursing™, P.O. Box 740059, Atlanta, GA 30374-9815.

ED Nursing™ is approved for approximately 18 nursing contact hours. This offering is sponsored by American Health Consultants®, which is accredited as a provider of continuing education in nursing by the American Nurses' Credentialing Center's Commission on Accreditation. Provider approved by the California Board of Registered Nursing, Provider Number CEP 10864, for approximately 18 contact hours.

Opinions expressed are not necessarily those of this publication. Mention of products or services does not constitute endorsement. Clinical, legal, tax, and other comments are offered for general guidance only; professional counsel should be sought for specific situations.

Editor: Staci Bonner.
Group Publisher: Brenda Mooney.
Managing Editor: Joy Daughtery Dickinson,
(joy.dickinson@medec.com).
Production Editor: Nancy McCreary.

Copyright © 1999 by American Health Consultants®. ED Nursing™ is a registered trademark of American Health Consultants®. The trademark ED Nursing™ is used herein under license. All rights reserved.

Hours of operation:
8:30 a.m. - 6 p.m. M-Th
8:30 a.m. - 4:30 p.m. F

Editorial Questions

For questions or comments, call Joy Daughtery Dickinson at (912) 377-8044.



TIP OF THE MONTH

Using 'order sets' will save you time

Using order sets for common chief complaints saves time and provides consistency in patient care, says **Carol Buscher**, RN, CEN, SANE, clinical coordinator for the ED at University Hospital in Cincinnati. "You can press a single button to order all the labs. You don't have to send each lab separately, which would require going through multiple screens."

The ED uses order sets for abdominal pain, trauma, headaches, possible strokes or seizures, neurological symptoms, toxicology, and chest pain. When the chief complaint is entered, the order set appears on the screen and serves as a reminder to order all the diagnostic tests needed. "For example, if a female patient has had abdominal pain for two days, this clues you in to the tests to order, such as a CBC [complete blood count] and beta."

All medications such as Dilantin (phenytoin), manufactured by Parke-Davis in Morris Plains, NJ, and Solfoton (phenobarbital), manufactured by ECR Pharmaceuticals in Richmond, VA, are listed with correct levels for specific neurological symptoms. Order sets streamline patient care and decrease length of stay, explains Buscher. "Patient care is not delayed by waiting for diagnostic tests to be ordered."

[Editor's Note: University Hospital's ED uses Last Word Order Communication system, which contains order sets. For more information, contact IDX Systems Corp., P.O. Box 1070, Burlington, VT 05402-1070. Telephone: (802) 862-1022. Fax: (802) 864-6848. E-mail: info@idx.com. Web site: www.idx.com.] ■

Readers are invited

Readers are invited to submit questions or comments on material seen in or relevant to *ED Nursing*. Send your questions to: Reader Questions, *ED Nursing*, c/o American Health Consultants, P.O. Box 740056, Atlanta, GA 30374. Or, you can reach the managing editor via e-mail: joy.dickinson@medec.com. You can also visit our home page at www.ahcpub.com. We look forward to hearing from you. ■

EDITORIAL ADVISORY BOARD

Consulting Editor: Renee Holleran, RN, PhD
Chief Flight Nurse, Clinical Nurse Specialist
Cincinnati Medical Center, Cincinnati

Kay Ball,
RN, MSA, CNOR, FAAN
Perioperative Consultant/Educator
K&D Medical
Lewis Center, OH

Darlene Bradley,
RN, MSN, MAOM, CCRN, CEN
Clinical Director
Emergency/Express Care
Services
Loma Linda University Medical
Center & Children's Hospital
Loma Linda, CA

Colleen Bock-Laudenslager,
RN, MSN
Consultant
Bock-Laudenslager & Associates
Redlands, CA

Sue Dill Calloway, AD, BA,
BSN, RN, MSN, JD
Director of Risk Management
Ohio Hospital Association
Columbus, OH

Liz Jazwiec, RN
President
Liz Jazwiec Consulting
Crestwood, IL

Linda Kosnik, RN, MSN, CEN
Unit Manager
Overlook Hospital
Summit, NJ

Gail P. Loadman, RN, CEN
Director, Emergency Services
Riverside Methodist
Hospitals
Riverside Campus
Columbus, OH

Larry B. Mellick,
MD, MS, FAAP, FACEP
Chair & Professor
Department of Emergency
Medicine
Director of Pediatric
Emergency Medicine
Medical College of Georgia
Augusta, GA

Barbara M. Pierce, RN, MN
Divisional Director of Emergency
Services
Children's Hospital
Birmingham, AL

Judy Selfridge-Thomas, RN,
MSN, CEN, FNP
Family Nurse Practitioner
St. Mary Medical Center
Urgent Care
Long Beach, CA
General Partner
Selfridge, Sparger,
Shea & Associates
Ventura, CA

CE objectives

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

1. Identify clinical, regulatory, or social issues relating to ED nursing. (See in this issue: *Are you putting children through unnecessary trauma in your ED? Controversy: RSV patients and bronchodilators; Delegating tasks: Know the legal risks; and Is it pertussis or RSV? Here's how to tell.*)
2. Describe how those issues affect nursing service delivery.
3. Cite practical solutions to problems and integrate information into the ED nurse's daily practices, according to advice from nationally recognized experts. (See *How to prevent transmission of RSV.*) ■

BRONCHIOLITIS

HOME INSTRUCTION SHEET

Definition: Bronchiolitis is an infection of the lower respiratory tract (smallest airways of lung, called "bronchioles") usually occurring in children less than two years of age.

Symptoms: The following symptoms often accompany bronchiolitis:

- wheezing — a high-pitched whistling noise produced during expiration (breathing out);
- rapid breathing with a rate of >40 breaths per minute;
- tight breathing or difficulty moving air out. This is often accompanied by retractions (pulling in and out of muscles at the rib cage or stomach);
- cough with thick mucous;
- fever and runny nose preceding lung symptoms;
- difficulty drinking or loss of appetite;
- increased fussiness.

Cause: The virus that causes bronchiolitis in 85% to 90% of patients is respiratory syncytial virus (RSV). It occurs in epidemics with a peak incidence from December to April. RSV causes inflammation of the bronchioles (small airways), which in turn leads to wheezing, difficulty breathing, and an oxygen requirement. Whereas children less than two years old develop bronchiolitis, older children may simply develop cold symptoms. Wheezing and breathing difficulties may be worse for two to three days, but then gradually improve. Wheezing can persist for seven days and cough for about 14 days. Twenty percent of children may develop ear infections. One to two percent of children with RSV are hospitalized because they need oxygen or intravenous fluids.

Home Treatment

Albuterol: Approximately one-third of children with bronchiolitis respond to albuterol, a medicine also used to treat asthma. Your doctor will order this if it is beneficial to your child. The dose is _____ by nebulizer every _____ hours.

Fever medicines: Acetaminophen every four to six hours or ibuprofen every six to eight hours may help suppress fevers and keep your child more comfortable.

Humidified air: Warm or cool moist air humidifiers may help loosen the thick mucous and break up secretions that may be gagging your child. New ultrasonic humidifiers are quiet and may also kill molds and bacteria that may contaminate the water.

Nasal suction: Suctioning of the nose will make your child more comfortable and allow him/her to drink easier. Suction with a soft rubber bulb syringe alone cannot remove dry secretions. Warm tap water or nasal saline drops will help loosen the mucous. Place three drops in each nostril. After one minute, use a suction bulb to suck it out. You can repeat the procedure several times until your child breathes easier.

Fluids: Encourage fluid intake. You may need to offer smaller volumes at more frequent intervals, as eating can be exhausting. If your child vomits after a coughing spasm, feed them again.

Smoking: Tobacco smoking aggravates coughing. Do not smoke around your child, as wheezing is exacerbated in children with RSV who are exposed to passive smoke. Do not allow anyone to smoke inside your home or car.

Oxygen: Oxygen is a medication ordered by your doctor. Do not take your child off oxygen unless instructed to do so. Do not travel to the mountains or above 6,000 feet without your doctor's permission.

Your doctor has ordered a liter flow of _____ per minute to be given by nasal cannula.

Precautions: Oxygen itself is nonflammable but will increase the rate of burning of a material such as clothing. For example, a spark that lands on clothing will normally only smolder and cause a small burn hole, but with oxygen in use it will cause the clothing to ignite. For this

reason, avoid toys with friction motors and ones that emit sparks. If you have a wood stove or fireplace in your home, be sure the firebox is enclosed or a spark screen is in use.

The oxygen source and your child should be kept 4-6 feet away from any heat source.

Do not smoke in the house and absolutely no smoking in the car when your child is present. Sparks from cigarettes are impossible to control, and your child should never be exposed to second-hand smoke.

Do not use any oil, grease, or petroleum-based products on any of your equipment or

near your child. These materials are highly flammable and, with supplemental oxygen present, will burn readily. For this reason, avoid any petroleum-based lotions or creams (i.e., Vaseline) on the face or upper chest. Check the listing of contents on products before purchasing. If moisturizing is necessary, we recommend nonpetrolatum products or aloe vera products as substitutes. In addition, we recommend that the child not be in the kitchen if you are frying foods, as the combination of oxygen, heat, and splattering of oil and grease can be a potential problem. If the child's presence is unavoidable, maintain the same 4-to-6-foot distance as with a fireplace.

Your appointment is scheduled for:

(24-hour visit) at _____ with Dr. _____

(48-hour visit) at _____ with Dr. _____

When to seek medical care

Immediately if:

1. Breathing becomes more labored.
2. The retractions (tugging between ribs or abdomen) become worse.
3. Your child stops breathing or passes out.
4. Your child's lips turn blue.
5. Your child becomes lethargic or acts sicker.
6. Your child refuses all liquids.

Within 24 hours if:

1. Your child is not drinking enough liquids.
2. Suggestion of an earache.
3. Fever >5 days.
4. Your child is getting worse.

During regular hours if:

1. Cough >3 weeks

Source: The Children's Hospital, Denver.

ED Nursing

1999 Index

When looking for information on a specific topic, back issues of ED Nursing newsletter, published by American Health Consultants, might be helpful. To obtain back issues, contact our customer service department at P.O. Box 740056, Atlanta, GA 30374. Telephone: (800) 688-2421 or (404) 262-7436. Fax: (800) 284-3291 or (404) 262-7837. E-mail: customerservice@ahcpub.com. Managing Editor: Joy Daughtery Dickinson.

Abuse

Tips to help you detect elder abuse, AUG:122

Accreditation

Conscious sedation: Here's how to comply with JCAHO, FEB:58

Airway management

Cutting-edge concepts for airway management, JUN:110

Alternative therapies

Bring alternative medicine to your ED, MAY:95

Herbal remedies and dangerous side effects: Fact or fiction? MAY:89

How to apply these alternative approaches, MAY:93

Navapache Regional Medical Center Therapeutic Touch Policy, MAY: 94

Asthma

Are you up-to-date on asthma treatments? MAR:66

Asthma Explorers Calendar; MAR:Supplement

Asthma IQ test, MAR; supplement

Asthma Student Action Information, MAR:70

Eight asthma myths you need to recognize, MAR:66

Emergency department targets pediatric asthma, MAR:69

Environmental Preventions for Asthma, MAR:72

Overhauled asthma guidelines:

The way you care for patients will be revamped, MAR:61

Pediatric asthma tracking forms, MAR:Supplement

Seven questions to ask your patients about asthma, MAR:67

Which asthma patients should be admitted? MAR:65

Congestive heart failure

CHF clinics can impact care in your ED, OCT:149

ED nurses should know which therapies to use, OCT:148

Educate CHF patients about home management, OCT:146

New drugs, research will change the way you manage CHF patients, OCT:143

Nurses: Try these tips for CHF management, OCT:147

Conscious sedation

Conscious sedation flowsheet; JUL:Supplement

Conscious sedation: Here's how to comply with JCAHO, FEB:58

Sedation flowsheet facilitates compliance, JUL:119

Deep vein thrombosis

Criteria for DVT outpatient management, JUL:118

Do you know how to assess patients for DVT? JUL:117

Home DVT treatment, JUL:118

Nurses: New anticoagulants used in ED will revamp treatment of DVT places, JUL:113

Documentation

Create a trauma flow sheet, MAY:96

Do's and don'ts of evidence collection, JUN:106

Sedation flowsheet facilitates compliance, JUL:119

Forms

Acute myocardial infarction and ischemic heart disease protocols, JUL:Supplement

Bronchiolitis Home Instruction Sheet, DEC:Supplement

Conscious sedation flowsheet, JUL:Supplement

Emergency trauma flow sheet, MAY:Supplement

Guidelines for the management of bronchiolitis in the

emergency department at The Children's Hospital, DEC:15

Navapache Regional Medical Center Therapeutic touch policy, MAY:94

Nurse Screen and Provider Order Form, NOV: Supplement

Nurse Screen and Provider Order Form Guidelines, NOV: Supplement

Pediatric asthma tracking forms, MAR:Supplement

Screening tests for alcoholism and drug abuse, APR:Supplement

Geriatrics

Are thrombolytics, beta blockers risky? AUG:123
Don't underestimate the danger of falls, AUG:125
Elderly patient numbers are up — You'll need your detective cap, AUG:119
How to meet the needs of elderly trauma victims, AUG:124
Mental status exam should be thorough, AUG:121
The difference between delirium and dementia, AUG:122
Tips to help you detect elder abuse, AUG:122

Headaches

Ask these questions at triage, JAN:35
Differential diagnosis of headache, JAN:40
Do you know how to tell which headaches are life-threatening? JAN:33
Headache myths revealed: Unravel some common misconceptions, JAN:38
Know the differences of primary and secondary headaches, JAN:36
Types of headache in the ED, JAN:40

Heat-related illnesses

Quickly cool off heat stroke patients, AUG:130

Infection

Antibiotic-resistant strains, FEB:51
Are you putting children through unnecessary trauma in your ED? DEC:13
Common agents seen in the ED, FEB:52
Controversy: Bronchodilators for RSV patients? DEC:18
Do you know how to manage infectious diseases in your ED? FEB:49
Here are hot tips for management of RSV, DEC:19

How to prevent transmission of RSV, DEC:20
Infectious disease update: Here's what you'll be seeing this winter, NOV:6
Is it pertussis or RSV? Here's how to tell, DEC:20
Know RSV medications: Here is what's new, DEC:17
Limit antibiotic use, NOV:9
Protect yourself, FEB:53
Strep pneumonia is becoming more resistant to antibiotics, NOV:8
Streptococcal disease: Watch for both Groups A and B, NOV:8
Update on drug resistant TB, NOV:9

Joint Commission

Sedation flowsheet facilitates compliance, JUL:119

Labor

Are you ready to deliver a baby in your ED? JAN:43
Six questions to ask a woman in labor, JAN:44
TABS procedure for newborn resuscitation, JAN:45

Medications

Address Viagra risks during triage, SEP:136
Are thrombolytics, beta blockers risky? AUG:123
Be prepared for prescription drug reactions, OCT:151
Be sure you know the side effects of Viagra, SEP:135
Do you know side effects of the newest drugs, OCT:153
Nitrate therapy, Viagra don't mix, SEP:135
Viagra side effects range from headaches to heart attack, SEP:131
When SSRIs are discontinued, NOV:10

New products

Be the first to know about drug testing device, MAR:72

How to use OnTrak Test Cup ER, MAR:73
MedicAlert jewelry can speed assessment, JUN:108

Pain management

Distract children during painful procedures, JUL:124

Patient handouts

Asthma Explorers calendar; MAR:Supplement
Asthma IQ test, MAR:Supplement
Asthma Student Action Information, MAR:70
Environmental Preventions for Asthma, MAR:72
Pediatric asthma tracking forms, MAR:Supplement

Pediatrics

Are you putting children through unnecessary trauma in your ED? DEC:13
Asthma Student Action information, MAR:70
Calculate ET tube size, MAR:75
Controversy: Bronchodilators for RSV patients? DEC:18
Distract children during painful procedures, JUL:124
Emergency department targets pediatric asthma, MAR:69
Here are hot tips for management of RSV, DEC:19
How to prevent transmission of RSV, DEC:20
Is it pertussis or RSV? Here's how to tell, DEC:20
Know RSV medications: Here is what's new, DEC:17
Nurses: Bring color-coded equipment to your ED, SEP:139
Pediatric asthma fatalities put caregivers on red alert, MAR:75
Pediatric asthma tracking forms, MAR:Supplement
Share these tips on car seats with parents, SEP:139
Warning: Air bag can kill child in front seat, SEP:138

What to tell parents about car restraints, SEP:136

Poisoning

Prewarm activated charcoal, JAN:47

Prevention and safety

Are you prepared for winter sports injuries? FEB:54
Share these tips on car seats with parents, SEP:139
Sled riding safety, FEB:55
Warning: Air bag can kill child in front seat, SEP:138
What to tell parents about car restraints, SEP:136

Rabies

Excerpt from CDC guidelines on Human Rabies Prevention, NOV:Supplement
Follow new rabies guidelines, or you may overuse or misuse vaccines, NOV:1
Patient handout: Animal Bite at Risk for Rabies, NOV:3

Risk management

Cope with challenges presented by patients who return repeatedly to the ED, FEB:56
Delegating tasks: Know the legal risks, DEC:22
Reduce your risks with policies, procedures, OCT:151
Tips in risk management: What you need to know (Part 1), SEP:141
Tips in risk management: What you need to know (Part 2), OCT:150
When a partner is at risk from HIV-positive patient, MAR:74
You need to know these high-risk areas, DEC:22

Seizure

Are you familiar with these 8 seizure myths? APR:87
Revamp how you address seizures — 4 new treatments, APR:86

Sexual assault

Are sexual assault victims getting the proper treatment in your ED? JUN:101
Do's and don'ts of evidence collection, JUN:106
Stay informed about date rape drugs, JUN:105

Staffing

Checklist: Characteristics of an impaired nurse, APR:81
Delegating tasks can get you into trouble: Know legal risks, DEC:21
Do you work with an impaired nurse? ED nurses are at higher risk, APR:77
How to confront one of your colleagues, APR:82
New ENA survey reports on over 1,600 EDs, AUG:127
Nurses may also need sensitivity training, JUL:123
Plan for dealing with an impaired colleague, APR:85
Rapport with physicians brings peace to the ED, JUL:120
When you suspect a colleague is addicted, APR:79

Substance abuse

Administer fluids to intoxicated patients, FEB:60
Alternative programs can save your license, APR:83
Be the first to know about drug testing device, MAR:72
Checklist: Characteristics of an impaired nurse, APR:81

Cope with challenges presented by patients who return repeatedly to the ED, FEB:56
Do you work with an impaired nurse? ED nurses are at higher risk, APR:77
How to confront one of your colleagues, APR:82
Plan for dealing with an impaired colleague, APR:85
Screening tests for alcoholism and drug abuse; APR:Supplement
The latest research on abuse by nurses, APR:83
When you suspect a colleague is addicted, APR:79

Trauma

Create a trauma flow sheet, MAY:96
Emergency trauma flow sheet, MAY:Supplement
How to meet the needs of elderly trauma victims, AUG:124
Update on ACLS drugs, MAY:98

Triage

Use "order sets" to save time, DEC:24

Vaccination

Cutting-edge protocol available for vaccines, NOV:5
Excerpt from CDC guidelines on Human Rabies Prevention, NOV: Supplement
Follow new rabies guidelines, or you may overuse or misuse vaccines, NOV:1
Nurse Screen and Provider Order Form, NOV: Supplement
Nurse Screen and Provider Order Form Guidelines, NOV: Supplement
Patient handout: Animal bite at risk for rabies, NOV:3