AMERICAN HEALTH CONSULTANTS®

Critical Care MANAGEMENT

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

INSIDE

MARCH 1999

VOL. 3, NO. 3 (pages 25-36)

American Health Consultants® is A Medical Economics Company

History-making birth of octuplets brings best out in neonatal nurses

Memorable event confirms nurses' belief in their training, professionalism

Imagine losing control of the normal routine in your intensive care unit, while hordes of reporters, photographers, and curiosity seekers invade your floor trying to get a glimpse of not one but eight of your critically ill patients.

The world may have celebrated the Dec. 20 arrival of the Chukwu octuplets — but for the hard-working neonatal nurses at Texas Children's Hospital in Houston, coming to work each day under the glare of public scrutiny was anything but festive.

Adequate staffing, equipment needs, security, and patient confidentiality were paramount issues on the minds of nurse managers and staff at the facility's neonatal unit.

More than two months after the infants' arrival, those nurses are now beginning to look back on the historic event. Despite the pressure of hosting what initially were the world's only surviving octuplets, the business of patient-care in the 48-bed neonatal ICU went surprisingly well, the nurses recall. Looking back, they credit the benefit of solid nurse training and professionalism for the outcome.

But make no mistake, the buzz surrounding the births was intense. From the earliest, nurses tried to make certain that once the critically ill

EXECUTIVE SUMMARY

The arrival of the Chukwu octuplets last December challenged nurses at Houston's Texas Children's Hospital to ratchet up their performance. Careful planning and teamwork got the NICU through the worst of it without incurring serious problems. Elements of success, nurses say, include:

- Planning well in advance by ensuring adequate nursing coverage to accommodate the unit's additional patient load.
- Coordinating with other hospital departments, including radiology and pharmacy, to anticipate a larger volume of ancillary services.
- Making certain security was high and patient confidentiality was not compromised in the crush of media and public attention.

preemies were placed in their hands, life in the nursery would be normal. At moments, however, conditions seemed doubtful.

Working in any ICU is stressful. Suddenly for some, it got tougher. Everyone learned to adapt as the days wore on, according to one nurse. "It's been interesting," says 25-year veteran **Pamela L. Marrs**, RN, with a trace of irony. The remark leaves one wondering what she really meant.

Expectations were suddenly exceeded

Until a week before Christmas, a Sunday, when the infants arrived, multiple "prematures" at Texas Children's weren't considered unusual. Several triplets, quadruplets, and at least one set of quintuplets have been patients of the NICU in past years, but those events were nothing compared to octuplets, according to Marrs.

Nkem Chukwu, the octuplets' 27-year-old mother, delivered at St. Luke's Episcopal Hospital. Texas Children's and St. Luke's share the same labor and delivery and neonatal ICU. Otherwise, they're unrelated facilities.

From the outset, the babies were frail and given at best only an 85% chance of survival. Fear of infection ran high. The smallest baby, Chijindu Chidera, who weighed less than 11 ounces, died within six days. By mid-January, the remaining septuplets were still listed as critical.

For the arrival, nurses were well-prepared. Most had attended numerous orientations and planning conferences held by administration. Everyone anticipated the crush of news media and public scrutiny. Intradepartmental coordination was viewed as essential to keep Texas Children's and the unit running smoothly.

What ultimately occurred, according to some, exceeded expectations. Nurses ended up pulling long shifts, nerves became frayed, and people got testy. Managers ran to attend impromptu meetings at all hours. They had to brief security officers, mollify concerned families of other patients, and repeatedly block dozens of unscheduled, uninvited guests, including photographers, from entering the nursery.

On a typical day, unit secretaries answered more than 40 phone calls and hundreds of inquiries from strangers and well-wishers. Excluded from the total were the usual calls from physicians, relatives, and friends of other patients. Nurses answered the phones when secretaries were unavailable.

People visiting the hospital on other business would wander up to the floor and ask for a glimpse of the preemies. Press conferences and meetings interrupted the normal flow of events. At the end of their shifts, tired nurses who stayed largely out of the spotlight during the media blitz, were often stopped in the halls by uniformed guards and asked for identification.

Despite all of that, "things went well. Medically, the patients' management was considered standard for our unit," says **Cynthia G. Sanders**, RN, MS, assistant director of nursing, referring to those first memorable weeks. The credit goes to advanced planning and teamwork from everyone, including nurses and other hospital departments, which were extremely supportive of the ICU.

Staff coverage became a big concern

In retrospect, Sanders says, the biggest challenges and concerns they faced could be summarized in the following categories:

- **Staffing and coverage.**

Of paramount importance was ensuring proper staff coverage, Sanders says. With an average daily census running at about 40, the unit's demands on adequate coverage were high. With the octuplets, the census remained at 50 and above for several days. Even during normal conditions, the hospital relies heavily on agency and registry staff to cover open positions, Sanders adds. In most cases, ratios range around one nurse for every two preemies, but one-on-one coverage is considered common.

Alerted well in advance of the possibility of premature octuplets, the critical care unit went into action, Marrs recalls. When "Mom" was in week 23, the department set up a call schedule and planned to increase nurse coverage for the unit as a whole beyond the usual complement. All nurses who were normally scheduled off or listed on-call were notified.

The actual number varied by shifts and daily workload, but staffing just for the Chukwu babies ranged between 12 to 14 extra clinicians. Not all were nurses. Each team consisted of a physician, respiratory therapist, registered nurse, and nurse practitioner.

- **Equipment and supplies.**

Equipping the unit for the mass arrivals also took planning. In descriptions similar to mounting a military campaign, the unit needed eight times of what would be normal for one infant. That meant one infant warmer, one heart monitor, three IV pumps, and a ventilator multiplied by eight, Sanders observes.

Managers scoured the hospital asking other departments for contributions, and the equipment materialized. Weeks ahead, central supply also set up carts labeled "octuplets" with the supplies. The carts were quickly called into action.

Planning also included notifying and coordinating with labs, the pharmacy, radiology, security, and patient relations. "Labs and X-ray were told to expect a sudden large volumes of work," Sanders says. Furthermore, each administrative department was kept informed regarding changes in the babies' conditions and related important events.

• **Security and confidentiality.**

The most urgent concern involved maintaining security, Sanders recalls. At stake was preserving patient confidentiality not only for the Chukwu babies, but for the 40-odd other preemies in the unit.

The other parents understood the situation, but they were no less concerned than the Chukwus about their own infants' privacy rights, recalls Marrs.

Sanders worked closely with the parents, says Marrs, explaining events and keeping them informed. According to Sanders, the other parents were really good about cooperating. "No one expressed any resentment or thought their babies were getting second-rate care," Sanders says.

Overall, security was tight. Uniformed guards manned entrances and screened visitors. Nurses, according to Marrs, received training in discreetly confronting people. But keeping security tight required constant management of the players, Sanders acknowledges.

For managers, what counted most was to minimize distractions and enable nurses to discharge their responsibilities. "As managers, our job was to allow that to happen," says Sanders. Her best advice in these difficult moments: Plan ahead. Keep your nurses fully informed at all times, and involve them in every stage of planning. ■

New CCNS exam raises the bar for nurse specialists

More states are requiring certification for licensure

The bar has been raised a few notches for advanced practice nurses who are being urged to take a new certification exam introduced in January by the American Association of Critical Care Nurses Certification Corp.

States are beginning to require the advanced practice certification for clinical nurse specialists in acute and critical care as a basis for licensure. Nurses in those states who neglect to take and pass the new certification exam may face difficulty renewing their practice license or obtaining a new one in the case of recently promoted clinical nurse specialists.

Since its launch two months ago, the new Certification for Clinical Nurse Specialist (CCNS) exam has generated enormous interest from both nurse managers and clinical nurse specialists, says **Jo-Ann Eastwood**, RN, MN, CCRN, certification director at Aliso Viejo, CA-based AACN Certification Corp., also known as AACN CertCorp.

Test sponsors say they aren't surprised by inquiries they've received from managers, who are encouraged in most cases to take the exam. "It would be appropriate for many to take the test," Eastwood reports.

Although nurse managers are professionally the equivalent of nurse specialists, they are both essentially on different career tracks, and their daily functions in the unit are quite different.

States are demanding proof of competency

The CCNS exam is specifically designed for the nurse who holds a master's degree or its equivalent. Nevertheless, it offers nurse managers who meet the minimum eligibility requirement the opportunity to broaden their scope professionally and provides them the opportunity to change career paths if they wish, Eastwood says.

To be eligible for the exam, a nurse has to have:

• An unrestricted registered nurse's license.

• A master's degree in nursing.

• 500 hours of direct clinical practice either within the master's program or as a clinical nurse specialist.

• Evidence of expertise in clinical knowledge, skills, and judgment. Part of that expertise can be demonstrated by an entry-level, basic, or advanced certification in nursing, according to AACN CertCorp.

A growing number of states, including Minnesota, Texas, and Louisiana, are requiring proof of advanced practice capabilities before recognizing nurses under CNS status. More

Sample Test Questions

1. The critical care department is considering purchasing new ET tube holders. An appropriate program of evaluation would include testing the new device:

a. Using a specified protocol for care compared with care routinely provided.

b. In the post-cardiac surgery unit, and compare with current care being provided in the medical-surgical ICU.

c. On a randomly assigned group of patients using a standard care protocol for patients in both the routine care and test groups.

d. For a six-month test period followed by a comparison period of six months.

Reference

Gift AG. Cost Effectiveness: Designing research for product evaluation, *Clin Nurse Spec* 1995; 9:204-206.

2. The CNS would guide the staff nurse in making which of the following recommendations to the inter-disciplinary team to provide ongoing pain relief for this neonate post operatively:

a. Monitor for episodes of tachycardia.

b. Increase the Fentanyl infusion to 3 mcg/kg/hr.

c. Initiate a paralytic agent such as Pavulon.

d. Provide music therapy as a non-pharmacologic intervention.

Reference

Gomella TL. *Neonatology: Management, procedures, on-call problems, diseases, and drugs.* Stamford, CT: Appleton & Lange; 1994.

are expected to follow suit. The Critical Care Registered Nurse certification (CCRN), while still valid for bedside registered nurses, is no longer acceptable as a certification status by many states for advanced practice.

However, states requiring the higher certification have left the task of designing and administering the exam to AACN, which was an appropriate decision, according to Eastwood. A professional organization or society is in a much better position to develop and design the test content, she adds.

Applicants who take the CCNS will be surprised by a number of differences from the CCRN exam. Unlike the CCRN test, which has become a standard among veteran CCU nurses, the CCNS represents a departure in both content and focus, says **Martha A.Q. Curley**, RN, PhD, critical care clinical nurse specialist at Children's Hospital Boston. Here are four main differences:

• **Patient-centered focus.**

The biggest difference lies in the test's patient-centered focus. While the CCRN and other nursing exams concentrate on testing clinical tasks and procedures, the task-oriented focus has been replaced in the CCNS with questions that emphasize a nurse's clinical competency in meeting a patient's medical needs. **(For sample CCNS test questions, see chart, left.)**

• **Master's degree complexity.**

Another difference lies in the way the test is skewed. "While the test meets the National Council of State Boards of Nurses' [located in Washington, DC] standards, in design it is geared to the knowledge level of a newly graduated master's degree nurse," Eastwood says. The questions also are more complex than those for a bedside RN, but a seasoned advanced practice nurse should have no trouble with the questions, Eastwood adds.

• **Emphasis on concepts not mechanics.**

Nurses who have not had abundant acute care or cardiac unit experience will be able to pass the exam. The questions do not demand a specialized knowledge of equipment use or procedures.

The exam will require the test-taker to understand concepts and cause and effect. For example, questions regarding the cardiac intraaortic balloon pump will concentrate more on the medical purpose for the device rather than specific timing or inflation-deflation factors in its use.

The CCNS exam application contains a list of study topics, labeled as a blueprint that covers the test content. It is divided into three general problem areas: neonatal, pediatric, and adult patient care. There is also a helpful bibliography. The materials should be sufficient to help applicants prepare for the test, says Curley.

• **Computer-based testing format.**

Unlike most nurse certification exams, the CCNS will be computer-based. The test will be given in a workstation setting at several designated testing sites.

The format allows applicants to schedule their exams when it's convenient and they can obtain their scores and results more quickly than with conventional pen-and-paper tests.

The four-hour test consists of 175 multiple-choice items. Of those, 150 concern non age-related patient questions. The remaining 25 address either

Patients Needs Characteristics

- **Resiliency**: Capacity to return to a restorative level of functioning.
- **Vulnerability:** Susceptibility to actual or potential stressors.
- **Stability:** Ability to maintain steady-state equilibrium.
- **Complexity:** Entanglement of two or more systems, (body, family, therapies).
- **Resource availability:** Extent of medical/social resources.
- **Participation in care:** Level of patient/family involvement.
- **Participation in decision making:** Level of patient/family decision making.
- **Predictability:** Expectation of course of events or illness.

Nurse Competency Characteristics

- **Clinical judgment**
- **Clinical inquiry** (innovator/evaluator)
- **Facilitator of learning**
- **Collaboration potential**
- **System thinking skills**
- **Advocacy/moral agency** (working with patient/family/nursing staff)
- **Caring practices**
- **Response to diversity**

Source: AACN Certification Corp., Aliso Viejo, CA.

adult, neonatal, or pediatric patients. Each question attempts to assess one or more nurse characteristics identified by test designers as part of the synergy model, the term for the exam's patient-care focus.

The principles of the synergy model are based on the assumption that synergistic interaction between nurse competencies and patients' needs will result in "optimal patient outcomes," according to test designers.

AACN CertCorp has identified eight patients'-needs characteristics and eight nurse competency characteristics that will be incorporated into the exam. **(For a list of these characteristics, see chart, above.)**

"The test is by no means a given for passing. We expect a pass rate of about 75%," says Eastwood. "Nurses will find it challenging, but any prepared and experienced master's-level advanced practice nurse will be able to do well." ■

Pay increases lag for CCU nurses compared to others

Cutbacks, mergers, talent-drain blamed for low rise

A serious crunch in the supply of registered nurses (RNs) nationally is pushing up salaries and benefits. But bedside nurses in certain specialties such as critical care are not seeing pay increases as high as those on a hospital's general medical floors, according to recent surveys.

In fact, overall nationwide salary increases for RNs in fields such as critical care, emergency medicine, perinatology, and oncology have fallen since 1994, according to Hospital and Healthcare Compensation Services (HHCS), an Oakland, NJ, research firm that tracks health care salaries, wages, and benefits.

The drop, when measured in terms of annual percentage increases, has been as much as half of the amount of increases in some years.

For example, "between 1997 and 1998, nurse compensation [in certain specialties] increased by about 3.13%," says **Rosanne Cioffe**, HHCS's director of reports. "In 1996, the rise was 1.99%. But five years ago, the rate of increase for all nurses ranged between 4% and 5% and has remained strong ever since," Cioffe says.

One reason for the laggard showing in the CCU has been diversity. "Home care and certain specialized acute-care clinics have drained away much of the hospital industry's nursing talent in critical care and other specialties," Cioffe says.

CCU nurse pay falls behind other categories

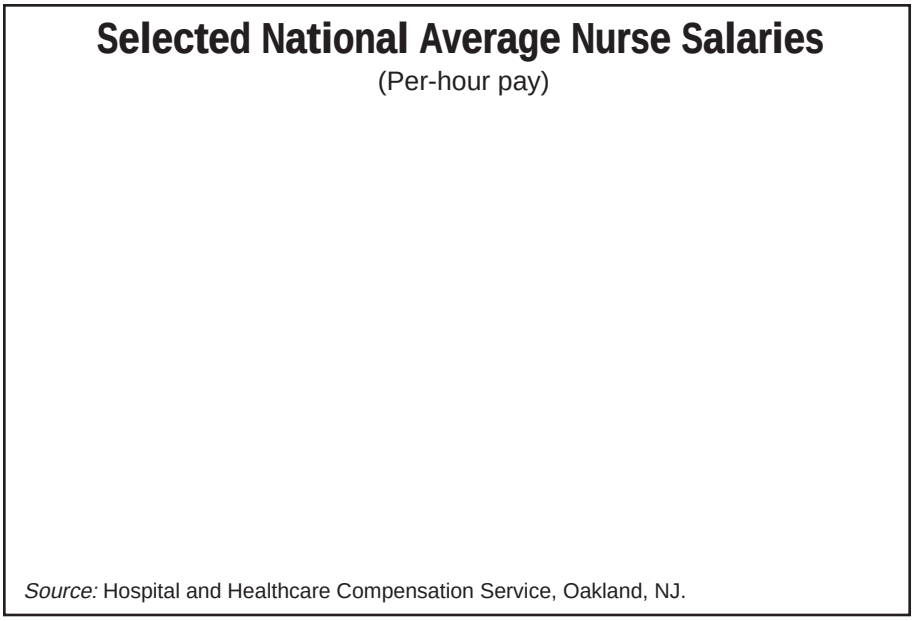
"Separately, these salaries tend to be lower than those that hospitals normally pay, but they figure into the data when reporting total salary increases," Cioffe says. However, much of the talent-drain has leveled off due to reimbursement problems in home care and other industries, she adds.

The pay problem appears even worse when compensation is calculated on an hourly basis. The most recent salary survey released in November by HHCS shows that both CCU and ICU nurses' hourly pay was roughly equivalent to that of a general staff nurse.

In fact, the staff nurse's average hourly pay exceeded that of the CCU nurse by $1.13 and was $1.11 an hour higher compared with the ICU nurse. **(For a comparison table, see chart on p. 30.)**

Selected National Average Nurse Salaries

(Per-hour pay)



Source: Hospital and Healthcare Compensation Service, Oakland, NJ.

According to data published in December by *Modern Healthcare* magazine, average annual RN salaries stood at about $40,000, but varied by as much as $10,000 across the country. In many cases, the total amount of compensation was actually higher because many hospitals were willing to give RNs generous sign-on bonuses. The report cited the severe nurse shortage for the generous one-time pay. One hospital, cited in the report, was willing to give nurses a $5,000 bonus if hired.

Years of corporate downsizing and mergers among hospitals have kept nurse salaries relatively low, Cioffe says. The current manpower shortage "appears to be a response to those business decisions," she adds.

[Editor's note: To obtain a copy of the 1998-1999 Hospital Salary and Benefits Report, contact: Rosanne Cioffe at Hospital and Healthcare Compensation Service, P.O. Box 375, Oakland, NJ 07436. Telephone: (201) 405-0075. Retail price of the report is $295 plus $7.50 S&H. Refer to ISSN no. 0277-2353] ■

Self-evaluation can trim nursing delays

You can speed up clinical turnaround, says expert

More and more, critical care units seem to resemble emergency departments (EDs) in the pace and intensity of acute patient care. In both areas, effective time management has become crucial to achieving positive clinical outcomes.

"Critical care decisions no longer apply only to the ICU," says **Linda Kosnik**, RN, chief nursing officer of 400-bed Overlook Hospital in Summit, NJ. "Emergency and cardiac care units share in the same time pressures to deliver good, quality care to critically ill patients."

Consequently, CCU nurses can benefit from lessons learned in the best-run EDs, which have trimmed turnaround time in areas such as X-rays. Unnecessary delays in completing these standard patient-care procedures have frustrated busy nurses and led to less than optimal outcomes in clinical care, Kosnik says.

Kosnik advises managers to use a little creativity in shortening the time from initiating orders to the arrival of anything from medications to X-rays. Overlook has been recognized by the Health Care Financing Administration and the American Hospital Association among other authorities for its benchmark innovations in time-to-delivery in nursing care.

Hospital cut X-ray delays in half

The hospital has won awards for patient satisfaction and time-to-thrombolytic performance in emergency cardiac cases.

Nurses and physicians cut the waiting time by more than half on X-ray orders by evaluating the procedure and simply changing the sequence of certain events in the process. In doing so, administrators were careful to avoid violating legal or licensure requirements or to overstep accreditation standards.

Whereas it used to take 75 minutes for X-rays to be ordered, taken, read, and delivered, it now takes less than 30 minutes, Kosnik says. Here's how she advises hospitals to do this:

- Create a clinical team to explore ways of reducing existing turnaround time.
- Set benchmarks on desired goals and time targets based on realistic expectations.
- Develop a visual flowchart that illustrates the existing process from order to delivery.
- Evaluate how changes in each step of the flow chart will affect time-to-delivery and the effectiveness of the delivery on patients.

• Initiate changes to the process slowly and in monitored phases.

In doing so with X-ray orders, managers found that "lots of extras were built into the system only to accommodate the X-ray department," Kosnik says. Considerable time was spent waiting for the X-ray tech to get around to shooting the film [and] collecting it. Waiting for the radiologist to read the results caused the biggest delay.

The staff agreed to eliminate the wait involved in the reading of the film and placed that step at the end of the process. Now X-rays are rushed to the ED where emergency physicians read the film first to help determine treatment plans. The film is still read by the radiologist, but after the attending physicians gets a first look, Kosnik says. ■

Be careful when judging performance on tight data

Take a broader view using cost, speed and quality

Is your unit performing as well as the best hospital in your market? Are you using your nurses efficiently?

The answers aren't likely to emerge from any one source in your hospital's database. More likely, you'll have to look at a broader picture of performance to make any valid assessments of your achievements, advises consultant **Sharon A. Lau**, a principal with the Los Angeles office of Medical Management Planning, a benchmarking research firm based in Bainbridge Island, WA.

Administrators often mistakenly base their accomplishments on a narrow set of parameters. Basing performance on cost alone, for example, actually tells you very little about your unit's performance, Lau observes. "Your unit may be a truly low-cost provider, but it could be setting records on poor patient outcomes or clinical inefficiency," she adds.

Benchmarking yields clues about others

More importantly, these falsely interpreted measures can lead to distortions in weighing a hospital's future strategic planning. "If you're really doing that great, stop and look at all your parameters. You may get a sharply different view," Lau advises.

Optimally, performance should be gauged on a combination of three variables:

• Cost, which is determined by how many nurse hours worked or expenses incurred per patient day.

• Speed, as in the time elapsed when a nurse orders a prescribed medication and when it's delivered.

• Quality, including patient outcomes and satisfaction measures.

And, don't be afraid to compare yourself to your competitors on these performance factors, especially the best ones nationally or locally, she says. In fact, it's advisable to emulate the best performing facilities. "It isn't illegal to steal ideas that work. It actually raises the bar for everyone else," Lau adds.

Benchmarking, if used correctly, has become a valuable tool for comparison. For example, a recent quarterly report on nurse productivity among neonatal ICUs conducted by Medical Management Planning shows that among children's hospitals nationwide, the median number of hours that nurses worked per patient day stood at 14.51.

The total number of patient days reported by the median hospital stood at 490. **(See graph, left.)** The worst

NICU Productivity — Worked Hours per Patient Day
July 1998

Source: Medical Management Planning Inc., Los Angeles, 1998.

performing hospital among the 15 surveyed reported 27.6 hours over 90 patient days. The best-performing facility posted 9.51 hours and a total of 1,411 days. If you shoot for the median level on nurse hours you wouldn't be wrong, consultant Lau says.

While the information is revealing by itself, unfortunately, it presents only a partial picture of overall performance, Lau says. "The data tell you a lot about cost, but nothing about the positive effect of nurses on their patients or their outcomes."

Hospitals that want to participate in a performance benchmarking survey can contact Lau at Medical Management Planning, 2049 Balmer Drive, Los Angeles, CA 90039. Telephone: (323) 644-0056. E-mail: salau@ix.netcom.com.

[Editor's note: In the April issue, Critical Care Management *will devote a more expanded report to benchmarking for managers.]* ■

Medical waste could be putting your staff at risk

Nurses can help influence environmental policy

One of the ironies of the nursing profession is that in striving to make life better for patients, nurses are exposing themselves to potential life-threatening infections and injuries.

For many health care workers, a hospital can be a dangerous place to work, according to environmental health experts as **Susan Wilburn**, RN, MPH, an official with the American Nurses Association (ANA) in Washington, DC.

There's been a groundswell of concern over bloodborne pathogens, airborne toxins, workplace violence, and patient care-related injuries to nurses, says Wilburn, senior specialist in occupational health and safety for the ANA.

Late last year, Congress declared war on the needlestick issue by directing several government agencies, including the U.S. Centers for Disease Control and Prevention, to develop standards for the use of safer needle devices. Other occupational safety issues, such as those involving back injuries sustained from patient lifting, have also captured the profession's attention.

In fact, the list of common workplace hazards is longer, says **Hollie Shaner**, RN, MS, president and co-founder of the Nightingale Institute for Health and the Environment, an Essex Junction, VT, nonprofit group.

A major culprit among health hazards found in hospitals is medical waste. As an industry, "we produce 6,700 tons of it per day," Shaner says. When incinerated, the waste releases dioxins and other toxins that find their way into the ecosystem and endanger public health.

Meanwhile, much of the risk of exposure to toxins and biological threats from medical waste and other workplace hazards affects hospital workers who happen to be in closest proximity to patients.

No matter where in a hospital you work, the risk level is about the same, notes Wilburn. "Individually, the exposure levels [to nurses] may vary. But no one department is any more or less vulnerable to bloodborne pathogens or other health risks than any other," she observes.

In the ICU where stress levels usually run high, patients are extremely ill, and the pace of work is often hectic. Bedside nurses may be particularly prone to nosocomial infections and work-related illnesses and injuries, some authorities say. Operating suites and CCUs are generally among the largest producers of medical waste, Shaner says.

Nurses not trained to be hazard-sensitive

Yet, nurses in these departments don't always think about the potential for harm that surrounds them. Few make the effort to consider what should be done about it. "Nurses don't think about these things because we haven't been trained that way," says Shaner, a former critical care nurse.

Managers and administrators have a tremendous opportunity to influence environmental health policies at their facilities, and it doesn't take reinventing the wheel to help create a safe working environment for nurses, Wilburn notes.

A few observations provided by Wilburn and Shaner are useful in making a point:

• **Latex.**

While protein allergens made headlines as a culprit found in powdered latex gloves, latex is also commonly found as a component part of intravenous lines. The protein was found to adversely affect 10% of nurses and has been blamed for disorders ranging from dermatitis and asthma to severe anaphylaxis.

Last year, the U.S. Food and Drug Administration ordered all medical products, including latex gloves, to be properly labeled, and most providers

have stopped using latex powdered gloves. Yet, latex and other potentially hazardous materials are available in small quantities in several common medical supplies, including intravenous lines.

• **Mercury.**

A highly toxic metal, it is commonly used in dozens of places in hospitals. It's found in common products from thermometers to esophageal dilators. Four grams of the metal are sufficient to contaminate a medium-sized lake, Shaner says. Yet, thermometers often end up in hospital trash bins and are easily accessible to patients, including children, and pose a threat to workers if not disposed of properly.

• **Bio-hazardous waste.**

The industry has made significant progress in handling syringes, body matter, and fluids through special disposal options that include the use of designated "red bags" and other containers. Yet, workers often confuse the disposal of tainted gloves and paper towels with other contaminated materials.

These items should end up in a general trash bin and not combined with more dangerous materials in special containers such as red bags. These standards are defined differently in 42 of the 50 states. Check with your hospital's safety committee. Biohazardous waste represents about 15% of a hospital's medical waste stream, according to Shaner.

Nurses can ensure safe work conditions

While documented cases of injuries or negative reactions from an unsafe health care work environment have been plentiful, changing behaviors has been another matter. This fact only redoubles the need for awareness and prevention, Shaner says. Nurses can do a great deal to ensure a safer work environment as the five following suggestions indicate:

• **Appoint a nurse within the department to oversee environmental hazard controls.**

The nurse can act as unit ombudsman and troubleshooter for assessing risk factors. The same individual can represent the unit on the hospital safety committee to report on the department's particular needs and concerns. The nurse should be trained in environmental safety and must receive the hospital's full support, Shaner says. The hospital also should be able to provide that training.

• **Investigate the basis for extensive sick leaves and absences.**

A pattern may emerge pointing to the source adversely affecting certain nurses. If the problem is due to an environmental cause, the research may help provide clues to possible solutions, Wilburn says.

• **Adopt environmental management standards for the unit.**

The U.S. Occupational Safety and Health Administration (OSHA) in Washington has published guidelines and standards for disposing of medical waste. And nonprofit groups such as the ANA and the American Hospital Association (AHA) in Chicago have guidelines for ensuring a safe work environment. For copies of ANA or AHA standards, contact your hospital's safety committee or risk management department. **(For information on how to obtain a set of OSHA guidelines, see editor's note at the end of this article.)**

• **Establish a protocol for managing environmental health and safety hazards.**

Extent of the protocol would vary depending on the unit's size, number of employees, nature of the hazard, and the volume of potential risk. Protocols should specify in writing exact procedures for handling potential materials such as proper labeling and safeguards for their disposal.

• **Provide for training and make environmental management a priority.**

New hires and transfers should be taken on a tour of the unit. Potential health hazards, including supplies and equipment, should be specifically pointed out as a precaution. This includes knowing what an MSDS (materials safety data sheet) is and knowing where they are kept, Shaner adds.

"The procedure should be given as much importance as fire safety," Shaner emphasizes. Staff should also receive training on hazardous materials based on published guidelines and information obtained from the hospital safety committee. "Most of these safeguards are easy to implement, but they can have far-reaching implications."

[Editor's note: The Office of Occupational Health Nursing in Washington publishes a document, Framework for a Comprehensive Health and Safety Program in the Hospital Environment. *To obtain a copy, contact: The Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Telephone in Washington: (202) 512-1800. Web site: www.gpo.gov/su_docs. Refer to order no. 029-016-00149-2. Price is $4.50. Or log on to OSHA's Web site: www.osha. gov. The agency is a department of OSHA.]* ■

Can't retain nurses? One hospital recruits RN grads

CCU bets heavily internships will yield retention

Struggle is a term that **Kathy Arnold**, RN, MS, a nurse manager at Swedish American Health System in Rockford, IL, knows all too well. Exhausted by the demands of trying to staff her CCU and coming up short each time in 1998, Arnold helped launch a plan she believes will end her hospital's costly reliance on nurse registries and staffing agencies.

The solution: Rather than search for seasoned CCU nurses, Arnold decided to cultivate her own nurses from the bottom up. She went to the most logical place in search of raw recruits — local colleges and universities.

In June, Swedish American enrolled its first group of three recently graduated RNs into its critical care internship program. The group may be small, but the five- to six-month course has been strategically designed with a dual purpose in mind: To give interested grads a thorough immersion into a real-life critical care practice setting while giving them a compelling reason to stay at Swedish American, hopefully for years.

Although many hospitals are trying this with mixed results, Arnold, a 14-year veteran CCU manager, says her approach can and will succeed. Why? "Because we're willing to work with these kids," she says, "to do everything we can to help them succeed. If they succeed, we succeed."

Hospital provides intensive CCU training

In this respect, Swedish American is unusual. Many hospitals simply recruit recent graduates and put them to work on medical-surgical floors before they advance to tougher assignments such as critical care. In contrast, interns at Swedish American are immediately immersed into critical care nursing and learn the specialty from day one.

However, from a management viewpoint, the program isn't for the impulsive, Arnold quickly points out. It requires a lot of time, patience, commitment, and dedication. Due partly to the intensive nature of critical care, "It's not for anyone looking for quick fixes," says **Rita B. Klint**, RN, MS, Swedish American's vice president of patient services. **(For a list of key factors, see chart on p. 35.)**

But for Swedish American, the time and effort involved is worthwhile. Until recently, the unit had been spending about $90,000 per year on agencies and registries, paying RNs a whopping $45 per hour whenever they were even available. The resulting investment has proven fruitless, Arnold says.

At the end of a month, the unit was still regularly under-staffed and the money was spent. "You can recruit all you want, but if you can't retain, you defeat the whole purpose," Arnold observes.

The combined 20-bed medical-surgical and cardiac-care ICU has been operating at least four FTE (full-time equivalent) nurses short on each shift, or 11% down, which has prevented the 20-bed unit from moving beyond an average patient census of 14, or 70% of bed capacity. The combination of the staffing costs and losses in potential patient revenue left the hospital with few options, Klint says.

Swedish American, which is located in a heavily populated suburb of Chicago, has all the urban problems of any large teaching hospital. At a cost of about $30,000 to $40,000 per intern over six months to cover salary, books, class time, and pay for an assigned preceptor, the expense is viewed as a long-term investment rather than an additional cost, Arnold says.

Beginning with the initial recruitment effort, administrators are careful not to make mistakes. Losing an intern after such a heavy investment would be a huge setback. Therefore, the following aspects of the program are carefully executed:

- **Recruitment.**

While the program hasn't enjoyed an

COMING IN FUTURE MONTHS

- Managing patient gridlock while keeping your census from dropping
- Strategies that will reduce your dependence on agency nurses
- How one hospital used volunteers to bolster nursing effectiveness
- Home care s role in critical care nursing and how your unit can benefit
- Six effective ways to track and reduce your ICU s infection rates

Key factors in Swedish American's graduate internship program

- High interest level and career goals in applicants.
- Thorough interview and assessment prior to recruitment.
- Assignment of qualified, compatible nurse preceptor.
- Clearly defined and detailed weekly learning objectives and goals per shift.
- 200 hours of integrated didactic classroom instruction.
- Daily supervised guidance and support of intern from preceptors.
- Phased-in clinical responsibilities for interns in assisting bedside nurses.
- Carefully monitored, increased responsibility by interns in patient-care duties.
- Daily review and feedback with preceptor of on-floor work experience.
- Weekly progress evaluation involving intern, preceptor and unit nurse manager.
- Documented progress evaluations.
- Program flexibility and focus on intern's own pace of learning.
- Administration's support and financial investment.

Source: Swedish American Health System, Rockford, IL.

overwhelming response from applicants, management has been careful to adhere to high standards. Applicants are carefully interviewed as they would for any paid position, says Klint. Some apply from a student nurse PCT (patient care technician) program that the hospital has operated for some time.

Of key importance is whether the graduate has a sincere interest in specializing in critical care or simply wants a job, Arnold says. The internship pays between $14.00 and $23.00 per hour, depending on experience. Energy, initiative, capacity for learning, people skills, and enthusiasm are also important.

• **Education.**

Although the internship involves practical bedside learning, the program includes a demanding regimen of classroom instruction in core competency clinical practice established by the American Association of Critical Care Nurses. About 200 hours of classroom instruction are scheduled into the 40-hour workweek over 20 to 24 weeks.

The first three weeks are spent with a clinical nurse specialist going over fundamentals such as admitting and starting intravenous feeding. The second three weeks, the intern works with patients' nurses shadowed by a preceptor with increasing responsibility. Over the next several weeks, the intern is given more leeway in decision making and eventually works night and evenings shifts.

• **Preceptorship.**

Each intern is assigned an experienced RN preceptor who acts as the intern's on-the-job teacher and guide. Unlike the general medical floors, the CCU requires one-to-one nurse-to-patient staffing at times. The interns, therefore, assist the attending nurses and learn by doing under the preceptor's supervision. The arrangement allows for thorough explanations, questions and answers, says veteran nurse **Judy Bowersock**, RN, a preceptor.

• **Clear-cut goals and objectives.**

Each week, program managers outline goals and objectives for interns. The goals can range

Critical Care Management (ISSN 1070-4523) is published monthly by American Health Consultants®, 3525 Piedmont Road, N.E., Building Six, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodical postage paid at Atlanta, GA 30304. POSTMASTER: Send address changes to **Critical Care Management**, P.O. Box 740059, Atlanta, GA 30374.

Subscriber Information

Customer Service: (800) 688-2421 or fax (800) 284-3291. World Wide Web: http://www.ahcpub.com. E-mail: customerservice@ahcpub.com. Hours of operation: 8:30-6 M-Th, 8:30-4:30 F, EST.

Subscription rates: U.S.A., one year (12 issues), $249. Outside U.S., add $30 per year, total prepaid in U.S. funds. One to nine additional copies, $125 per year; 10 or more additional copies, $75 per year. Call for more details. Missing issues will be fulfilled by customer service free of charge when contacted within 1 month of the missing issue date. **Back issues**, when available, are $42 each. (GST registration number R128870672.) Continuing education credits: $40.

This continuing education offering is sponsored by American Health Consultants®, which is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center s Commission on Accreditation.

Editor: **Howard Kim**, (626) 844-6597, (HKIM383995@aol.com).
Publisher: **Brenda Mooney**, (404) 262-5403, (brenda.mooney@medec.com).
Managing Editor: **Coles McKagen**, (404) 262-5420, (coles.mckagen@medec.com).
Production Editor: **Nancy McCreary**.

Editorial Questions

For questions or comments, call **Howard Kim** at (626) 844-6597.

from mastering intubation, titration, taking arterial blood gasses, admitting, documenting, and daily charting. The intern's progress is carefully monitored and discussed with the preceptor and unit manager during daily and weekly meetings. The discussions are designed to be supportive, helpful, and encouraging, says Bowersock.

• **Flexible pacing.**

Interns are offered a positive, flexible work environment to allow them to learn at their own pace, says **Glenn M. Gungel**, RN, who graduated from nursing school last year and enrolled as an intern while taking his state boards. While the program offered him "great hands-on training, there was always someone there who could help with answers" and direction, says Gungel, a 50-year-old who decided two years ago to become a nurse. Gungel was among the first to complete the program and has decided to stay at Swedish American.

Pacing is important as both a means of easing the intern into a very demanding clinical job, but also as a means of giving the intern a positive, caring experience, says Arnold.

The program is new and therefore the risks are great, Klint acknowledges. "Initially, it was viewed as a huge undertaking with a doubtful payoff," says Arnold. To some degree, it still is. ■

Nurse practice 'blueprint' set for release by AACN

Toolkit will be the first to help CCU nurses

Critical care nurses are about to receive an authoritative set of practice tools that will answer dozens of their questions concerning appropriate levels of patient care in the CCU.

In May, the American Association of Critical Care Nurses (AACN) is expected to release the first edition of its long-awaited guide, *The Staffing Blueprint: Constructing Your Own Solutions.*

The guide is described as a comprehensive resource that covers an exhaustive range of patient-care concerns ranging from acceptable admission-discharge criteria to patient satisfaction and team nursing strategies.

"The Blueprint surpasses anything that's come before because it focuses on concerns that nurses have expressed, which are directly linked to improving patient care in their units," says **Justine Medina**, RN, MS, a clinical practice specialist, who is overseeing the project at AACN, which is based in Aliso Viejo, CA.

In fact, the Blueprint replaces the *Staffing Toolkit*, an older resource that was used by AACN as a practical CCU handbook. According to Medina, the Blueprint should be available for purchase in May.

To obtain a copy, contact: Medina at AACN, 101 Columbia Ave., Aliso Viejo, CA 92656-1491. Telephone: (800) 809-2273. E-mail: justine.medina@aacn.org. Retail price for the tool was not known at time of publication. ■

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. ■