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Media Contact: Shannon Carter
303-368-6720
scarter@cc-institute.org

Study Finds Certification May Impact Surgical Patients

New research correlates Direct-Care RN Specialty Certification and Surgical Patient Outcomes

DENVER, CO (January 6, 2015)—Results from a recent study indicate specialty nursing certification contributes to improved surgical patient outcomes in hospitals nationwide. Published in the November 2014 issue of *AORN Journal*, the peer-reviewed journal of the Association of PeriOperative Registered Nurses (AORN), the research was conducted by the staff at the National Database of Nursing Quality Indicators (NDNQI) and the University of Kansas. It was sponsored by the Competency & Credentialing Institute (CCI).

The study examined surgical patient outcomes in two unit types—surgical intensive care units (SICUs) and surgical units—and assessed some of the most common complications in surgical units and their occurrences amongst patients being cared for by certified vs. non-certified nurses. Researchers studied four specialty certifications commonly held by perioperative nurses in the hospital setting: certified ambulatory perianesthesia nurse (CAPA), certified postanesthesia nurse (CPAN), certified nurse operating room (CNOR) and certified RN first assistant (CRNFA).

The research showed higher rates of CPAN and CNOR/CRNFA certification in perioperative units were significantly associated with lower rates of central-line associated bloodstream infections in SICUs. Specifically, the study indicated that a ten percent higher rate of CNOR/CRNFA and CPAN certification in perioperative units resulted in 16% and 8% (respectively) lower rates of central-line associated bloodstream infection rates in SICUs.

“While there has been much anecdotal speculation about the benefits of specialty nursing certification, our aim was to ascertain if a positive connection exists between certification and surgical patient outcomes,” said James Stobinski, PhD, RN, CNOR, one of the study authors and Director of Credentialing & Education at CCI. “We found that higher rates of CPAN and CNOR/CRNFA contributed to improved surgical patient outcomes in SICUs when controlling for a variety of unit and hospital characteristics.”

Using data from the largest, unit-based, national nursing quality program, the National Database of Nursing Quality Indicators (NDNQI), the researchers analyzed secondary data submitted from participating NDNQI hospitals, ultimately spanning 447 nursing units over the same time periods.

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Merging 2011 unit-level clinical and administrative data—including patient outcomes, staffing and RN education—with the same survey data specific to national specialty certification and perceptions of the unit practice environment, the researchers were able to assess the impacts of specific specialty certifications on surgical patient outcomes. Aside from looking solely at what occurred within the OR, the data also assessed how those actions impacted patients as they moved from the OR into other areas of the hospital. “Using the NDNQI data helped to ensure the research could be generalized to more facilities,” Stobinski said.

This is not the first research assessing the potential impacts of nursing specialty certification. Previous research indicated a positive correlation between certified nurses and a lower frequency of falls, as well as decreased length of hospital stays and decreased odds of adjusted 30-day mortality. Among the most important outcomes of CCI’s research, Stobinski added, “is the strong foundation it creates for future investigation to more closely examine the relationship.”

“The research results contribute to a better understanding of the value of certification to clinicians, hospital administrators, educators and ultimately patients,” Stobinski said. “Specialty certification should be considered certainly within nursing, as well as within other healthcare sectors, as a mechanism to ensure the proper protocols are being followed, providing patients with the best care available and keeping associated costs as low as possible.”

Notably, the study also found that higher rates of CNOR/CRNFA certification in perioperative units were associated with higher rates of hospital-acquired pressure ulcers and unit-acquired pressure ulcers. The association between certification rates and catheter associated urinary tract infections (CAUTIs) was also investigated. In this instance, while some positive correlations were discovered, the results were not found to be statistically significant.

CCI plans to expand its research agenda, specifically related to patient outcomes. The authors of this study have begun a new study which will examine the relationship between nursing demographic factors, certification rates, the nursing work environment and the most common complication of surgery – Surgical Site Infections (SSI). Building on the results of this study this new research may yield insights into this complex, multi-factorial relationship.

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CCI is the leading provider of certification and competency-based education to perioperative nurses. Established in 1979, CCI provides the CNOR, CRNFA and CNS-CP credentials to more than 36,000 registered nurses, making it one of the world’s largest specialty nursing credentialing bodies. For more information visit CCI online at www.cc-institute.org/cssm.