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Penn study examines link between nurse burnout, care

By Don Sapatkin
Inquirer Staff Writer

For years, as hospitals cut costs to survive ever-increasing financial pressures, nurses argued that inadequate staffing harms patients.

California's controversial and, so far, unique response was to mandate minimum nurse-to-patient ratios, which, if applied locally, would prevent 222 surgical deaths annually in New Jersey and 264 in Pennsylvania, researchers here calculated in 2010.

Now members of that same University of Pennsylvania team say they have figured out a key reason for that. Though it might seem clear-cut - fewer caregivers provide poorer care - they maintain the issue is not simply numbers but a bad work environment.

And that leads to burnout.

Staffing, of course, is a big part. When there also is a lack of teamwork and support from the top, and an inability to act independently, "stress builds up and builds up and builds up until the giver of care just detaches," said lead author Jeannie P. Cimiotti, and "all of a sudden they are doing work, but they are not even cognizant of what they are doing, they are so stressed." They may forget to wash their hands.

The study is believed to be the first to examine why staffing matters. It also is among the first to measure the potential harm - both injuries for patients and costs for hospitals - using detailed infection data available only in Pennsylvania, where reporting is mandatory.

If hospitals could reduce their proportion of burned-out nurses to 10 percent from the 30 percent that is typical, according to the study, they would prevent 4,160 cases a year of the two most-common hospital-acquired infections statewide and save \$41 million. Insurers are increasingly unwilling to reimburse the expense of treating preventable infections.

"It is costing hospitals more money not to spend money on nursing," said Linda H. Aiken, another author of the study and director of the Penn nursing school's Center for Health Outcomes and Policy Research.

The paper appears Monday in the American Journal of Infection Control. That venue "takes it out of nurses' saying, yet again, 'Woe is me,' " said Cheryl Peterson, director of nursing practice and policy for the American Nurses Association, and makes it "a patient-safety issue" for other medical disciplines.

The Penn researchers examined 2006 infection data that 161 acute-care hospitals reported to the Pennsylvania Health Care Cost Containment Council. They then linked that data to responses to two surveys: staffing information that hospitals supply to their national association and nurse-burnout levels based on a standard measure applied to answers to a questionnaire returned by 7,076 registered nurses in direct patient care at those hospitals.

Each nurse cared for an average of 5.7 patients. There were 8.6 catheter-related urinary tract infections for every 1,000 patients statewide. Adding one patient to a nurse's workload was associated with an increase of nearly one infection per 1,000 - a total of 1,351 additional infections if the nurse-to-patient ratio is applied statewide. Surgical site infections, which are half as common but which cost far more, went up at a similar rate.

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When the researchers considered burnout instead of staffing levels, they found that a 10 percent increase in a hospital's proportion of burned-out nurses raised urinary tract infections about the same amount but surgical site infections more than 50 percent, from 4.2 per 1,000 patients to more than six.

Neither finding was a surprise. That came when the researchers combined changes in staffing and burnout levels - and discovered that burnout appeared to be responsible for nearly all the harm caused by greater workloads.

Michael Leiter, an organizational psychologist who researches job-related stress and burnout at Acadia University in Nova Scotia, cautioned that the study could not prove cause and effect. Still, he said, the findings made sense.

Burnout builds through a cycle of exhaustion, cynicism, and lack of civility, he said. Nurses, who are licensed and must uphold professional standards, may also experience "a value conflict with their employer" if they believe that finances are trumping patient care, Leiter said.

"Basically, what makes burnout is bad management."

Pressure on nurses has risen in recent years as medical conditions have gotten more complex and lengths of patient stay have shortened. Trenton and Harrisburg are among dozens of state capitals where nurse-backed legislation mandating minimum staffing ratios has been introduced but not passed.

Pennsylvania's bill uses part of the labor contract at Allegheny General Hospital in Pittsburgh, one of the few to include staffing ratios, said Cathy Stoddart, chapter president of SEIU Healthcare.

The critical first sign that a patient's condition is worsening may be a slight temperature change or drop in urine output. "I would notice that," Stoddart said, but a nurse who is scrambling to care for 10 patients would not.

Staff turnover and patient infection rates plummeted after the contract promoted a "partnership" with the hospital, she said.

The industry generally has fought staffing mandates, arguing that hospitals need flexibility to respond to unique challenges.

The new study "raises an interesting question," said Nancy Foster, vice president of quality and patient safety policy for the American Hospital Association, about "exactly how can we look at nursing burnout and its impact on patient safety."

Foster said hospital leaders she speaks with are all looking at how to help nurses practice at the top of their game.

Cimiotti, who led the research while at Penn and who is now executive director of the New Jersey Collaborating Center for Nursing at Rutgers University in Newark, said that when staffing is adequate, paying attention to issues such as physician-nurse relationships and having the right people to call at night could make a big difference at a hospital.

"It doesn't cost them anything to improve the organizational climate," she said.

Contact Don Sapatkin at 215-854-2617 or dsapatkin@phillynews.com.

Inquirer staff writer Meeri Kim contributed to this article.

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looking at that kid getting poisoned makes me want to vomit. Get your dose of hepatitis that will give you H.I.V....or better yet a good ol dose of brain damage or cancer.

— songsrme2

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Think that nursing care, is bad now... just wait til Obamacare kicks in. Understaffed, Long painful over worked hours, are already on the doctor's report. But hey, Obama can wave his magic wand and "walla"... We suddenly have all the doctor's and nurses to take care of the whole entire world.

TRUTH: We are headed for complete total chaos of the entire healthcare system. Don't believe it... go talk to a nurse.

But who cares, as long as Dr. Obama is in charge.

— FocusTruthFully

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Another bogus study that cannot show cause and effect. Using catheter and post-surgical incision infections as the basis of "poor care" is ludicrous. Nurses can't see bacteria in order to stop it. Urinary catheters get infected from anything including the patient's own perspiration.

And to Focus Truthfully, go ahead, vote in Romney and let's see if you'll even get a bandaid in an ER. IDIOT! First you vcrly you don't have healthcare, then you don't want it when it's mandated. Americans get way too much for free. You're probably some snmck on "disability" eating up those Oxys all day from some old work injury you been lying about for a decade or more.

— MDRN

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