

Hot Issues in ICU Staffing

As temperatures rise in critically ill patients, so do nurses' workloads.

An ICU nurse's workload can increase when patients are febrile, yet hospitals often don't consider that fact when staffing their units. For that reason, Kiekkas and colleagues studied the relationship between nursing workload and fever for nearly a year at a 14-bed, medical-surgical ICU at a university hospital in Greece. The study included patients whose ICU stays were at least 12 hours; of 361 patients, 188 (52%) had fever.

To gauge nursing workload, investigators used the Therapeutic Intervention Scoring System-28 (TISS-28), which assigns points to patient care activities. One TISS-28 point corresponds to 10.6 minutes of a nurse's shift; in a typical shift, a nurse is considered capable of delivering the care equivalent of 46.35 TISS-28 points. Nurses took patient temperatures at one-hour intervals around the clock, as was routine practice in this ICU.

Peak temperature was a significant predictor of mean daily

TISS-28 scores, which were significantly higher in patients with fever than in those without. The presence of fever increased mean daily nursing workload by 9.7% overall and by 11.4% and 25.9%, respectively, when peak temperatures rose above 39.2°C (102.5°F) and 40.2°C (104.3°F).

So why don't administrators think about fever in terms of staffing? According to Linda Bell, a clinical practice specialist at the national office of the American Association of Critical-Care Nurses in Aliso Viejo, California, "When estimating nursing workload, we tend to look more at the technological indicators—mechanical assist devices, the number of drips, how frequently those drips need adjustment—rather than at the actual patient symptoms."

Working two days a month as a bedside staff nurse in a medical ICU, Bell knows firsthand that fever amplifies nursing time. Of the tasks required—obtaining blood cultures, implementing cooling measures, and adminis-

tering antipyretics—she says, "if two of my patients have a fever, that's a huge increase in the workload." Still, even Bell has overlooked the staffing implications of fever. "If one patient has a fever," she acknowledges, "I'd tell the physician or pass it along to the nurse on the next shift, but I might neglect to tell my charge nurse." The findings of Kiekkas and colleagues serve as a reminder that clinical signs and symptoms "remain important predictors of nursing intensity."

Bell suggests that nurses ensure that administrators recognize fever's impact on nursing workload in a number of ways. Educators can use studies such as Kiekkas and colleagues' to raise awareness. Moreover, she adds, nurses "who take such findings and build them into their institution's system for extrapolating acuity data can affect decision making on a unit level."—*Maribeth Maher*

Kiekkas P, et al. *Am J Crit Care* 2008;17(6):522-31.

NewsCAPS

↳ **Pennsylvania outlaws mandatory overtime for nurses.** In a ceremony on December 18, 2008, Governor Edward G. Rendell signed the bill into law; when it goes into effect in July, it will bar health care facilities from forcing nurses and some other practitioners to work beyond their regularly scheduled shifts. "There was a problem with nurses' being overworked and overtired and potentially error-prone in their jobs," Governor Rendell said, according to the *Philadelphia Inquirer*.

↳ **Children and young adults who survive aggressive cancer treatment often face diminished fertility.** A clinical review in the November 2008 *BMJ* (*British Medical Journal*)

recommends that nurses and physicians counsel patients younger than 40 and their families about fertility preservation before cancer treatment begins. Men can have sperm samples cryopreserved. Women and their male partners can produce embryos for freezing via in vitro fertilization (IVF). For women with estrogen receptor-positive breast cancer, safer IVF methods are being developed that don't require increasing the amount of estrogen in the body. Strategies for single women, such as freezing just the egg cells alone or having ovarian tissue frozen for later reimplantation, are still experimental. Hospital ethics committees should address fertility preservation in children and teens.

Sex and Violence in the Media Influence Teen Behavior

Three studies show a correlation.

Highly sexual TV shows and intensely violent Web sites and video games may be affecting teenagers' behavior, according to three studies published in *Pediatrics*.

Sex on TV and teen pregnancy. A total of 2,003 teens (ages 12 to 17 years) were asked how often they watched 23 popular TV shows that portrayed passionate kissing, sexual talk, and sexual intercourse. One to

Children who played violent video games early in the school year had increased physical aggression three to six months later.

three years later they were interviewed again; 744 teens reported being sexually active. Those who watched the most TV shows with sexual content were two to three times more likely to become pregnant or to impregnate someone than were teens who watched the least. The authors say that the findings of this longitudinal study demonstrate "a prospective link" between watching the shows and becoming pregnant, with implications for pediatricians (who should be aware of the link), media outlets (which should portray the negative outcomes of sex), and parents (who should watch TV with their children and talk with them about sex).

Web sites and teen violence. A total of 1,588 10-to-15-year-olds were asked about the types of Web sites they visited. Youths who most frequently visited sites depicting real people fighting,



shooting, or killing were five times more likely to report engaging in assaults, stabbings, robberies, and other violent behavior than were those who never visited violent Web sites. "Violence online may be particularly important to our understanding of seriously violent behavior among today's young people," the researchers write. They advise health care professionals to encourage parents to install software that blocks and filters violent sites as a way of reducing access to online violence.

Video games and violence. Teens in both Japan, considered a "low violence" culture, and the United States, a "high violence" culture, who chronically play violent video games behave more aggressively than classmates who don't play these games,

researchers say. Analyzing data from studies of 1,231 Japanese students (ages 12 to 18 years) and 364 U.S. students (ages nine to 12 years), the authors found that children who played violent video games early in the school year exhibited increases in physical aggression such as kicking, punching, and hitting three to six months later. The authors conclude that the two cultures' similar behavior "strongly supports the theory that playing violent video games is a causal risk factor for relative increases in later physical aggressiveness," and rules out the notion that naturally aggressive children prefer violent video games.—*Carol Potera*

Anderson CA, et al. *Pediatrics* 2008;122(5):e1067-e1072; Chandra A, et al. *Pediatrics* 2008;122(5):1047-54; Ybarra ML, et al. *Pediatrics* 2008;122(5):929-37.

End-of-Life Conversations Benefit Patients and Caregivers

They may also improve the quality of patients' lives in their final days.

Are conversations about end-of-life care distressing to patients? Some physicians and nurses think so, even though there's no good evidence to support this view. In fact, a recent survey of patients with advanced cancer found that rather than doing harm, end-of-life conversations lead to better-quality lives for patients and caregivers, and after such discussions more patients opt for hospice care and less-aggressive treatment.

As part of the Coping with Cancer study, jointly funded by the National Cancer Institute and the National Institute of Mental Health, 332 patients with cancer were surveyed in their final weeks of life. The survey's questions concerned whether they had talked with their physicians about the end-of-life care they wanted to receive, and responses were compared with care they actually did receive (data were obtained from medical records after they died). Interviews with caregivers (usually spouses or adult children) were conducted after the patient's death and about six months later.

About a third of patients recalled discussing end-of-life care with a physician. These patients, compared with those who didn't discuss end-of-life issues, were nearly twice as likely to accept that death was imminent, 1.5 times more likely to enroll in hospice care, somewhat more likely to choose treatments to relieve pain and discomfort than to extend life, and more than twice as likely to have completed a do-not-resuscitate order. Aggressive therapies, such as mechanical ventilation

and resuscitation, were seven to eight times more likely to be performed on patients who did not have an end-of-life conversation. Such aggressive medical care diminished the quality of life in these patients, whereas hospice care improved it.

Caregivers whose patients received aggressive care had triple the risk of major depression than those whose patients didn't receive it. And caregivers of patients with higher (better) quality-of-life scores reported less regret and greater ability to face the death than caregivers of patients whose scores were low. The findings suggest that "end-of-life discussions may have cascading benefits for patients and their caregivers," the authors write.

"Nurses are the ones who do the follow-up," although physicians generally initiate end-of-life conversations, says Rose Virani, director of the End-of-Life Nursing Education Consortium (ELNEC) at City of Hope, a cancer center in Duarte, California. After the physician leaves, "patients and families are often in a state of shock. The nurse answers questions, makes sure the patient understands what was said, introduces hospice and palliative care choices, and provides quiet time for patients and caregivers to think."

The study's findings show the importance of nurses' communication skills, Virani says, noting that although nursing schools teach basic skills such as conducting family meetings and breaking bad news, they don't teach specific techniques for use



Cancer patient Eileen Mulligan, 68, was told by her physician that her prognosis was grim and that she should explore hospice care. According to the Associated Press, Mulligan was at first shocked, then decided, "It was a really good way of handling a situation like that." Many physicians never have such discussions with their patients, but when they do it's often nurses who handle the details. Photo credit: Associated Press / Kevin Wolf.

in holding end-of-life discussions. The ELNEC project (www.aacn.nche.edu/elneec) has trained thousands of nurses in end-of-life care since it began in 2000. "We cannot be fearful of our own mortality," Virani says. "Before we can talk with patients about the end of life, we need to accept it ourselves."—*Carol Potera*

Wright AA, et al. *JAMA* 2008;300(14):1665-73.

NewsCAPS

By late December cholera had killed nearly 1,600 people in Zimbabwe and infected more than 30,000, the World Health Organization (WHO) reported. A waterborne bacterial disease, cholera causes severe diarrhea and dehydration. The WHO says the outbreak is being propelled by inadequate sanitation systems and insufficient supplies of clean water; a shortage of health care workers has also contributed to the spread. A WHO delegation has traveled to Zimbabwe's capital of Harare to lead a containment effort. Cases have also been reported in South Africa and Botswana.



A man suffering from cholera is taken in a cart to a nearby clinic in the high density suburb of Budiriro, Harare, Zimbabwe, on November 20, 2008. A lack of clean water and poorly maintained sewage systems have caused the waterborne disease to thrive. Photo credit: Associated Press.

Aspirin therapy offers no coronary benefit in patients with diabetes, according to two recent randomized studies. A Japanese study published in the November 12, 2008, issue of *JAMA* enrolled 2,539 patients without a history of atherosclerotic disease and gave half of them aspirin, either 81 mg or 100 mg daily, and the other half no aspirin (although nine patients in the "no aspirin" group needed and received aspirin or antiplatelet medication) for a median of 4.37 years. Atherosclerotic events occurred in 5.4% of those taking aspirin, compared with 6.7% of those not taking aspirin. A Scottish study published in the October 16, 2008, *BMJ* (*British Medical Journal*) gave 1,276 patients 100 mg of aspirin plus an antioxidant capsule, aspirin plus placebo, antioxidant plus placebo, or placebo plus placebo, for a median of 6.7 years. Among the 638 patients in the two aspirin groups, 116 had a coronary incident (as did 117 in the two nonaspirin groups), including 43 deaths (and 35 deaths in the two nonaspirin groups). In both studies, the researchers concluded that the differences between aspirin takers and nonaspirin takers weren't significant.

Patients' satisfaction with their hospital stays correlates with the nursing care they receive, reports a study in the

October 30, 2008, issue of the *New England Journal of Medicine*. Harvard researchers Jha and colleagues studied the results of the Hospital Consumer Assessment of Healthcare Providers and Systems survey that assessed patients' hospital experiences. In hospitals in "the top quartile of the ratio of nurses to patient-days," 66% of patients rated their hospital experience as a 9 or 10 out of 10, whereas only 61% of patients gave high scores to hospitals in the lowest quartile. The difference was statistically significant. Researchers noted that patient satisfaction may be a direct result of nursing care.

Surgical mesh used to treat urinary incontinence can cause rare but serious complications, according to an October 20, 2008, public health notification from the Food and Drug Administration (FDA). The mesh, placed through a vaginal incision, is used to treat stress urinary incontinence or repair pelvic organ prolapse. Complications include pain, infection, urinary problems, erosion of the vaginal lining, and recurrence of the original complaint. The FDA suggests that health care providers make sure patients know the mesh is intended to be permanent, warn about possible complications, and provide information from the manufacturer. No one brand of mesh was especially linked to complications. ▼