

Critical Care MANAGEMENT™

The essential monthly resource for critical care and intensive care managers and administration

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Special Series: Nursing Competencies

Our special three-part series on nursing competencies continues this month with a look at how to design and implement an assessment tool and conduct focused group interviews, qualitative research studies, and in-depth discussions that will accurately assess your nursing staff's clinical competence. Our series, which begins on page 5, will help you develop the skills to test your nurses on professional and cognitive competencies, interpersonal skills, and effective patterns of patient interactions. In part three of our series next month, learn how to make sense of the results of your evaluations.

Are early transfers, discharges to blame for high readmissions?

After complaining about the high cost of critical care, ICU professionals have not fully determined whether there is (or should be) a universal average in intensive-care readmissions. With a debate over cost still raging, the solution to why so many patients are being readmitted to ICU during the same hospitalization and what to do to curb their numbers eludes experts. The finger of blame seems to point to the current trend of early transfers and discharges to less-intensive, less costly levels of acute care. Cover

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After years of uneven oversight, regulatory agencies are getting tougher on nurses. States are asking providers for proof of workplace competency, while pressuring hospitals to set meaningful standards on clinical proficiency. In order to meet these demands, some nursing practitioners are developing competency assessment tools that include both written and

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Are early transfers, discharges to blame for high readmissions?

Quest for a 'normal' readmission rate can be elusive

Is there a "normal" readmission rate for the ICU? After complaining about the high cost of critical care, ICU professionals have not fully determined whether there is (or should be) a universal average in intensive-care readmissions.

With a debate over cost still raging, the solution to why so many patients are being readmitted during the same hospitalization and what to do to curb their numbers seems to elude the experts, according to individuals who have studied the problem.

The finger of blame seems to point to the current trend of early transfers and discharges to less intensive, less costly levels of acute care. But is early discharge from the ICU really to blame, some experts ask?

Uncertainty about early transfers

Veteran managers defend early transfers and assert that hospitals are getting better at case management and fostering greater collaboration between ICUs and general medical-surgical floors. The goal has been to ensure both appropriate and timely patient transfers.

Nevertheless, patients are returning to the ICU in worrisome numbers. Studies show that a large percentage of those patients are returning sicker, and in many cases with new medical problems.

They also "require stays in the ICU that are longer than if they had not been transferred in the

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observational approaches with an overriding focus on practical, real-life knowledge of bedside care. 5

Critical care units most affected by lack of skills

Throughout nursing the lack of good skills is a factor aggravating an already severe staffing shortage. Not all nursing specialties, however, are similarly affected. But in critical care, where the stakes are high, the problem of marginally trained new nurses has become increasingly acute. Mentorship programs and increased efforts to retain qualified staff can help solve the problem of staffing shortages. 8

Embracing new technology is critical care challenge

Getting frontline ICU nurses in sync with changing patient-care technology may be the next big frontier in critical care. As many managers are discovering, the effort to get rank-and-file staff up to speed with new developments is proving a lot more vexing than previously believed. Classroom training, incentives, and rewards, and even peer pressure are suggestions being offered to help staff learn new forms of technology. 9

FDA to regulate reuse of 'high-risk' medical devices

In response to growing concerns over the safety of single-use medical devices that are reprocessed for reuse, the Food and Drug Administration has taken an initial step to more strictly regulate the practice. The FDA has proposed a three-tiered system that would apply the greatest restrictions to high-risk devices. 10

Nurse walkout ends forced overtime at DC hospital

Nurses at Howard University Hospital in Washington, DC, are still savoring a victory over management following a one-day walkout in October that nearly halted all clinical operations at the renowned 300-bed not-for-profit institution. The nurses have won most of their labor demands from management, and are in the process of bettering relations with administration. 12

COMING IN FUTURE ISSUES

- Why the ICU manager's role is fast becoming obsolete
- Do AIDS patients pose a special challenge to ICU nurses?
- How to effectively grade and interpret your nurses' competency test
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- How to manage security controls to prevent family disruptions

first place,” says researcher **Charles G. Durbin Jr., MD**, associate professor of anesthesiology at the Virginia Health Sciences Center in Charlottesville, who has studied ICU readmission rates.

Within 48 to 72 hours, between 30% and 50% of all readmitted cases present in the ICU with new complications, compared with 30% of patients who were not previously transferred to other units, he says.

Medical ICUs (MICUs), according to Durbin, generally see a higher rate of complications, compared to surgical ICUs (SICUs). And cardiac surgery cases have a better track record than general surgery patients.

The chief reason, according to Durbin, is that most SICU patients tend to be in better general health and have fewer predisposing complications than MICU patients. Otherwise, they would not have made good surgery candidates, Durbin adds.

While some studies suggest that better respiratory assessment and other planned interventions can decrease mortality and morbidity in readmitted patients, the numbers have not been overwhelming thus far.¹

Meanwhile, ICU care continues to be increasingly expensive. More than 20% of every dollar spent on hospital care goes to treating critical care cases, according to figures from the U.S. Office of Technology Assessment in Washington, DC.

That amount has been increasing rapidly, experts say. Meanwhile, the “positive effects of critical care treatment on patient outcomes have been difficult to gauge,” according to Durbin.

Absence of universal benchmarks

The answer, experts agree, isn't longer ICU stays. But most intensivists assert that something has to be done to slow the rate of readmissions.

But determining a “normal” or a typical readmission rate for any unit isn't so simple, muses epidemiologist **Liddy M. Chen, MB, MSc**, a biostatistician who holds a medical degree in China and is employed by PPD Development, a pharmaceutical research firm in Raleigh, NC.

Chen studied ICU readmission cases as a researcher at the Critical Care Research Network of the London Health Sciences Centre in Ontario, Canada.

Reducing readmissions by making comparisons to a predetermined standard or absolute rate won't work because very likely there is no absolute, universal rate in existence, Chen says.

Nevertheless, nurses can achieve a consistent

unit-specific baseline rate over time based on internal environmental factors for each unit. Here's how:

- **Analyze early transfer trends.**

Certainly, early transfers play a role in high morbidity and mortality among readmitted cases, Chen says. Although many departments have strong case management and discharge planning protocols, hospitals still face enormous pressures to shorten lengths of stay.

Analyzing whether the balance between judicious, appropriate discharges and economic imperatives does not inadvertently favor one at the expense of another may help determine whether you are transferring patients too early, says Chen.

- **Assess the quality of external support.**

At the same time, concentrating on correcting potentially flawed discharge planning protocols can mask other factors leading to high readmission rates.

The problem actually may lie in the poor quality or lack of sufficient patient support services in a stepdown or receiving medical-surgical floor, some studies show.²

For example, the nurse-to-patient ratio or the effectiveness of the respiratory therapy staff on those floors may be inferior or inadequate to support your patients adequately, Chen notes.

If such is the case, managers and discharge planners should consider modifying their discharge policies to account for the potential risk associated with a patient transfer.

- **Consider the unit's case mix.**

A problem associated with benchmarking lies in drawing faulty comparisons between different sets of patient acuity and diagnosis factors between the benchmark hospital and one's own facility, studies show.

Readmissions skewed by case mix

While striving for reduced readmission rates may be a worthy goal, in reality, readmission levels vary markedly by diagnosis. They also vary by the patients' levels of medical need, acuity differences, and the overall case mix within a department, Chen says.

For example, in one study of readmission rates among teaching hospitals, cardiovascular conditions led among a group of four leading diagnostic causes of ICU readmissions.

The same study showed that among disease categories, the leading causes of readmission,

barring new or original complications, were renal disorders, gastrointestinal and neurologic problems, and sepsis.

But more than 50% of patients readmitted to the ICU suffered from a cardiovascular condition as the primary diagnosis. **(The other three causes were respiratory, gastrointestinal, and neurologic. The graphs on p. 4 illustrate those and other comparisons.)²**

Furthermore in the same study, respiratory problems increased significantly (by about 40 percentage points) in readmitted patients, compared to those originally admitted with other problems.

The level and sophistication of technology can also influence a department's readmission rates, complicating the definition of a "normal" rate for any unit, says Chen. "Under this scenario, things are always changing and are different every day," she says.

Still, there are ways to determine what for a given unit may be a normal, or typical, readmission rate. What you may be aiming for is a statistical average, or mean. But you also may be looking for the disease category with the highest frequency of readmissions in a sample size.

Several suggestions follow:

- **Make intelligent comparisons.**

By keeping the above-cited variables constant, Chen says, a department can compare itself with another in setting benchmarks based on retrospective discharge and diagnostic data. The data can be shared especially when a facility belongs to a large system or group of affiliated providers.

Large urban hospitals are more suitable for comparisons due to the breadth and variety of their disease categories. But that tenet doesn't always hold true, Chen says, due to other factors that can make two urban providers quite dissimilar.

Another caveat: Teaching, community, or rural hospitals should be compared to facilities of the same type but not with each other, regardless of any similarities in their patient mix, according to Durbin's study.

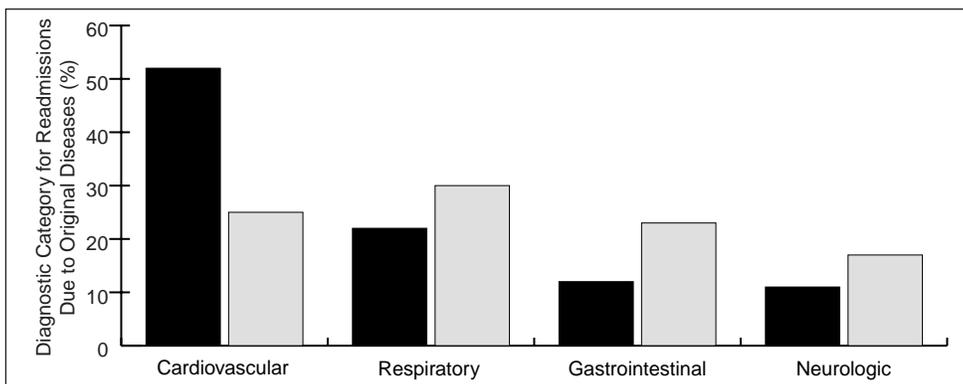
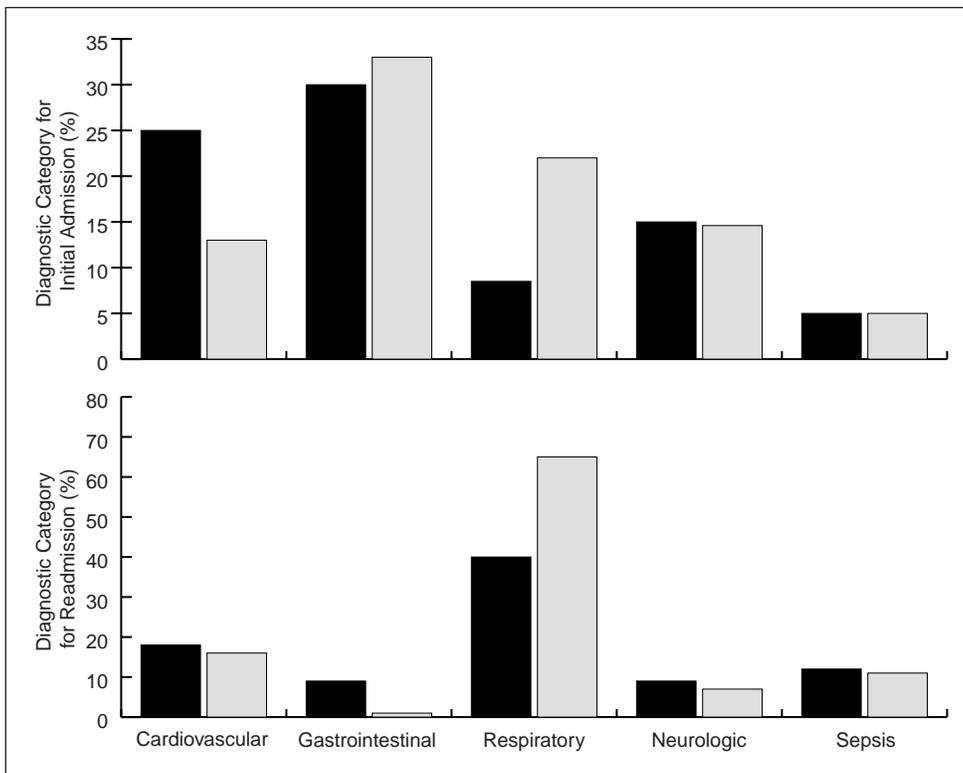
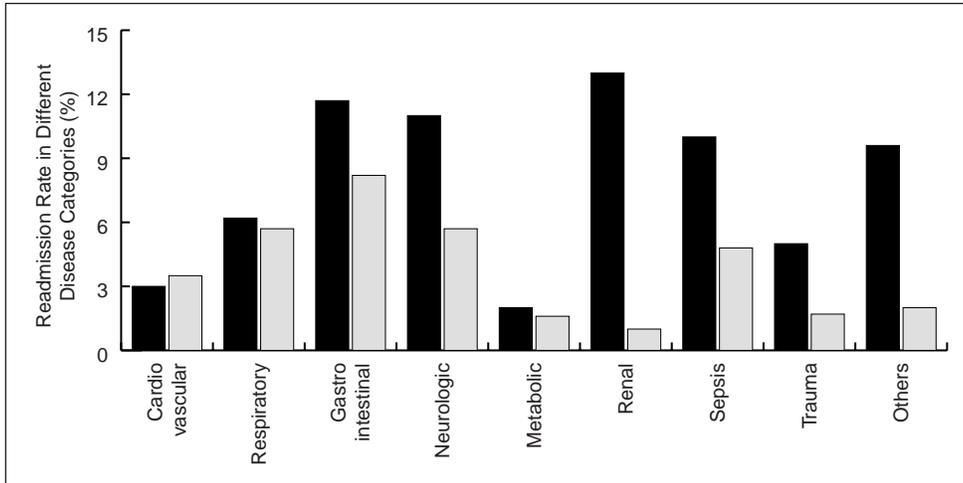
- **Stratify the findings.**

When looking for a normal readmission rate, focus the search on narrowly defined diagnosis groups, such as all 45-year-old male patients with perforated gastrointestinal tracts.

Avoid drawing conclusions regarding the unit's overall readmission rate. The unit's overall rate will not necessarily mean anything because it says virtually nothing about specific cases and

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Intensive Care Readmission Rates in Teaching and Community Hospitals



Source: Chen LM, Martin CM, Keenan SP, et al. Patients readmitted to the intensive care unit during the same hospitalization: Clinical features and outcome. *Crit Care Med* 1998; 26:1,834-1,841.

disease categories, which are the key to what drives readmissions, says Chen.

- **Focus your search.**

It is often easier to calculate an average or median, which is the middle rate between the highest and lowest range when you compare similar diagnoses and disease groups.

But ensure that the sample size is substantial. Three or four years of retrospective data should be sufficient, says **Sue Chapman**, RN, a clinical coordinator at York County Hospital in Ontario, who helped compile data for Chen's study.

It is fairly simple to extrapolate those figures from a patient database. But it means you will be able only to speak of a normal readmission rate for a specific diagnosis or disease category and not the whole unit, Chapman says.

- **Account for high-risk cases.**

Determining a "normal" readmission rate for high-risk patients can be useful in setting policies to lower the number of high-risk cases who return to the unit.

When conditions in the unit change, clinicians can use the data to help track the reasons that readmitted patients are developing, such high-risk complications outside the department, says Chen.

Was it that certain patients were transferred too soon? Or were existing clinical resources throughout the hospital inadequate to address the needs of the readmitted patients at the time?

- **Allow for discharge planning changes.**

Finally, changes in discharge planning policies and procedures may account for wide variations

in subsequent readmissions. Track any changes in such policies during the three years of reviewing the patient data, Chapman advises. They could offer a key to reducing the readmission rate to what in the process may be deemed normal for the department.

Ultimately, the only prediction that can be made with certainty is that a unit will have a minimum readmission rate of some kind. Even that may change over time.

And due to changing factors in the unit, the minimum will likely seldom be achieved. Instead, the usual rate will probably be much higher and subject to further change, Chen says.

Even while appropriate lengths of ICU stays can help achieve better outcomes and fewer medical complications, a nagging question will remain as to which patients are most likely to benefit most from such policies. As yet, that isn't known.

"Information about this group of patients is required to improve clinical decision-making," Chen says. "Unfortunately, only a few studies in the United States have investigated these patients and the reasons for their readmissions."

References

1. Kirby EG, Durbin Jr. CG. Establishment of a respiratory assessment team is associated with decreased mortality in patients readmitted to the ICU. *Resp Care* 1996; 41:903-907.
2. Chen LM, Martin CM, Keenan SP, et al. Patients readmitted to the intensive care unit during the same hospitalization: Clinical features and outcomes. *Crit Care Med* 1998; 26:1,834-1,841. ■

Nurses get best results with hands-on assessments

Preparation and interviewing are favored trends

After years of uneven oversight, regulatory agencies are getting tougher on nurses. States are asking providers for proof of workplace competency, while pressuring hospitals to set meaningful standards on clinical proficiency.

Nursing organizations are feeling the heat. In critical care, where morbidity rates generally run high, the stakes are daunting, according to veteran ICU nurses.

It's no place to gamble with hunches that your staff will pass muster, says **Georgiann Homuth**, RN, MS, CCRN, a critical care clinical

nurse specialist at Swedish American Health System near Chicago.

Rightly or wrongly, many licensing and accreditation entities, among them the Joint Commission on Accreditation of Health Care Organizations, are linking their concerns over medical mistakes to cases of poor clinical judgment.

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Medical mistakes linked to hospital deaths

Recently released figures from the Harvard University School of Public Health in Cambridge, MA, linked medical mistakes to some 120,000 annual hospital inpatient deaths. While Harvard officials didn't single out any one factor as

responsible, including nurse proficiency, experts have long argued for better staff training and assessment as a way to reduce hospital adverse events.

But assessing nurse competency hasn't been easy. A running debate over how to design and implement competency assessment tools has given way to confusion and inaction, say many advanced practice nurses.

Observation tests are preferred

In many busy, overworked ICUs, the written test has been the cornerstone of most competency assessment exams. However, a growing number

of nurses generally condemn written exams.

"How do I know whether you can really do something unless you actually do it?" asks Homuth, who advocates observation tests over

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written exams.

Although there is no one way to design the ultimate competency assessment tool, some experienced practitioners advocate devising a combination of approaches, including written and observational, with an overriding focus on practical, real-life knowledge of bedside care.

Hospitals that have taken this integrated approach appear to achieve better results, according to their own officials. What follows are examples of two different approaches taken by markedly different hospitals:

- **Department of Veterans Affairs Medical Center, West Palm Beach, FL.**

At the Department of Veterans Affairs Medical Center in West Palm Beach, FL, managers designed a multifaceted tool that combined a written portion and a verbal, task-focused interview component.

The interview covers aspects of a nurse's clinical and technical abilities. But it also tests cognitive, intellectual, and social skills that are routinely used in the ICU, says **Sara Moore**, RN, MSN, CCRN, a former ICU manager, who now works with the medical center's imaging services.

Moore designed the tool while assigned to the ICU and won a National Teaching Institute's Creative Solutions award in 1997 from the American Association of Critical Care Nurses (AACN) in Aliso Viejo, CA.

The test is divided into two sections:

- I. KSA (knowledge, skills, and abilities):**

Assesses a nurse on formal technical and clinical patient care matters, such as understanding hemodynamic parameters and accurate interpretations of blood gas level readings.

- II. WOF (work-orientation factors):** Focuses on professional collaboration, decision making, interpersonal relations, and social skills involving patients and family members.

Parts of each section involve a written portion in which the nurse is given a problem-solving scenario and is assessed on a narrowly defined series of expected responses. **(For a sample question from each category, see the box on p. 7.)**

The management staff developed the questions on the basis of what they felt were important areas for nursing expertise, Moore says. But managers can also devise the questions based on problem areas by targeting, for example, patient types or diagnoses that pose serious problems for nursing care.

Providers differ on testing styles

Important areas for the hospital included working with patients on conscious sedation and ventilator-dependent cases, Moore says. The obvious places to look are those that involved high-risk patient cases and highly volatile outcomes and bedside management protocols.

Moore says the hospital administers the test to new and rank-and-file nurses annually as part of a twice-a-year "skills fair" that involves booths and games in which nurses can test their skills in fun ways.

The two-hour test is given in a classroom setting. Individual nurses can choose when to take the exam, but all the nurses are interviewed during the same designated block of time, Moore says. Floaters or extra nurses are called in to cover the floor.

The tests are graded by a series of nonnumerical values that fall into four categories: negative (-), neutral (0), positive (+), and double positive (++). Moore says the scoring system reduces a tendency toward subjectivity and focuses on strengths and weaknesses, instead.

- **Swedish American Health System, Rockville, IL.**

With two large, 10-bed ICUs and a staff of 50, competency assessment should be anything but easy at Swedish American Health System. But management has been able to evaluate its nurses by focusing on sound preparation and actual hands-on skills, says Homuth.

The unit uses two different assessment tools, one to test tenured nurses and another for staff with less than three years of experience. Usually, the emphasis has been to test on important procedures that for some nurses are less-frequently performed.

A typical example might be the removal of a

femoral sheath from a patient's groin area, which due to the three maneuvers involved may be a tricky procedure for nurses who don't routinely perform the procedure, Homuth says.

To choose the best procedures, Homuth says administrators begin with a list of basic skills such as starting an intravenous line or inserting a nasogastric tube.

A second list is compiled for skilled nurses with less than three years of experience, which might include assisting in a pericardiocentesis or monitoring a cerebral ventricular drainage, Homuth adds.

'Education Days' strengthen nurses' skills

In March of each year, the unit holds a set of "Education Days," two full days of nursing skills review that include a list of 29 must-know items and a 3½-hour session with a nurse verifier.

Tenured nurses (with more than three years of experience) undergo 2½ days, with a much shorter list every other year. For tenured nurses, the emphasis is on technical competency, but critical thinking skills are highlighted, Homuth adds.

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In December, the managers usually send a list by e-mail around to staff nurses asking for input and changes to the list. Other resources are also consulted, including advice from preceptors, benchmarking data, the unit's clinical policies and procedures manual, and the AACN practice guidelines.

A packet of required skills is distributed in advance that includes the list of questions, their answers, and any updates or new information nurses are required to know.

The emphasis of the assessment involves observation of each nurse, either in a hypothetical or actual patient-care situation. Regardless of the case, the nurse conducting the observation looks for real-life capabilities beyond formal technical knowledge of the procedure or protocol, Homuth says.

During observation, the nurses are evaluated for each procedure on a pass/fail basis. A report is issued on each nurse identifying the procedure, the date of observation, and the final grade. Nurses who fail an observation are retested later.

"The key to competency testing is to ensure that the nurse can function fully in an actual situation," Homuth adds. ■

Sample Written Assessment Questions

The following questions were used to test ICU nurses in two categories of skills:

I. KSA (knowledge, skills, and abilities):

Problem: Mr. B, a 62-year-old who weighs 70 kg, is admitted to the ICU in a confused and agitated state. His physical assessment reveals an elevated jugular venous pressure, distant heart sounds, cool and diaphoretic extremities, absent bowel sounds, a white blood cell count 17,000, and no urine output since admission one hour ago. A pulmonary artery catheter is inserted, and the following hemodynamic profile is obtained:

BP	62/40
Pulse	124
RAP/CVP	16mmHg
PAP	40/18
PCWP	17
CO	2.0 L/Min

- 1) What is your assessment of each of the hemodynamic parameters?
- 2) What is the most likely diagnosis for Mr. B's condition?
- 3) What interventions would you take to improve Mr. B's condition?

Skills Assessed:

1. Knowledge of hemodynamic parameters.
2. Integrating concepts into practice.
3. Appropriate nursing interventions.

II. WOF (work-oriented factors):

Problem: The critical care units will be implementing the shared governance practice model.

- 1) What is your knowledge/experience with shared governance?
- 2) How will you support the critical care program shared governance concept?

Skills Assessed:

1. Interpersonal relationship skills.
2. Participative style.

Source: Department of Veterans Affairs Medical Center, West Palm Beach, FL. Used with permission.

Critical care units most affected by lack of skills

Many new grads not clinically prepared to step in

More and more nurse managers of all stripes are bemoaning an apparent lack of broad-based skills and experience in their new bedside staff. Throughout nursing, some experts say, the lack of good skills is a factor aggravating an already severe staffing shortage.

Not all nursing specialties, however, are similarly affected. But in critical care, where the stakes are high, the problem of marginally trained new nurses has become increasingly acute, say ICU veterans.

The lack of broad-based skills is not across the board, but is concentrated in specialties such as neonatal nursing, says **Carole Kenner**, DNS, RNC, FAAN, director, education and programs, National Association of Neonatal Nurses (NANN), Des Plaines, IL. "In other words, the shortage is not in sheer numbers, but in the numbers of nurses with specialty experience."

Kenner points to a national survey conducted by the American Organization of Nurse Executives, the U.S. Department of Health and Human Services, the American Nurses Association, and the Society of Healthcare, Human Reserves Administration, which surveyed 388 hospitals on the nursing shortage issue.

The survey results also indicate that nursing educational institutions are contributing to the specialty shortage problem by not providing students with enough clinical experience before graduation.

Frances Strodbeck, DNS, RNC, NNP, director of the Neonatal Nurse Practitioner Program at the University of Cincinnati College of Nursing and neonatal nurse practitioner at Miami Valley Hospital, Dayton, OH, concurs. "The units want to have people with experience," she says. "When dealing with sick babies, there isn't a huge margin for error."

With changes in health care and mainstreaming of hiring lines, less staff are available to orient new employees. "We don't have the resources for orientation as we once did," says Strodbeck. "We need to hire people with experience, and one of the ways to do this is to help students get more experience while in school in order to make them more marketable for when they apply for a job."

In order to provide students with opportunities to gain experience prior to graduation, NANN is in the process of developing a mentorship program. "This will provide an exceptional opportunity for students to gain clinical experience, enhance their skills, and broaden their resources under the auspices of an experienced professional," says Strodbeck. "These are the qualities that will give a new graduate the edge over someone else."

With a mentorship program in place, NANN chapters will work collaboratively with area schools of nursing. "Everyone will benefit from this mentoring concept," says Strodbeck. "Hospitals will have higher-caliber students entering their workplaces, the patients will benefit from the quality of care provided to them, and graduates will feel more confident entering the workplace."

Students are also encouraged to volunteer in neonatal units as cuddlers. Cuddler programs encourage neonatal nursing students to rock and cuddle babies. "Through 'mini introductions' to neonatal nursing units, such as with the cuddler program, students are able to experience aspects of nursing that they wouldn't be able to in a classroom setting," says Strodbeck. "Many times students who make an effort to volunteer in a neonatal unit often have an edge over other candidates when looking for a position."

Management style key to retaining nurses

While many hospitals nationwide are experiencing nursing shortages and other related challenges, some are not feeling the crunch. One such site is Cincinnati-based Tri-Health, a partnership of Bethesda North, Bethesda Oak, and Good Samaritan Hospitals.

Leslie Altimier, RN, MSN, manager of Neonatal Services for Tri-Health ICU and Special Care Nurseries has a staff turnover rate of 2%. "We are very lucky to have a very low turnover rate and not be short-staffed," says Altimier, who is responsible for a staff of 200.

Altimier attributes the successful retention rate to the fact that everyone is treated as a valued employee. "We have found that the human element plays a significant role in keeping our nursing staff happy and willing to go the extra mile when necessary," she explains. "We allow fairness and flexibility and provide the same treatment to all staff members."

"One of the things that people say is that pay is the biggest issue facing staff across the country,"

she says. "In reality, there are many people that go to work Monday through Friday for less pay, but have flexible hours. We try to consider all of the factors that are important to staff, such as flexible hours, opportunities to attend conferences, and an opportunity to voice suggestions and ideas for improvement, among others.

"We try to provide a work environment that people want to return to on a daily basis, and our low turnover rate is one way of seeing that the staff do like it here," says Altimier.

To ensure continuity among the three hospitals, one physician group covers all the units while Altimier serves as manager. "We provide operational consistency for all three sites," says Altimier. "From a management perspective, we try to listen to the staff and treat everyone as individuals, not numbers."

Working collaboratively builds stronger staff

A good communication system is key to working collaboratively with your staff, nurse managers claim. "Instead of having a third party determine how to design our new neonatal unit at Good Samaritan, we asked the nurses to take the lead on it," says Altimier. "Usually, the units are linear in design, not here. We have an 'L' shape that best meets the needs of the staff and patients.

The unit also includes improved acoustics, carpet/vinyl flooring combinations, cell phones instead of an intercom system, and a central vacuum system. "We have a beautiful unit in which everyone has taken ownership," she says.

The staffing shortage problem affecting specialty nursing cannot be solved easily. It requires a combination of trying harder to retain existing staff and opening doors to new students seeking mentors or opportunities to volunteer to gain firsthand experience.

To retain staff, Altimier advises having open communications with your staff. "You don't want to be motherly. You want them to know that you will respond to them and act on their request," she says. "Having staff members take the lead on projects invites them to take ownership. They will be more willing to do the work if you give them the space to do so."

For nursing students seeking a mentor or volunteer opportunity, welcome them with open arms. "The bond you create with a new graduate could be a long-term working relationship that you wouldn't have had otherwise," says Strodtbeck.

"Because of the shortage, we don't want

graduates to be afraid to come in. We want them to feel comfortable and confident that they will be an asset to the existing team," she says. ■

Embracing new technology is critical care challenge

Getting frontline ICU nurses in sync with changing patient-care technology may be the next big frontier in critical care, according to experts.

As many managers are discovering, the effort to get rank-and-file staff up to speed with new developments is proving a lot more vexing than previously believed.

"The nature of critical care medicine is for staff to be proficient with certain types of technology," says **Tom Ahrens**, DNS, RN, CCRN, CS, clinical specialist in critical care at Barnes/Jewish Hospital in St. Louis, MO. One simple example cited by Ahrens is the use of a Swan-Ganz catheter in hemodynamic monitoring.

"Although this [and other] technology is not new and has been around since the 1970s, all hospitals have it and many do not use it well."

During day-to-day critical care functions, extra time to learn a new piece of technology may not be available for all staff. Many times, the technology is fairly difficult and requires extra time and concentration. "Nurses have many other things to do," says Ahrens. "They are rarely given the opportunity to learn a new technology. They receive no extra time or money to do it. There is little, if any, incentive to try."

Change is sometimes resisted just because the ideas are new and people haven't had a chance to get used to them or don't fully understand their implications, Ahrens explains. Often, managers work on implementing the new technology for so long that they assume everyone else understands its capabilities as well as they do.

"I know firsthand from working the night shift that when it comes to technological changes, there are no good support systems or inservices offered at night," says **Carol Kenner**, DNS, RNC, FAAN, director, education and programs, National Association of Neonatal Nurses' national office, Des Plaines, IL. "In order to get your staff to buy into it, education is critical for all shifts. Your staff will accept technological change easier if they fully understand the benefits and how it will impact their work."

“The key to getting your staff to accept technology is to prepare the nurses for an upcoming change. Have a classroom dedicated to learning the new technique or task, and incorporate dedicated time in their schedules to practice. That is why effective managers ‘plant seeds’ early, to allow ideas to germinate and become familiar,” Ahrens says.

Resisting change won’t stop technology

An effective way to get staff to accept a new form of technology is through peer pressure. “If you have a few key peers who are self-motivated and want to do it well, then peer pressure will usually develop and everyone will eventually catch on,” says Ahrens. “You will do it because your friend is doing it and you don’t want to be the only one who can’t conform.”

“Nurses play a pivotal role with technology. For example, if a physician needs to know the amount of a patient’s exhaled carbon dioxide, the nurse must know how to manipulate the equipment,” says Ahrens. “A physician can’t get information unless the nurse knows how to use the equipment and interpret the data.”

Across the country there are wide variations in how hospitals are training their staffs to use new technology and what incentives are effective in encouraging their participation. “To get the staff to become involved, you have to find a way to provide them with an incentive. Whether it becomes part of a performance evaluation or an opportunity for extra money, look for opportunities to inspire your staff,” says Ahrens.

“Sometimes we have key people get together for a nice dinner and talk about the plans for the department and what we are trying to do with new technology,” he says. “As a thank-you for their participation, we will even give them gift certificates to restaurants to let them know that they are valued and that their thoughts and concerns are heard and appreciated.”

A reward system can have a great impact on behavior when altered, but requires considerable thought first. “You don’t want staff to do what will be rewarded and tend not to bother doing what goes unrewarded such as smaller, yet important, tasks,” says Ahrens.

As executive editor of the American Association of Critical Care Nurses (AACN), Ahrens’ goal is to try to standardize technology and create a national critical care curriculum. “This is a huge undertaking. We will gather everyone’s individual efforts,

and create one unified educational piece that we can all follow,” says Ahrens.

“We have to get the best nurses in the country to be major writers of this manual. They know the literature and how to put it into practice. If we are lucky, the program will be up and running in 2001.”

Without a strong organization such as the AACN, it would be a major challenge to get everyone to follow suit in creating national standards. “I am pleased that we can finally address this issue,” Ahrens says. “Everyone will benefit — the physicians, nurses, and patients — as we all work from the same manual in a consistent effort to provide the best patient care with the best technology available. Without the program, we would have fragmentation indefinitely.” ■

FDA to regulate reuse of ‘high-risk’ devices

In response to growing concerns over the safety of single-use medical devices that are reprocessed for reuse, the Food and Drug Administration (FDA) has taken an initial step to more strictly regulate the practice.

The FDA has proposed a three-tiered system that would apply the greatest restrictions to high-risk devices. The agency did not specifically identify which devices fall into that category, but has scheduled a Dec. 14, 1999, open meeting in Rockville, MD, to discuss the current practice of reprocessing and reusing devices that are labeled or otherwise intended for only one use.

Larry Kessler, FDA’s chief of device surveillance, anticipates that the number of high-risk devices will be small. “Right now, there’s a lot of emotion about this,” he says. “We need good, credible science to make the decision.”

According to recent estimates, about 1 million disposable devices are reprocessed every year in the United States. Critics of the practice argue that recycled products put patients at risk, despite conflicting reports from the Centers for Disease Control and Prevention (CDC) stating that potential problems are “rare.”

In response to a congressional urge to crack down on unregulated reprocessing, the FDA recently announced that it will take the first step towards regulation. Under the proposed strategy,

disposable medical devices would be categorized into three groups:

I. High-risk: The FDA will stop the sale of those products that will not work after repeated resterilization or show potential safety hazards.

II. Moderate-risk: Products that raise concern, but lack actual evidence of harm, will have safety standards established as additional data is collected by reprocessors.

III. Extremely low-risk: The FDA will permit sales to continue, and require hospitals that reuse products to register for continued monitoring.

"A single-use device's risk category may depend on such factors as the complexity of the procedures needed to reprocess the device, the risk of infection from reusing the reprocessed device, any risk of performance failure with respect to reprocessing, and the scientific information available on reprocessing the specific device," the FDA reported in a position paper on the proposal. "For single-use devices in the high risk category, i.e., products that may pose a significant public health risk to patients and users

after reprocessing, FDA is considering enforcing all the agency's regulatory requirements, including premarket applications."

While the FDA did not specify devices by risk category, high-risk devices that are currently being reprocessed by some facilities would presumably include items that enter sterile tissue like angioplasty balloon catheters. The Association for Professionals in Infection Control and Epidemiology has previously advised the agency that heightened regulation and oversight may be warranted for reprocessing single-use critical care items that come into contact with sterile tissue or the vascular system. Under its current policy, the FDA has exercised discretion in letting reprocessors operate without submitting premarket product information.

Under the proposed strategy, FDA would consider regulating third-party processors and health care facilities that engage in the reprocessing of single-use devices the same way the

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Editorial Questions

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agency has regulated original equipment manufacturers. That includes registration and listing of firms, premarket notification and approval requirements, submission of adverse event reports, and labeling requirements.

Although this is only the first step, the FDA needs to ensure “that reprocessed devices be as safe as new devices,” says **Melissa Merz**, spokeswoman for Sen. Richard Durbin (D-IL), who pushed for FDA action. “The fact remains that Congress needs to go further to ensure patients are informed before a recycled device is used on them.” ■

Nurse walkout ends forced overtime at DC hospital

Nurses at Howard University Hospital in Washington, DC, are still savoring a victory over management following a one-day walkout in October that nearly halted all clinical operations at the renowned 300-bed, not-for-profit institution.

Nurses have won most of their labor demands from management, and are in the process of bettering relations with administration, according to **Cristol Primas, RN**, a clinical nurses specialist, who helped organize the job action.

The walkout in late October by some 400 nurses, pharmacists, dietitians, and social workers effectively ended a three-year pattern of sudden mandatory overtime, low wages, and inadequate nurse staffing, Primas says.

Most of the nurses belong to the DC Nurses Association, a local union with a chapter at Howard University.

Following the job action, the hospital agreed to stop the practice of forcing nurses to work overtime. It also agreed to improve staffing levels by hiring new nurses and contracting with more reliable nurse registries.

Management and staff recently agreed to a 2% pay rise, retroactive to July, and a 5% increase over the next two years.

Among those leading the charge in the dispute were the hospital's critical care nurses, who according to Primas, have long complained about dangerously low staffing levels in the hospital's 12-bed surgical ICU and five-bed critical care unit.

“Things were so bad there that registry nurses who worked those units refused to come back for another shift,” Primas says. On most days,

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Primas adds, staffing ratios ranged around one nurse to six or eight patients.

Staffing ratios have since fallen but have not yet reached the 1-to-2 national average, Primas says.

A hospital spokeswoman did not return calls requesting information. ■

CE objectives

After reading each issue of *Critical Care Management*, participants in the continuing education program should be able to:

- identify particular clinical, administrative, or management issues related to the critical care unit;
- describe how those issues affect nurse managers and administrators, hospitals, or the health care industry in general;
- cite practical solutions to problems that critical care/intensive care managers and administrators commonly encounter in their daily activities. ■

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