

The New York Times

January 6, 2004, Tuesday, Late Edition - Final

Nursing Shortage Forces Hospitals to Cope Creatively

By LAURIE TARKAN

Banter in the hospital operating room may be less lively if the surgeon's assistant is a robot rather than a nurse, but that is of no concern to the inventor of Penelope. With a six-year-old nursing shortage showing no signs of easing, Dr. Michael R. Treat of the Columbia-Presbyterian Center in Manhattan is hoping that his one-armed robot will replace the nurse who hands the surgeon the instruments, freeing the nurse to give postoperative care.

Other robots already ferry medications and supplies around hospitals.

With mechanical help, flexible shifts and online auctions of shifts, hospitals are surpassing the creative in dealing with the nursing shortage that experts predict will worsen in a decade or two.

The pressure on hospitals to attract and retain nurses continues to grow, largely because of a mounting body of evidence that being short staffed compounds the rate of medical errors and deaths.

On Jan. 1, California became the first state to mandate specific nurse-to-patient ratios. Hospitals there have been scrambling to meet the deadline.

Around the country, using various strategies, some are beginning to see their efforts succeed, leading to lower vacancy rates in nursing jobs, lower turnover and lower mortality rates for patients. In addition, hospitals are seeing higher ratings of satisfaction among nurses and greater satisfaction among patients.

In efforts to keep health care costs down in the 1980's and early 90's, hospitals eliminated nursing positions and tried to increase efficiency, but often at the expense of nurses' working conditions, experts contend, decreasing their flexibility, increasing their workload and reducing their roles in decision making.

About 13 percent of nursing positions nationwide are vacant, the American Hospital Association reports. Experts predict that the rate will increase to 20 percent by 2015.

"Every hospital wants to hire more nurses and improve the working conditions," said Amy Lee, spokeswoman for the American Hospital Association, "but hospitals are in fragile financial states, and some don't have financial capital to do it."

The nursing shortage may have helped Charles Cullen, the nurse who the police

say has admitted killing 30 to 40 patients, to move from one hospital to the next in New Jersey and Pennsylvania. The high turnover may have made his short stays at many hospitals less conspicuous and led hospitals to be less particular about their prospective employees, said Dr. Linda Aiken, a professor at the University of Pennsylvania School of Nursing, who is a leading researcher on the shortage.

”High turnover rate,” Dr. Aiken said, “is a very big problem and potentially leads hospitals to be desperate to try to get in sufficient numbers of nurses to keep their services open.”

Many hospitals have dealt with the shortage by requiring overtime in understaffed wards. Nurses have complained that management does not listen to their concerns, often dismissing them with a take-it-or-leave-it attitude.

That relationship is not the only problem that has to be noticed. A report just released by the Institute of Medicine of the National Academies found that nurses’ working conditions were contributing significantly to medical errors.

High patient-to-nurse ratios, fatigue on long shifts and mandatory overtime, a lack of experienced staff, and inadequate time to monitor patients have been associated with poor medical results and higher death rates for patients, the report said.

”Nurses can commit errors, and they also play a crucial role in protecting patients from errors,” said Dr. Donald M. Steinwachs, who led the panel that issued the report.

According to a paper by the Joint Commission on the Accreditation of Healthcare Organizations, low numbers for nursing staffs was a factor in 19 percent of medical errors resulting in deaths or serious injuries in hospitals. Nurses’ inadequate orientation and training were cited as factors in 58 percent of serious errors.

A study by Dr. Aiken found that patients scheduled for routine surgery were 31 percent more likely to die in a hospital with a patient-to-nurse ratio of eight to one than in a hospital with a ratio of four to one. The study was published last year in *The Journal of the American Medical Association*.

A majority of nurses say they believe that they cannot do their jobs as well under their current working conditions, a 2001 survey by the American Nurses Association shows.

The survey found that 75 percent of nurses said the quality of nursing care at their medical centers had declined in the prior two years. More than 40 percent said they would not feel comfortable having a family member cared for in their hospitals.

”I think hospitals could substantially improve nurses’ working conditions in ways that would have a very significant impact on patient safety,” said Dr.

Steinwachs, who is also chairman of the health policy and management department at the Bloomberg School of Public Health at Johns Hopkins.

The report recommended major changes in hospital culture. Some hospitals have already started programs. To appeal to young technologically oriented nurses, the Spartanburg Regional Healthcare System in South Carolina began an online auction that allows nurses to bid on extra shifts, starting at \$40 an hour. They bid down the wage by 50 cents a bid; the lowest bidder wins the shift. On average, they receive \$38 an hour, which is \$16 an hour more than their typical pay.

Nurses gain flexibility and control over their schedules. The hospital has decreased its reliance on agency nurses, who cost more to employ and train than staff employees, to 4 from 54.

This month, the Cleveland Clinic Foundation began offering a “mom shift” from 9 a.m. to 2 p.m. to attract nurses who left the field.

”They can work while their kids are in school and be there when they get home,” said Claire M. Young, chief nursing officer at the hospital.

The program has attracted 40 nurses.

The hospital also offers a nine-month position with summers off, and it has established a partnership with KinderCare Learning Centers to offer child care. The hospital has lowered its nursing vacancy rate to 6.2 percent from 12.8 percent in 2002.

Many hospitals have offered large sign-on bonuses and improved benefits. Johns Hopkins Hospital in Baltimore offers the benefit of paying 50 percent of college tuition to any college for nurses’ children. Other hospitals are making special appeals to attract men, minorities and foreign nurses. Hospitals have held health fairs in schools to raise interest in nursing. One visited third graders in a grammar school.

San Antonio Community Hospital in Upland, Calif., just opened a concierge service to help nurses, who typically have 12-hour shifts, to deal with daily errands. The service offers laundry, dry cleaning, film developing, DVD rentals, package and mail deliveries, and entertainment tickets.

”This is a fairly low-cost way to add a benefit that makes their lives easier,” said George Kuykendall, president and chief executive of the hospital.

Some hospitals have “lift teams” to help transfer patients. About one-third of nurses suffer back-related injuries, mostly because of lifting and transferring patients.

Some hospitals turn to robots. Along with the robot Penelope, which has not yet been submitted for approval to the Food and Drug Administration, nearly 100 hospitals have used the Pyxis Helpmate, a robot that shuttles medication, meals,

lab specimens, supplies, medical records and radiology films around the hospital. The robot is hard working, at 24/7, and costs less than \$5 an hour. It moves at a slow pace and has to wait for the elevator like everyone else. But it saves time by not chatting at the water cooler.

Aside from such innovations, hospitals have begun to address basic problems by ending mandatory overtime, involving nurses in making decisions, listening to their concerns and reducing paper and nonclinical work.

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GRAPHIC: Photos: Dr. Michael R. Treat hopes his one-armed robot will someday replace the nurse who hands the surgeon the instruments, freeing the nurse to give postoperative care. (Photo by Carol Halebian for The New York Times)