THANKS TO OUR ADVERTISING PARTNERS

SEE BELOW FOR OPPORTUNITIES FROM TOP FACILITIES AND EDUCATIONAL PROGRAMS IN THE ADVANCE FOR NURSES, SAN DIEGO, SAN BERNARDINO AND ORANGE COUNTY AREAS.
Advance for Nurses
San Diego, San Bernardino and Orange County Areas

Keeping It Clean & Safe
Hemostatic Agents in the OR
Mending Little Hearts
Due to the compassionate care and community outreach that the Mercy Hospitals provide, we have been voted as the #1 hospital in the Bakersfield area for the 4th consecutive year! Mercy Hospitals of Bakersfield extends our warm appreciation to our Nursing Staff.

**It’s not just what you do, it’s how you live your life.**

Spend less time commuting and more time caring with Mercy Hospitals of Bakersfield. Life in Bakersfield is much more affordable and much less congested than Los Angeles. With the family-friendly lifestyle and a wide range of outdoor adventures, you can find real work/life balance at Mercy Hospitals of Bakersfield. Our benefits package includes free health insurance for you and your dependents, relocation assistance and continuing education.

**Nursing Management opportunities in:**
- Nurse Manager - Medical Surgical
- Senior Nurse Director - Patient Care Services
- Case Management Supervisor
- Nurse Manager - Labor and Delivery
- Nurse Director - Emergency Dept.
- Nurse Director - ICU

**Excellent opportunities available for experienced RNs in the following departments:**
- ICU
- Medical Surgical
- RN Case Manager
- Telemetry
- NICU
- Post Partum
- CDCR Guarded Care Unit
- Labor and Delivery
- Emergency

**Some major benefits at Mercy Hospitals of Bakersfield:**
- Competitive salaries and Paid Life Insurance
- Free health insurance (on most positions) for you and your dependents
- Relocation assistance
- Retirement and pension plans
- Tuition Reimbursement and Educational Opportunities
- Paid time off vacation and holidays
- Eligibility for annual bonuses for management positions

Qualified candidates can apply online at [www.mercybakersfield.org](http://www.mercybakersfield.org) or e-mail resumes to MHBHR@dignityhealth.org

For Nurse Management positions, contact David Zandueta at 661-632-5212, or fax at 661-632-5541

For Staff RN positions, contact Brad Garrett at 661-632-5682, or fax at 661-632-5541

EOE
Join the Community!

As a member of the ADVANCE community, you receive free access to lots of information. Don’t miss out. Visit www.advanceweb.com/Nurses to sign up for the e-newsletter.

The ADVANCE community provides:

➤ Daily web updates
➤ Weekly e-newsletters
➤ One-stop shopping for work, play and in between
➤ Access to regional and national job fairs
➤ CE opportunities online and in person
➤ Invitations to virtual open houses and conferences
➤ Blogs
➤ Facebook group
➤ Twitter updates
➤ LinkedIn
➤ Job searches
➤ Salary survey results
➤ Nurses Book Club
➤ And more!

You’ll notice we’ve included a few QR codes. These “quick response” codes work much like a bar scanner. To use them, download an app to your smartphone (like ScanLife or QuickMark). Open up the app, zoom in on the code, and you instantly have access to ADVANCE for Nurses content.

From the Editor

It’s already June, which means the start of summer is just around the corner — a time for vacation, barbecues and spending time with family and friends. With summer almost in full swing, ADVANCE continues to provide our readers with clinical articles, nursing news, CE articles and job opportunities throughout the country. We’re here to answer your questions, be your professional sounding board and provide you with information that will help enhance your career.

As with each issue, we offer diverse content. Learn more about preventing the risk of hospital-acquired infections in “Keeping It Clean,” and improve blood management and the need for transfusions during surgery in “Picking the Right Agent.” Learn more about cardiopulmonary bypass and its effects on neonates and infants in “Little Hearts, Big Outcomes.” In addition, you’ll find more information on critical care topics and management issues affecting the workplace.

Are you looking for an easy and convenient way to earn CE credits? Visit www.advanceweb.com/NursesCELive to attend online courses right in your home or office. Upcoming session topics include the 3Ds: dementia, delirium and depression and working with difficult people.

As always, we encourage you to stay connected with your colleagues. Visit our social network communities to find out what’s going on with your colleagues. There are always new topics to discuss on Facebook, LinkedIn or Twitter. Our rich Nurse POV blogs are only a click away. Read more about trending topics in nursing informatics, infection control and healthcare.

We want to hear from you as well. Help us expand our content by sharing your nursing stories, ideas and suggestions. Help make the nursing community stronger.❖

Pamela Tarapchak

FREE Virtual Conference Events

➤ ADVANCE is committed to providing our readers with up-to-date information on industry trends and technologies without the expense of traveling to a trade show.

Visit www.advanceweb.com/Events to learn about conference topics and to register.

How to Contact Us: Merion Matters, ADVANCE for Nurses, San Diego, San Bernardino and Orange County Areas, 2900 Horizon Drive, King of Prussia, PA 19406-0956 On the Web: www.advanceweb.com/nurses ★ E-mail: advance@advanceweb.com ★ Editorial: 800-355-5627 ★ Pamela Tarapchak, Editor, ptarapchak@advanceweb.com, ext. 1360 ★ Barbara Mercer, Managing Editor, bmercer@advanceweb.com, ext. 1282 ★ Robin Hocevar, Senior Regional Editor, rhoecevar@advanceweb.com ★ Linda Jones, Editorial Director, ljones@advanceweb.com, ext. 1229 ★ Article Reprints: 800-355-5627, ext. 1446 ★ To place an ad, call our Sales Department: 800-355-JOBS (5627)

Find some balance ★ www.advanceweb.com/NurseLifestyleCenter

Cover photography: Jeffrey Leeves (Jeffrey Leeves courtesy Northeast Georgia Medical Center/HEMERA/THINKSTOCK/design by Doris Mohr)
Blood is thicker than water. Four times thicker to be precise. Still, controlling blood flow can pose many problems. Conserving blood in the preoperative and perioperative setting is vital to positive patient outcomes. To help reach those positive outcomes, various hemostatic agents may be used to conserve patient blood levels.

"Effective blood management keeps patients from having to receive a blood transfusion. Not only does this keep the patient from potentially compromising his or her immune system, it avoids a costly and unnecessary [procedure]," said Vangie Dennis BSN, RN, CNOR, CMLSO, administrative director, Spivey Station Surgery Center, Jonesboro, GA.

Many different items fall under the umbrella of hemostatic agents. Ranging from gauze all the way to fibrin-based surgical sealants, many different hemostatic agents are available to nurses. The key is picking the right one for the right application.

"The biggest thing people need to know about hemostatic agents is that there are different types that are used for different purposes," Dennis said.

Broadly speaking, there are three different types of hemostatic agents: absorbable hemostatic agents, surgical sealants and surgical adhesives. A fourth tool, hemostatic thermal tools such as ultrasonic scalpels and lasers, may be added to any hemostatic repertoire.

**Testing & Evolution**

The various hemostatic agents currently available have been rigorously tested in both laboratory and clinical settings. Yet, many of these hemostatic agents have received their most rigorous testing on the battlefield.

"Our research primarily deals with battlefield trauma. Getting the patient stabilized and into the perioperative setting is our end goal in studying these hemostatic agents," said James Burgert, MSNA, CRNA, staff nurse anesthetist at Brooke Army Medical Center (BAMC) in San Antonio.

Burgert and other researchers at BAMC have been studying the safety and effectiveness of hemostatic agents. According to Burgert, a very clear evolution has occurred within the types of hemostatic agents available.

"Early hemostatic agents used granular, porous, mineral-based substances to absorb plasma and concentrate platelets and clotting factors at the hemorrhage site," he said. "However, this first generation of hemostatic agents generated an exothermic reaction in excess of 140° F. This reaction caused increased potential tissue damage to the patient and could potentially cause injury to the provider if the substance came in contact with their mucous membranes."

Though plagued by unintended side effects, these early hemostatic agents showed promise. The next step was to find an absorbable hemostatic agent that did not induce an exothermic reaction.

"Early hemostatic agents used granular, porous, mineral-based substances to absorb plasma and concentrate platelets and clotting factors at the hemorrhage site," he said. "However, this first generation of hemostatic agents generated an exothermic reaction in excess of 140° F. This reaction caused increased potential tissue damage to the patient and could potentially cause injury to the provider if the substance came in contact with their mucous membranes."

Although the heat issue was eventually overcome, early hemostatic agents posed other significant problems when it came to application. "All of the early hemostatic agents used in a combat setting were a particulate poured into the wound," Burgert said. "The problem was that high velocity hemorrhage would eject the particulate before it could work. Even worse was that there was the possibility some of the particulate could enter into the patient’s circulation, causing an embolic event," he explained.
A new generation of absorbable agents aims to correct these problems. “Recently, a third generation of hemostatic agents has been developed that consists of gauze-like dressings impregnated with the hemostatic agent. With these you have the benefits of the hemostatic agent combined with the benefits of traditional wound management. The mass of the dressing fills the wound cavity, increasing direct pressure on the wound, while the hemostatic agent concentrates platelets and clotting factors,” Burgert said.

Many Agents Available
The rigors of combat call for unique hemostatic agents. Even though the operating room is dramatically different than the battlefield, a large degree of hemostatic agent crossover occurs.

Absorbable hemostatic agents are currently being used in the perioperative setting. Some may be composed of cellulose, collagen, plant-based polysaccharide or gelatin-based materials, while some use bovine thrombin to promote clotting.

Along with the absorbable hemostatic agents, sealants and adhesives are available. Surgical adhesives may be used as adjunctive therapy with sutures or staples. Also, surgical sealants may be used as adjunctive therapy when bleeding is uncontrolled by standard suture, ligature or electrosurgical methods.

“Surface agents can be used to create a seal at the bleeding site. These are essentially adhesives that hold two tissue surfaces together. However, it is important to note that there are some types of arterial bleeding that these will simply not work on,” Dennis said.

Another option for intraoperative blood management comes in the form of electrosurgical hemostatic agents, such as ultrasonic scalpsels, lasers and vessel sealing technology, but can result in adverse side effects. “Many of these can lead to tissue death within 2 seconds of use,” Dennis warned. “Nurses must consider the complications related to the device.”

Of all the hemostatic agents available, the most effective method has to occur before the patient enters the operating room. “Before relying on hemostatic agents, nurses need to rely on a preoperative assessment,” Dennis said. “This is a clinical fundamental that provides early intervention for high-risk patients. Preoperative anemia can be addressed ahead of time by increasing red blood cell mass, for instance, while an assessment of current medications can go a long way in saving blood in the intraoperative setting.”

In some form or another, nurses are involved in hemostatic agents. That interaction may occur in the OR with the nurse applying sealant to a leakage of blood. “Preoperative and postoperative assessments are crucial to blood management,” Dennis said. “Attending to those will prevent excessive bleeding better than any hemostatic agent.”

A. Trevor Sutton is a frequent contributor to ADVANCE.
Keeping It Clean

Keeping patients safe means more than just handwashing for nurses and other healthcare providers

By Candy Goulette

Everyone working in healthcare, from the hands-on practitioner to an environmental services worker, knows the drill: wash your hands before entering and when leaving a patient room to decrease the spread of infectious pathogens. But what happens while practitioners are in the room also raises the risk of hospital-acquired infections (HAsIs) spreading?

Sue Barnes, BSN, RN, CIC, director of Northern California Regional Infection Control for Kaiser Permanente in Oakland, and a past board member of the Association for Professionals in Infection Control and Epidemiology Inc. (APIC), said that’s the question of the hour for infection preventionists. The simple answer is yes.

Protection & Prevention

While stressing proper hand hygiene is the most important weapon in the fight against HAsIs, Barnes said contamination in the near-patient environment — the hard surfaces — also is a very real issue.

“When we’re talking about infection transmission risk, the greater risk is with hands and hard surface contamination, so it’s important to focus both on the hands and the contaminated environment,” she told ADVANCE.

“If you think of how hard surfaces are touched, it’s obvious that it’s much easier to contaminate solid, flat, hard surfaces, and for those bugs to remain on those surfaces,” she explained. “That means a more vigilant cleaning in the patient environment by housekeeping is crucial. Along with hand hygiene, that’s where the bang for the buck is.”

Due Diligence

Barnes said the focus on hand hygiene has been strong for the past 10 years for both infection preventionists and practitioners.

“There have been many creative ways put forth to optimize hand hygiene and we continue to explore new methods to support optimal hand hygiene with advanced technology,” she said. “Similarly, there have been large initiatives with a lot of focus placed in the past years on optimizing cleaning and disinfection of the patient environment.”

To that end, APIC is partnering with other organizations as part of a group of initiatives, called Building Bridges, designed to establish relationships between APIC’s infection preventionists and members of other stakeholders. One initiative, Clean Spaces, Healthy Patients, is a collaboration with the Association for the Healthcare Environment of the American Hospital Association.

Under a Microscope

Barnes shared information about a recent study at the University of Maryland Medical Center (UMMC), Baltimore, in which researchers tested 10 environmental surfaces in each of 50 rooms used by patients with a positive culture for Acinetobacter baumannii. In the UMMC study, nearly half of the rooms and about 10 percent of the surfaces in the near-patient environment were contaminated, including supply cart handles, room floors, infusion pumps, ventilator touch pads and bed rails. It also suggested patients with either a recent or remote history of positive cultures were equally likely to contaminate their environment.

Barnes said she was not surprised. “A. baumannii can stay moist for a long time, making it accessible in the patient environment,” Barnes explained. “This study correlates with others on different nosocomial pathogens, including MRSA and Clostridium difficile, and just underscores how important it is to optimize cleaning throughout the patient environment, for both nursing staff and environmental services, to eliminate or decrease the risk for infection for inpatients. “No matter where they are, if [patients are] in a vulnerable position, these things need to be maintained to ensure they aren’t exposed to any opportunistic bug,” she continued. “The bad bugs are not exclusively in the hospital setting — many patients bring them in with them from the community. Healthcare workers need to be especially vigilant in these situations, using correct hand hygiene and ensuring the environment is adequately and appropriately cleaned.”

And that’s the heart of the issue, said Bill O’Neill, vice president of infection control applications for PurThread Technologies Inc. For O’Neill, ensuring the soft surfaces are contamination-free is equally important.

“Microbial contamination is endemic in the hospital setting, in spite of the Herculean efforts made by both clinicians and environmental services staff over the past several years,” O’Neill shared. “Consider the challenge: whether colonized or infected, many patients bring pathogens with them when they enter the hospital. The environment can be further compromised by visitors, delivery people, service technicians and even clinicians who may carry unwelcome microbial guests with them as they move through the hospital.”

Candy Goulette is a frequent contributor to ADVANCE.
I come from a long line of nurses. When I was a kid, the dinner table was alive with talk of helping patients and our coffee table was always piled with medical books. No surprise why I’m fascinated with science and health care technology, and wanted to continue the family tradition.

When I heard about Palomar Health, a Magnet® recognized health care system in North County San Diego, I knew it was the place for me. Commitment. Work-life balance. Loving what you do. Rewarding individual effort, I feel so at home here. But more importantly, I know that when it comes to making a difference in people’s lives, my journey has just begun.

Available Positions

We are seeking BSN and MEPN Registered Nurses for the following positions.

- Nursing Supervisors & Nurse Managers:
  - Acute Care
  - Critical Care
  - Emergency

- Clinical Nurse Specialists:
  - Birth Center - Psychiatric
  - Emergency - Quality

- Float Pool RNs:
  - Critical Care
  - Emergency / Urgent Care

- Infection Preventionist
- Sr. Department System Analyst

Comprehensive Benefits Package
- Two Generous Retirement Plans
- Shared Governance
- Paid Time Off
- Ask About our Hospital of the Future
  - Scheduled to Open Summer 2012

To ensure a healthy environment for both our patients and staff, all Palomar Health campuses are now smoke-free.

Glendale Adventist Medical Center

Adventist Health

Now open, our new patient care tower including a Neuro Critical Care Unit, bringing the medical center’s bed count from 457 to 515!

Patients who come through our doors tell us our nurses are something special. We know that too. At Glendale Adventist Medical Center, a recognized healthcare leader located in Southern California, we provide life-changing experiences, excellent benefits that begin on the first day of hire and many other advantages that encourage our nurses to deliver perfect care.

To find out more on how you can join us to deliver perfect care, visit GlendaleAdventist.com or call (800) 576-3113. Contact Sally Munoz at MunozS3@ah.org.

Cardiac Telemetry RNs

Full time, Day shift and Night shift openings

World-class care and deep compassion come together at Mission Hospital in Mission Viejo, CA. Our non-profit, Level II Trauma Center is the designated Regional Trauma Center for south Orange County and a two-time recipient of the Ernest A. Codman Award for clinical excellence.

Right now, we’re seeking experienced Cardiac Telemetry RNs to work in our 34-bed Cardiac Telemetry unit. The ideal candidate will have a minimum 2-3 years of similar cardiac telemetry experience; ACLS and BLS certification; and strong arrhythmia interpretation skills. BSN, CCRN or other specialty certifications are preferred.

In addition to our competitive salaries and benefits, you’ll enjoy our engaged, collegial work environment. To learn more about Mission Hospital or to apply, visit www.mission4health.com. EOE.

Mission Hospital

ST JOSEPH HEALTH SYSTEM

MISSION VIEJO • LAGUNA BEACH

mission4health.com
Cardiac

Little Hearts, Big Outcomes
How cardiopulmonary bypass affects neonates and infants
By Beth Puliti

With a prevalence of 4-10 cases per 1,000 live births, congenital heart defects are not only the No. 1 birth defect in the U.S., they’re also the No. 1 killer of infants with birth defects.¹ ² The American Heart Association reports the incidence of congenital cardiovascular defects has increased in both adults and children as a result of increased survival.³

In 1953, the first successful open-heart surgery was performed using a heart-lung machine to mend an atrial septal defect. Since then, caring for infants with congenital cardiac defects has greatly progressed. These days, complex repairs are completed by means of cardiopulmonary bypass techniques, and total repair of congenital heart defects can be carried out with good results in infants who weigh less than 2 kg.⁴

In rare cases, despite these advancements — and even successful surgical repairs — exposure to cardiopulmonary bypass may lead to major morbidity and occasionally mortality, particularly in neonates and infants.

ADVANCE recently spoke with Sandra Staveski MS, RN, CPNP-AC/PC, CNS, CCRN, CVICU, nurse practitioner, Lucile Packard Children’s Hospital, Palo Alto, CA, about the effects of cardiopulmonary bypass in this population.

What Is Cardiopulmonary Bypass?

Often referred to as a heart-lung machine, a cardiopulmonary bypass machine takes over the function of both the heart and lungs to maintain the circulation of blood and the oxygen when the heart is stopped during a surgical procedure.

Staveski elaborated on the function of cardiopulmonary bypass, saying it refers to a device “that bypasses the heart and lungs ensuring oxygen delivery and tissue perfusion via a mechanical pump and oxygenator during open-heart surgery. Cardiopulmonary bypass blood is funneled through venous cannulas via gravity and moved through an extracorporeal circuit with the aid of a pump. The blood is oxygenated and cardiac output is maintained during open-heart surgery by the bypass circuit. Blood is then funneled back into the heart distal to the operative site through arterial cannulas.”

Just how do cardiopulmonary bypass techniques make complex repairs possible? Staveski noted they take over the work of the lungs and heart so surgeons can perform complex heart operations.

Cardiopulmonary Bypass Complications

As with any procedure, complications from cardiopulmonary bypass can occur, mainly hemolysis, capillary leak from inflammatory response, clotting/bleeding issues (e.g., anticoagulation and clotting cascade activation), fluid sequestration from hypothermia and embolism (e.g., gas or particulate). Patients who are smaller and younger (e.g., pre-term) have more fluid shifts.

Children undergoing open-heart surgery with cardiopulmonary bypass are subjected to hypothermia, hemodilution, non-pulsatile/less pulsatile flow, cardioplegia and, at times, circulatory arrest. “Circulatory arrest is performed on small neonates and entails cooling the patient to below 18° C and then taking out the arterial and venous cannula,” explained Staveski. “Cooling is then the only protective strategy. It is believed that up to 45 minutes of circulatory arrest is safe for children.”

Although uncommon, general cardiopulmonary bypass surgical complications are linked to high mortality. “Gas or particulate matter could lodge into the coronaries or cerebral circulation and cause ischemia, albeit rare,” said Staveski.

Identifying patients early on who are at an increased risk for these complications can lead to earlier detection and treatment, and possibly reduced mortality.

Pediatric vs. Adult Patients

The harmful effects of cardiopulmonary bypass in neonates are often more pronounced than those in larger pediatric or adult patients because neonates’ and infants’ circulating blood volumes are much smaller than adults.

“An infant’s circulating volume is 80 mL/kg (so a 4 kg baby’s entire circulating volume is 320 mL),” Staveski explained. “The
infant is exposed to a primed circuit for cardiopulmonary bypass, and there is a significant difference between an older child and adult circulating volume-to-prime ratio. An average adult female is 65 mL/kg or approximately 4875 mL versus 320 mL."

She noted there are current strategies used to minimize complications related to cardiopulmonary bypass in neonates and infants.

"Some centers avoid circulatory arrest and utilize antegrade cerebral perfusion, and will avoid cardiopulmonary bypass in some patients," she said, "utilizing research to find the most appropriate hemodilution range, use of pulsatile flow, and neurological monitoring [e.g., near-infrared spectroscopy] in the operating room."

Antegrade cerebral perfusion, near-infrared spectroscopy and microsurgery make it possible for repairs of complex congenital cardiac defects during the neonatal period. "Different cannulation techniques, when appropriate — warm beating heart bypass, avoidance of bypass in specific cases, use of neurological monitoring through the case — can be employed to temper some of the potentially deleterious effects of cardiopulmonary bypass," Staveski said.

There is a growing trend to emphasize early complete repairs to establish optimal blood flow to the brain, heart, lungs and end organs to optimize the development of the child.

References for this article can be accessed at www.advanceweb.com/Nurses. Click on Resources, then References.

Beth Puliti is a frequent contributor to ADVANCE.
It’s quite possible the first goal established for any home care patient is also the toughest promise for any nurse to keep long-term: maintaining that person’s freedom to live at home by keeping them out of the hospital or a skilled-care facility.

This is no more evident than among the population of older adults who live with comorbid physiological and mental health issues. As the U.S. population continues to age, so has the likelihood of developing a mental illness.

According to Mental Health America (formerly known as the National Mental Health Association), more than 2 million of the 34 million Americans ages 65 and older live with some form of depression. Many of these people actually develop symptoms of their mental illness as a result of triggers generated by chronic illnesses that occur commonly in later life and are diagnosed in many home care patients, such as Alzheimer’s disease, Parkinson’s disease, heart disease, cancer, HIV/AIDS, diabetes and even arthritis.

When a mental health condition presents itself in conjunction with an otherwise manageable chronic condition, it can often dominate care planning and impede the individual’s ability to provide self-care that their physiological condition almost becomes secondary to the mental health issue.

“It’s almost like the ‘chicken or the egg,’” said JoAnn Abbott, MSN, RN, a psychiatric nurse with Bayada Home Health Care, an agency based in Mt. Laurel, NJ. “When it comes to establishing a patient’s plan of care, it’s obviously going to be very important to keep their diabetes under control if they’re a diabetic, but if you’re also living with clinical depression you may lack the motivation to take care of yourself.”

That’s when independence hangs in the balance.

No Place Like It
When a patient is referred to Abbott, she goes into the person’s home to provide a mental health assessment to determine level of cognition and gauge how well they understand the specifics of their mental and physical conditions. Knowing medication compliance can be a deciding factor as to whether or not patients remain as healthy as possible, Abbott makes it a point to review one’s prescription schedule intimately.

“We’ll sit down, review each medication bottle by bottle and list the times they need to be taken in a weekly planner,” she explained.

Abbott also meets with family members and neighbors when appropriate to educate them on their loved one’s conditions and medications, ensuring someone is designated to help them. If the patient lives alone, Abbott will schedule per-diem visits as needed and can often rely on the assistance of a nurse’s aide who can alert the nurse to patient safety concerns if adequate time can’t be spent with the patient by another caregiver.

If Abbott believes there’s a barrier to the patient’s self care due to mental illness, she’ll speak with the primary physician to discuss other healthcare options.

“[Generally speaking,] the criteria to be admitted into a psych facility is posing as a physical harm to themselves or others or an inability to function,” she said. “But there are always safety risks for those who live at home with mental health conditions, so I like to make sure they can identify each pill, its purpose, it’s color, some of the side effects they may need to look out for and when they might need to call a doctor.”

This latter information can be touch-and-go, however, because there’s a fine line between being safe and not overreacting to something and triggering a mental health episode, Abbott said. For instance, a lot of people who are diagnosed with COPD tend to develop anxiety and/or experience panic attacks due to the fear their breathing could suddenly become compromised.

The Whole Picture
It’s the potential for this type of scenario that can raise a red flag and illustrate how patients can be harmful to themselves in a nonviolent manner, said Elizabeth Gregory, PhD, RN, CNS, corporate behavioral health program manager at Amedisys Inc., a home health agency based in Baton Rouge, LA.

“Anxiety really impedes one’s learning,” she said. “Patients with...
COPD can become scared they won’t be able to catch their breath when they have difficulty breathing. We teach them relaxation techniques and how to recognize their anxiety.”

Abbott said she also likes to teach coping mechanisms such as stretching exercises that can help keep patients calm.

“You always need to have a safety plan in place,” Abbott said. “I feel keeping the patient’s anxiety level under control helps cut back on hospitalizations and the effects of the conditions themselves.”

Also requiring consideration is the patient’s eating and sleeping habits, both of which can be greatly affected by mental health illness while posing as a threat to just about any physiological condition someone can live with, Gregory said.

“Patients living with a mental health disorder will also likely be experiencing sleep disorders and eating disorders that will affect their diet, energy levels and willingness to provide appropriate self-care for chronic conditions,” she continued.

To accurately assess the potential presence of sleeping and/or eating disorders, staff at Amedisys follows the OASIS (Outcome and Assessment Information Set) established by Medicare.

“You want to look at the person’s energy level, how much eye contact they make when they’re taking to you, how well they are moving around,” Gregory explained. “In terms of diet, you need to be asking what it is they are eating, not just how often they eat. If they’re losing or gaining weight, it may not just be a dietary issue, it could be related to their sleeping habits, which could also lead to irritability and anger issues, so you have to be assessing that too.”

At Amedisys, all assessment observations made by the nursing case manager are stored electronically for all staff members to access when visiting a patient’s home so continuum of care is established, Gregory told ADVANCE.

“Without being encouraged and pushed, these patients may not have the motivation they need to stay healthy,” she said.

To further promote safety in the home and good overall health, Abbott likes to teach her patients about proactive healthy lifestyle tips related to diet, sleep, medications and exercising.

“You have to try to keep things easy to understand, but it’s harder to do than it is to say because a lot of people have bad eating, sleeping and exercising habits,” she said.

**Added Responsibility**

While being in the home setting affords nurses the opportunity to share a more personalized one-on-one relationship with their patients, it also places an added responsibility to ensure everyone is assessed appropriately at the start of care and throughout the care planning.

“The nurse in the home setting needs to incorporate any kind of mental or cognitive concern that could impair the patient’s ability to manage their medical illness,” Gregory said. “And it’s up to the nurse to ensure a caregiver in the family is available to assist the nurse in teaching and managing their loved one’s care because the patient will not be able to do so until the mental health issue is brought under control.”

At Amedisys, a formal, standardized psychiatric program has been established for patients living at home with mental health conditions. Protocol calls for a credentialed psychiatric nurse to be assigned to provide primary care when mental health is part of the initial assessment.

“Only 3-5 percent of nurses in the U.S. specialize in psychiatry, so it’s a small pool to pull from, but we have it as a recruitment focus here,” Gregory said. “The psychiatric nurse gets the order to evaluate and becomes the primary care manager.”

Abbott is among the nurses at Bayada who takes over cases with psychiatric patients. Formerly a staff nurse on a psychiatric inpatient unit, Abbott said she sees more mental health patients now in the home setting than she’s ever seen.

“Our population is getting older, and I’m seeing quite a bit of an increase in those patients living with dementia in particular,” she said. “Winter and holiday time is a common time for more patients to experience depression because it tends to run in cycles and some people have little family support. I see patients from the ages of 19-99, some who live alone. It can be very challenging for them.”

She said the care she gets to deliver in the home far exceeds what she could provide to inpatients.

“In the inpatient setting, you never know what people go home to,” she said. “It’s just more endearing to be in the home. It’s more challenging, too, but there’s a better sense of accomplishment when you help people.”

According to Gregory, many of the country’s older adults aren’t getting the mental health treatment they need regardless of setting due to lack of awareness and funding on the local level.

“I think it’s very much overlooked,” she said. “The [NIH] and the American Medical Association have been pushing for primary care providers to assess for depression because it is cited as the No. 1 healthcare problem among the general population in the U.S. And many physician visits are attributed to mood disorders, which include depression, anxiety disorders and substance abuse — which can be related to a person’s chronic pain brought on by an inability to manage their care.”

Residual stress related to patients’ conditions and challenges can take its toll on nurses, Abbott said. Coping with these difficulties is important not just for the provider but the patient.

“It’s important to understand psych patients are going to have a range of emotions,” she said. “They’re going to be sad, angry, argumentative and they may lash out at you. That’s why they need your help.”

Joe Darrah is a frequent contributor to ADVANCE.

---

**FREE Job Fairs**

Scan to learn about more Job Fair events or visit www.advanceweb.com/Events and find out how you can participate in virtual and in-person job fairs.

What’s coming up? Check the Conference Calendar ➤ www.advanceweb.com/Nurses
Determining proper placement of a nasogastric (NG) or orogastric (OG) feeding tube is a common process for many nurses and a vital safety practice for all patients. Despite newer devices to aid with placement, feeding tubes are generally inserted during a blind attempt at the patient’s bedside. Feeding tubes can also be placed with the aid of devices that guide the process such as through ultrasound, fluoroscopy or endoscopy. Proper placement of any feeding tube should be obtained with the tip of the tube within the stomach or advanced past the pylorus and into the duodenum of the small intestine.

When using either a large-bore tube such as a standard Salem sump NG tube (14-16 French) or a small-bore one with a stylet and narrower (8-10 French) more flexible tubing, complications can occur. One large research investigation showed that, when examining insertion of 2,000 NG tubes, 1.3 percent to 3.2 percent were not correctly positioned, potentially leading to adverse events. Further investigation showed 28 percent of the incorrectly positioned tubes led to the development of a pneumothorax or pneumonia from aspiration. Improperly positioned feeding tubes can cause serious injury and can even lead to fatal patient events. Complications such as respiratory distress, dyspnea, pneumothorax, aspiration pneumonia, sinusitis and epistaxis may occur. Rarer but more serious injuries include improper positioning into the brain or pleural space, which can lead to fatal outcomes.

**Verification Methods**

Ultimately, proper verification of a feeding tube is vital to avoid dangerous outcomes for patients. The following six methods to predict proper tube placement will be reviewed: radiographic confirmation (chest or abdominal X-ray), auscultatory method, capnography, measurement of potential hydrogen (pH) in aspirate, respiratory distress observation and observation of visual gastric aspirate.

Radiographic studies such as a chest X-ray or abdominal X-ray, confirmed by a radiologist, are the gold standard for ensuring proper placement of a gastric feeding tube.

After an NG or OG tube is inserted blindly at the patient’s bedside, confirmation with an X-ray is the most concise method to verify placement within both the stomach and small intestine. It is important to note the X-ray should visualize the entire feeding tube within the gastrointestinal (GI) tract in order to help identify the proper positioning.

Listening for a “whoosh” of air through the feeding tube over the epigastric area, located below the rib cage on the upper left quadrant of the abdomen, can confirm placement. This auscultatory method is most frequently taught and easily performed. Use a piston or luer lock (30-60 cc) syringe, insert 20-30 cc of air into the tube and listen with a stethoscope over the epigastric area.

Although recommended for preliminary confirmation, this is not a dependable method because it can be difficult to distinguish between respiratory and gastric placement.

Air sounds can emanate from the tube and be transmitted throughout the lower airway or upper abdomen to give false position verification. The auscultatory method also does not confirm exactly where the feeding tube is positioned, i.e., upper or lower stomach or small intestine.

The capnography method is performed by using a carbon dioxide (CO₂) detector to assess if any CO₂ is identified in the NG tube, indicating placement in the pulmonary system. The downfall of using a
CO\textsubscript{2} detector to verify placement is that this method is not specific or sensitive enough to detect CO\textsubscript{2} gas.\textsuperscript{1}

And, like the auscultatory method, the capnography method cannot determine the exact placement and location of the tip of the feeding tube. Observing the appearance of the gastric aspirate and monitoring the pH of gastric aspirate can inform a practitioner if the tube is within the GI tract. Potential hydrogen levels in respiratory secretions generally are greater than six, while the gastric pH is usually less than five, even for those patients receiving gastric acid inhibitors.\textsuperscript{6}

Utilizing litmus paper to test the gastric pH is another possible confirmatory method. Applying a drop of aspirate from the NG tube on the litmus paper will establish the pH level.\textsuperscript{4} But, this method is also unreliable due to the changes in pH within body secretions.

For example, secretions from the small intestine typically can have pH levels greater than six, which may lead one to believe the tube is positioned in the respiratory tract and not the GI region.

Also, secretions can be more alkaline from saliva or acidic from gastric reflux juices, which will alter the pH of the secretions and, therefore, give an inaccurate result.\textsuperscript{3} Inaccurate results can lead to improper verification of the tube’s position. The appearance of the aspirate from an NG/OG tube may look like gastric content, but it is too difficult to determine with the naked eye.

**Monitoring for Adverse Placement**
Observing for signs of respiratory distress, coughing or dyspnea may also be seen if the feeding tube is positioned in the respiratory tract. This is because the tube is irritating to the trachea and can cause the patient to cough, gag and have difficulty breathing. Monitoring pulse oximetry may be helpful to determine this adverse result.

All of these methods will assist in verifying the proper placement of a temporary gastric tube, but the best type of confirmation is an X-ray after the tube is placed and then done daily.

Prior to infusing tube feedings or medication through an NG/OG tube, you should always verify placement to avoid aspiration complications.

Check for proper placement at regular intervals as recommended by your facility, such as every 4 hours. This is important because the tube can migrate out and also become knotted, kinked or displaced upward into the respiratory tract. Always mark the placement of the NG/OG tube and document the exact position, usually noted in centimeters on the smaller feeding tubes, to help with detecting tube dislocation.

While proper placement and verification of an NG/OG feeding tube is a skill learned by nurses and other healthcare providers, it is the first step in ensuring safe delivery of care for patients.

Additionally, close monitoring, care and assessment of the temporary gastric tube will help decrease complications leading to injuries or adverse outcomes for your patient.\textsuperscript{7}

References for this article can be accessed at www.advanceweb.com/nurses. Click on Resources, then References.

Mary Ellen Dimatteo is a critical care nurse, charge RN and preceptor at the trauma center CCU at Advocate Good Samaritan Hospital, Downers Grove, IL.
Refutable evidence supports the efficacy of evidence-based management for geriatric patients and those with multiple comorbidities within the nursing home setting. Regardless, providers often divert from evidence-based practice (EBP) in lieu of practices based on tradition and experience. Paternalistic provider philosophy and practice that excludes patients and/or surrogate decision makers may violate ethical principles. In addition, NPs must consider legal consequences of practices based on tradition without supporting evidence. Management of heart failure and treatment of dementia-related behaviors in the long-term care setting are well-cited examples for which divergence from EBP is common.

Heart Failure
Angiotensin-converting enzyme (ACE) inhibitors and beta-blockers are often misused or underused in the treatment of long-term care patients with heart failure. Unless contraindicated (heart block, bradycardia, hypotension, severe respiratory disease), beta-blockers are efficacious for patients with recent or remote history of MI.

Dementia
In 2011, a federal audit of Medicare claims found more than half of the prescriptions for second-generation “atypical” antipsychotics were written off label, without supporting documentation of indication.

Contrary to recommendations and black box warnings, use of psychotropic medications remains prevalent in the nursing home setting for dementia-related behaviors (e.g., agitation, repetitive questioning, wandering).

Use of first- and second-generation antipsychotics may increase the risk of stroke and premature mortality in patients with dementia. Adverse effects such as increased sedation, extrapyramidal side effects and anticholinergic side effects are common and increase the risk of fall-related injury.

Alternatives for Practice
Awareness of personal biases and objective evaluation of treatment benefits and burdens — with collaboration — guides best practice (see Table).

Geriatric considerations for heart failure management include dosage adjustments for advanced age and moderate to severe renal impairment.

Electrolyte levels and renal function (e.g., potassium, sodium, blood urea nitrogen, creatinine) should be monitored with initiation or dosage adjustments. Titration of beta-blockers should be based on heart rate, blood pressure and clinical response, with dosage adjustments no more often than every 2 weeks.

Symptoms that warrant psychotropics for dementia-related behaviors include impaired functional ability, danger to self or other residents, and interference with provision of personal care.

In addition, music, pet therapy and aromatherapy may provide nonpharmacologic relief for agitation. Evaluate acute and chronic conditions and sensory deficits that may increase agitation.

Implications for Practice
NPs have an ethical and legal responsibility to discuss and document all treatment options, including the benefits and burdens of each option, with geriatric residents and/or surrogate decision makers. Documentation of rationale for divergence, including contraindications for treatment options, is essential.

Appropriate EBP using a collaborative decision-making process exemplifies best practice. Evidence-based disease management has the potential to improve clinical outcomes, quality of medical and nursing care, establish evidence-based standards of care, and decrease unnecessary healthcare expenditures.

References for this article can be accessed at www.advanceweb.com/Nurses. Click on Resources, then References.

Online Learning—Expand Your Knowledge
Join ADVANCE each month for an informational webinar series. See a selection of archived webinars or sign up for live events at www.advanceweb.com/NurseWebinars.

Table: Reasons for Divergence From Evidence-Based Heart Failure Management

<table>
<thead>
<tr>
<th>Professional</th>
<th>Lack of knowledge</th>
<th>Lack of confidence</th>
<th>Fear of iatrogenic harm</th>
<th>Reluctance</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy of care</td>
<td>of recommendations</td>
<td>in dosing for geriatric residents</td>
<td>of iatrogenic harm</td>
<td>to change treatment plans in stable asymptomatic patients</td>
<td>bias toward younger patients</td>
</tr>
</tbody>
</table>

Candace C. Harrington is an adult and gerontologic nurse practitioner who works for Evercare in Greensboro, NC. She is a member of the adjunct faculty for Vanderbilt University School of Nursing in Nashville, TN.

Find past issues online. Read digital edition archives at www.advanceweb.com/Nurses
Take the leap.
Pursue those three big letters that come after your name.

BSN and MSN

As a RN, you can advance your education online and work towards advancing your career. Online options include: RN to BSN Option, RN-BSN to MSN Option and Master of Science in Nursing (MSN) Degree Program.

Chamberlain College of Nursing offers a proven model with advanced degree program options to take you to the next step. Keep moving forward.

Now enrolling for summer, fall and spring semesters

For more information, please visit chamberlain.edu or call 888.556.8CCN (8226)

Comprehensive consumer information is available at: chamberlain.edu/studentconsumerinfo

National Management Offices | 3005 Highland Parkway | Downers Grove, IL 60515 | 888.556.8CCN (8226)

©2012 Chamberlain College of Nursing, LLC. All rights reserved.
ADVANCE is your one-stop shop to dress yourself for success!

Women’s Professional “Raindrop” Patent Leather Clog
#19738
$134.99

Women’s “Le Tubes Run SR” Training Shoe
#20219
$85.99

Women’s “Xenia” Clog
#19900
$124.99

Men’s 32” Zip-Front Jacket
S-4XL.
Personalizable.
#04009
Starting at $20.99

Ultimate Medical Bag*
13” x 9” x 14”.
Personalizable.
#02444
$34.99

Pen/Pen Light
5½”.
#16687
$7.99

Women’s “Raindrop” Patent Leather Clog
XS-2XL.
Personalizable.
#20090
Starting at $22.99

*Additional charge for personalization

Connect with us at facebook.com/ShopAdvance
Share What You Love on Pinterest
Connect with us at Facebook.com/ShopAdvance
Follow us on Twitter.com/ShopAdvance
Add us to your circle on Google+

FREE Shipping on all orders over $49!
Use promo code RNFREE514

Enjoy FREE GROUND SHIPPING on single-package orders in the 48 contiguous United States now through 08/05/12.

From the publishers of ADVANCE FOR NURSES
Catalog Code: RN-1223
Prices and offers valid through 07/08/12

advancehealthcareshop.com
1-877-405-9978

2 colors available

11 colors available

BLUE
PINK
BLACK

Advance Healthcare Shop
advancehealthcareshop.com
1-877-405-9978

FREE Shipping on all orders over $49!
Use promo code RNFREE514

Enjoy FREE GROUND SHIPPING on single-package orders in the 48 contiguous United States now through 08/05/12.

From the publishers of ADVANCE FOR NURSES
Catalog Code: RN-1223
Prices and offers valid through 07/08/12

Women’s Professional “Raindrop” Patent Leather Clog
#19738
$134.99

Women’s “Le Tubes Run SR” Training Shoe
#20219
$85.99

Women’s “Xenia” Clog
#19900
$124.99

Men’s 32” Zip-Front Jacket
S-4XL.
Personalizable.
#04009
Starting at $20.99

Ultimate Medical Bag*
13” x 9” x 14”.
Personalizable.
#02444
$34.99

*Additional charge for personalization

Connect with us at facebook.com/ShopAdvance
Share What You Love on Pinterest
Connect with us at Facebook.com/ShopAdvance
Follow us on Twitter.com/ShopAdvance
Add us to your circle on Google+

Advance Healthcare Shop
advancehealthcareshop.com
1-877-405-9978

FREE Shipping on all orders over $49!
Use promo code RNFREE514

Enjoy FREE GROUND SHIPPING on single-package orders in the 48 contiguous United States now through 08/05/12.

From the publishers of ADVANCE FOR NURSES
Catalog Code: RN-1223
Prices and offers valid through 07/08/12

Women’s Professional “Raindrop” Patent Leather Clog
#19738
$134.99

Women’s “Le Tubes Run SR” Training Shoe
#20219
$85.99

Women’s “Xenia” Clog
#19900
$124.99

Men’s 32” Zip-Front Jacket
S-4XL.
Personalizable.
#04009
Starting at $20.99

Ultimate Medical Bag*
13” x 9” x 14”.
Personalizable.
#02444
$34.99

*Additional charge for personalization

Connect with us at facebook.com/ShopAdvance
Share What You Love on Pinterest
Connect with us at Facebook.com/ShopAdvance
Follow us on Twitter.com/ShopAdvance
Add us to your circle on Google+

Advance Healthcare Shop
advancehealthcareshop.com
1-877-405-9978

FREE Shipping on all orders over $49!
Use promo code RNFREE514

Enjoy FREE GROUND SHIPPING on single-package orders in the 48 contiguous United States now through 08/05/12.

From the publishers of ADVANCE FOR NURSES
Catalog Code: RN-1223
Prices and offers valid through 07/08/12

Women’s Professional “Raindrop” Patent Leather Clog
#19738
$134.99

Women’s “Le Tubes Run SR” Training Shoe
#20219
$85.99

Women’s “Xenia” Clog
#19900
$124.99

Men’s 32” Zip-Front Jacket
S-4XL.
Personalizable.
#04009
Starting at $20.99

Ultimate Medical Bag*
13” x 9” x 14”.
Personalizable.
#02444
$34.99

*Additional charge for personalization

Connect with us at facebook.com/ShopAdvance
Share What You Love on Pinterest
Connect with us at Facebook.com/ShopAdvance
Follow us on Twitter.com/ShopAdvance
Add us to your circle on Google+

Advance Healthcare Shop
advancehealthcareshop.com
1-877-405-9978

FREE Shipping on all orders over $49!
Use promo code RNFREE514

Enjoy FREE GROUND SHIPPING on single-package orders in the 48 contiguous United States now through 08/05/12.

From the publishers of ADVANCE FOR NURSES
Catalog Code: RN-1223
Prices and offers valid through 07/08/12

Women’s Professional “Raindrop” Patent Leather Clog
#19738
$134.99

Women’s “Le Tubes Run SR” Training Shoe
#20219
$85.99

Women’s “Xenia” Clog
#19900
$124.99

Men’s 32” Zip-Front Jacket
S-4XL.
Personalizable.
#04009
Starting at $20.99

Ultimate Medical Bag*
13” x 9” x 14”.
Personalizable.
#02444
$34.99

*Additional charge for personalization

Connect with us at facebook.com/ShopAdvance
Share What You Love on Pinterest
Connect with us at Facebook.com/ShopAdvance
Follow us on Twitter.com/ShopAdvance
Add us to your circle on Google+

Advance Healthcare Shop
advancehealthcareshop.com
1-877-405-9978

FREE Shipping on all orders over $49!
Use promo code RNFREE514

Enjoy FREE GROUND SHIPPING on single-package orders in the 48 contiguous United States now through 08/05/12.

From the publishers of ADVANCE FOR NURSES
Catalog Code: RN-1223
Prices and offers valid through 07/08/12

Women’s Professional “Raindrop” Patent Leather Clog
#19738
$134.99

Women’s “Le Tubes Run SR” Training Shoe
#20219
$85.99

Women’s “Xenia” Clog
#19900
$124.99

Men’s 32” Zip-Front Jacket
S-4XL.
Personalizable.
#04009
Starting at $20.99

Ultimate Medical Bag*
13” x 9” x 14”.
Personalizable.
#02444
$34.99

*Additional charge for personalization

Connect with us at facebook.com/ShopAdvance
Share What You Love on Pinterest
Connect with us at Facebook.com/ShopAdvance
Follow us on Twitter.com/ShopAdvance
Add us to your circle on Google+

Advance Healthcare Shop
advancehealthcareshop.com
1-877-405-9978

FREE Shipping on all orders over $49!
Use promo code RNFREE514

Enjoy FREE GROUND SHIPPING on single-package orders in the 48 contiguous United States now through 08/05/12.