



NATIONAL ASSOCIATION OF
CLINICAL NURSE SPECIALISTS

RWJF Initiative on the Future of Nursing

Forum on the Future of Nursing: Acute Care

October 19, 2009

Testimony of the National Association of Clinical Nurse Specialists

The National Association of Clinical Nurse Specialists (NACNS) appreciates the opportunity to submit testimony to the Forum on the Future of Nursing addressing the critically important role of Clinical Nurse Specialists in acute care. The leadership and members of NACNS applaud the Robert Wood Johnson Foundation for their excellent and timely support for increasing and enhancing the nursing work force at this crucial time when fundamental reforms to health care are being considered and the needs of an aging population are rapidly increasing.

Clinical Nurse Specialists (CNSs) are advanced practice registered nurses (APRNs), who are licensed registered nurses with graduate degrees in a nursing specialty, at the master's and/or doctoral level. They have unique and advanced level competencies that can meet the need to improve quality and reduce the costs in the U.S. health system. Specifically CNSs are:

- Clinical experts in the diagnosis and treatment of illness in specialties across the continuum of care from neonatology to gerontology, including, but not limited to, pediatrics, women's health, oncology, mental health, cardiology, wellness and prevention.

- Providers of evidence-based care in many settings including hospitals, rehabilitation facilities, outpatient offices and private clinics, and nursing homes.
- Coordinators of care across settings
- Leaders and facilitators of change among large groups and organizations facilitating quality improvement, patient safety and lower health care costs.
- Researchers who identify effective interventions with proven outcomes to improve quality and safety
- Direct providers of Medicare services
- Prescribers of medications for their patients in 38 states.

Clinical Nurse Specialists were created by the nursing profession in the 1950's to meet the increasingly complex needs of patients. Nursing recognized the need for CNSs to provide expert care to patients with complex conditions and advance the practice of nursing by designing innovative evidence-based interventions to influence the practice of other nurses and influence the healthcare system environment to support autonomous nursing practice. ¹

In the acute care setting CNSs are *leaders* of change, *developers* of evidence-based programs to prevent avoidable complications, *facilitators* of teams to improve the quality and safety of care and *researchers* seeking evidence-based interventions to improve the outcomes of care. President Obama has applauded Mayo Clinic and Cleveland Clinic for offering high quality health care at costs below the national norm; health centers where many CNSs lead system-wide efforts to improve the care and lower costs.

Leaders of Change to Improve the Quality and Safety of Care and Reduce Health Care Costs

CNSs use their clinical expertise, consultation and collaboration skills to lead system-wide efforts

to improve the quality of care. They lead clinical teams, including physicians and nurses, to implement evidence-based system-wide changes to reduce infections, medical errors and costs in acute care facilities, as well as reduce hospital acquired infections.^{2, 3, 4}

For example, a University of Pennsylvania CNS developed and led a safe and cost effective care model to reduce the length of stay in the neonatal intensive care unit through the early discharge of very low birth weight infants. The mean hospital costs were 27% less than the control group and the mean physician charges were 22% less. Taking into account the home care costs, the net savings was \$18,560 for each infant.⁵ A gerontological CNS introduced a discharge planning program for elderly patients that were compared with a usual care group. The intervention group had fewer readmissions, fewer total days of rehospitalization and a lower readmission rate.⁶ A study explored if there were differences between hospital units with and without CNSs and showed shorter lengths of stay and about 1/3 the number of complications in units with CNSs.⁷

Developers of evidence-based programs to prevent avoidable complications

CNSs integrate scientific knowledge to design evidence-based interventions that improve the quality and safety of care, treat symptoms, functional problems and complications of disease

¹ National Association of Clinical Nurse Specialists. (2004). *Statement on Clinical Nurse Specialist Practice and Education*, Harrisburg, PA.

² Hanneman, S., et.al. (1993). The indirect patient care effect of a unit-based clinical nurse specialist on preventable pulmonary complications. *American Journal of Critical Care*, 2(4), 331-338.

³ Murray, T. (2005). Ventilator-associated pneumonia as a nurse-sensitive outcome: the role of the clinical nurse specialist in the development and implementation of clinical systems to reduce ventilator associated pneumonia. *Clinical Nurse Specialist*, 19(2), 80.

⁴ Vollman, K. (2006). Ventilator-Associated Pneumonia and Pressure Ulcer Prevention as Targets for Quality Improvement in the ICU. *Critical Care Nursing Clinics of North America*, 18(4), 453-467.

⁵ Brooten, D. et. al. (1996). A randomized clinical trial of early hospital discharge and home follow-up of very low birthweight infants. *New England Journal of Medicine*, 315, 934-939.

⁶ Naylor, M., et. Al. (1994). Comprehensive discharge planning for the hospitalized elderly. *Annals of Internal Medicine*, 120(12), 999-1006.

⁷ Wheeler, E. et. al. (1999). The effect of the clinical nurse specialist on patient outcomes. *Critical Care Nursing Clinical North America*, 11 (2), 269-275.

treatment across the specialties of care, including geriatrics, pediatrics, rehabilitation, oncology, neurology, psychiatry.

Studies of programs developed by CNSs have shown a decrease in complications and costs by reducing pain and decreasing expensive ICU days when CNSs develop evidence-based practice guidelines to effectively address pain and to reduce the incidence of preventable pulmonary complications including ventilator acquired pneumonia a source of high costs.^{8, 9, 10}

Facilitators of teams to improve the quality and safety of acute care

CNSs are facilitators of teams in the acute care area to improve quality and safety. Their practice is the translation of clinical expertise into nursing care provided either directly or by influencing nurses and nursing personnel through evidence-based nursing care standards and programs of care”.¹¹

A pulmonary and emergency CNS initiated a study with a physician intensivist to determine the frequency and causes of reintubation that led to an educational program aimed at minimizing unplanned extubations. The reintubation rate decreased from 4.4% to 1.9% and reintubations after unplanned extubation were decreased from 14% to 5.2%.¹² In an intensive care unit for patients at the end of life, the impact of a physician and CNS communication team was studied and

⁸ Hanneman, S., et.al. (1993).

⁹ Murray, T. (2005).

¹⁰ Vollman, K. (2006).

¹¹ National Association of Clinical Nurse Specialists, (2004).

¹² Crimlisk, J. et. al. (1997). Endotracheal intubation: A closer look at a preventable condition. *Clinical Nurse Specialist* 11(4), 145-150.

showed shorter lengths of stay and lower fixed costs in the patients who received their care from the communication team.¹³

Researchers seeking evidence-based interventions and new technologies to improve the outcomes of acute care

Innovation in illness diagnosis and treatment is one of the hallmarks of the CNS practice. An example of this is Kathleen Vollman, a critical care CNS, who designed the Vollman Prone Positioner to enhance nurses' ability to turn patients to the prone position.¹⁴ This lifesaving device has been shown to improve pulmonary oxygenation of patients with Acute Respiratory Distress Syndrome (ARDS) (www.vollman.com).

In a large metropolitan medical center in the mid-west, a CNS working on an oncology unit led the development of an evidence-based practice to change the nursing care of patients with neutropenia. The hospital policy prohibited patients from having access to flowers and other items because of the potential for infections. Based on her research, the CNS proposed changes to the existing policy for "Care of the Neutropenic Patient" that was reviewed and approved by the hospital committees and implemented across the system, giving patients who must be in the hospital for long periods of time access to items of importance to them.¹⁵

Case Study

¹³ Ahrens, T. et.al. (2003). Improving family communication at the end of life: Implication for length of stay in the intensive care unit and resource use. *American Journal of Critical Care*, 12(4), 317-323.

¹⁴ National Association of Clinical Nurse Specialists, (2004).

¹⁵ Fulton, J.S. (in press). Evolution of clinical nurse specialist practice in the United States. In J.S. Fulton, B.L. Lyon & K.A. Goudreau (Eds.). *Foundations of Clinical Nurse Specialist Practice*. New York: Springer Global, B. Leading Revisions of Neutropenia Practice Guidelines, Chapter 36.

The following is a case study of a CNS practice in a Surgical Intensive Care Unit (SICU) in an academic medical center. The study demonstrates how the CNS in her daily practice improves the quality of patient care, ensures safety, uses technology, coaches staff nurses and applies innovation to nursing practice in the care of patients.

A female patient was admitted to the surgical intensive care unit (SICU) following major trauma. She suffered pelvic fractures, a right acetabulum fracture, a right wrist fracture, sternal fracture and a head injury. This patient case is a good example of the many ways a CNS supports the care of a patient with complex needs related to multiple trauma.

The patient experienced intermittent periods of intracranial instability as demonstrated by her intracranial pressure (ICP) waveforms. Staff nurses in the surgical intensive care unit learn ICP waveform analysis during unit orientation; however, the ability to actually analyze and interpret waveforms as they are occurring takes practice. To further develop the staff's skill in waveform interpretation, I use actual patient situations to validate comprehension. Using real patient experiences to build skill with staff is one way a CNS contributes to quality nursing care and improved patient outcomes. Over the course of ICP monitoring, I lead many discussions about waveform interpretation with nurses, neurologists and resident physicians.

The patient initially had a subarachnoid bolt placed. Later, the bolt was removed and she had a ventriculostomy placed to allow for drainage and maintenance of a stable pressure in the ventricular space. Coming in early one morning, I found a physician resident attempting to re-secure the drain to the patient's scalp, explaining that overnight the patient began draining blood tinged CSF and he was unable to irrigate the catheter. The clinical situation indicated emergent need for a Computed Tomography (CT) scan. I worked with the staff nurse to contact the attending physician, explain the problem, obtain orders for the test and prepare the patient for transport. Transport was complicated by pelvic traction. The staff nurse had never removed pelvic

traction before. I directed the actions of the staff nurse and a patient care assistant, and the traction was removed while taking care not to move (not to abduct or adduct) the patient's leg while transferring to the stretcher. The patient had a severely fractured acetabulum in combination with her open book pelvic fracture. We discussed the possible worsening of her acetabular injury and the potential for misalignment of her pelvic fracture if the leg were not kept straight. The patient was transferred successfully. As a result of the scan, interventions were put in place to clear the ventriculostomy so that intracranial pressure would not exceed the normal range.

The day after the CT scan, the patient had an external fixation device placed in her anterior pelvis to stabilize the fractures. Although a difficult process, the external fixation device would give the patient much more stability as healing proceeded. Upon making rounds in the unit, the same staff nurse I helped with the pelvic traction asked me to assess wounds around the patient's external fixation device. The external fixation pins had caused tearing of the skin around the pin sites.

We discussed a plan of care. Noting that the current type of dressing kept moisture continuously against the patient's skin we discussed other dressing options – materials and techniques. I role modeled how to problem solve by talking out loud while using a decision tree type algorithm including various dressing choices available. We reviewed each dressing choice until we came to a single dressing that was absorbent and would turn into a gel as it soaked up serous fluid, thereby decreasing the amount of fluid on the patient's skin.

This problem solving model led to a best practice decision for the patient. It is important to note that the staff nurse sought my help on the second day based on a positive interaction with me on the first day. Staff want and need clinical support, and will seek out a CNS who they perceive to be helpful. I believe the two critical elements to being perceived as helpful from the staff's perspective, are clinical expertise and being non-judgmental.

Feeling confident about the dressing decision, the staff nurse asked me to examine the patient's labia and noted a significant amount of serous discharge coming from her vagina. Together we identified tears in the labia, most likely the result of positional edema. We made a wound care plan to treat the tears. We then reviewed the chart to determine if the patient had a pelvic exam upon admission. I explained to her that the vagina is often the "forgotten organ" in pelvic fractures whereas the urethra and rectum are always examined. Severe vaginal tears can occur in open book pelvic fractures and can go untreated unless the trauma is identified in an examination in the emergent part of the admission.

Determining that a pelvic exam was not completed, the staff nurse took responsibility for calling the trauma team. Not only had I helped assure appropriate care for this trauma patient, but I also educated and empowered the staff nurse. Empowering the staff nurse with knowledge and skill is one of those all too often invisible contributions CNSs make to quality patient outcomes.¹⁶

Conclusion

In today's complex health care environment, the goal of patient care is to improve patient outcomes while remaining fiscally responsible.¹⁷ This has led to an increased demand for employment of advanced practice nurses with the clinical expertise to provide system wide education and facilitate process change that leads to improvements mandated by the agencies regulating healthcare organizations such as the Joint Commission on Accreditation of Healthcare Organizations.¹⁸ The CNS in her/his acute care practice provides the leadership and facilitation

¹⁶ Fulton, J.S. (in press). Evolution of clinical nurse specialist practice in the United States. In J.S. Fulton, B.L. Lyon & K.A. Goudreau (Eds.). *Foundations of Clinical Nurse Specialist Practice*. New York: Springer
Brush, K. Leading Revisions of Neutropenia Practice Guidelines Chapter 36

¹⁷ Cohen, S., Crego, N., Cuming, R. & Smyth, M. (2002). The synergy model and the role of clinical nurse specialists in a multihospital system. *American Journal of Critical Care*, 11, 5, 436-446.

¹⁸ Cohen, S., Crego, N., Cuming, R. & Smyth, M. (2002)

needed to improve the quality and safety of patient care through the use of technology, innovative nursing practices, staff coaching and development of evidence-based practices .

Because of the critical role of the CNS across the delivery system and in specialties, we encourage the Committee on the Future of the Nursing workforce to address the supply of these clinical experts that enhance the safety and quality of care in the acute care system.