



ADVANCED PRACTICE NURSES

DEDICATED | CARING | QUALIFIED

CLINICAL NURSE SPECIALISTS (CNS)

When CNSs treat patients in hospitals, long-term care facilities and communities, outcomes improve and costs decline. CNSs with prescriptive authority also diagnose and prescribe. Psychiatric-Mental Health CNSs provide psychotherapy and prescribe medications.

CNSs Reduce Costs by:

- Reducing days of inpatient hospitalization
- Reducing number of readmissions
- Preventing complications
- Reducing emergency room visits

CNSs Achieve these Results by:

- Promoting evidence-based care
- Implementing innovative models of patient care
- Coordinating care with members of the health care team
- Teaching patients and nursing staff
- Conducting research

REFERENCES

Authors do a comprehensive review of the literature to describe the clinical nurse specialist role and contributions to health care. Lewandowdki, W. & Adamek, K. (2009). Substantive areas of clinical nurse specialist practice: A comprehensive review of the literature. *Clinical Nurse Specialist, 23*(2), 73-90.

A CNS-developed safe movement program resulted in a 93% decrease in workers compensation insurance in a 156-bed hospital, and a 99% decrease in lost workdays due to employee injury. Sedlak, C., Doheny, M., Jones, S., & Lavelle, C. (2009). The clinical nurse specialist as change agent: Reducing employee injury and related costs. *Clinical Nurse Specialist, 23*(6), 309-313.

Care of 57 patients with Hepatitis C virus (HCV) receiving standard care by a gastroenterologist and medical resident was compared to 61 HCV patients with care managed by a CNS. The CNS group had significantly reduced loss to follow-up (53% vs. 12%, $p < .001$), significantly increased diagnosis confirmation with liver biopsy (65% vs. 84%), and statistically significant improvement in treatment (9 vs. 20 cases, $p = .03$). Shutt, J., Robathan, J., & Vyas, S. K. (2008). Impact of a clinical nurse specialist on the treatment of chronic hepatitis C. *British Journal of Nursing, 2008, 17*(9), 572-575.

CNSs who evaluated patients for prostate cancer revealed dramatically improved efficiency in diagnosing prostate cancer. Patients were referred directly to the CNS and seen within five days. Survey results revealed 33% of respondents were surprised to be seen by a CNS instead of a urologist and 10% would have preferred to have been seen initially by a urologist. Following the biopsy, no patients preferred a urologist to perform the biopsy, 84% were happy to receive their findings from the CNS, and 16% had no preference. Quality and safety results for the CNS-managed patients were excellent: 43% of biopsies were positive, all core tissues were of prostatic origin, and only 4 of 147 patients (3%) were admitted to the hospital post biopsy for infection ($n = 2$) and urinary retention ($n = 2$). James, N., & McPhail, G. (2008). The success of a nurse-led, one-stop suspected prostate cancer clinic. *Cancer Nursing Practice, 7*(3), 28-32.

A CNS-led interdisciplinary team in one hospital developed standardized insulin orders that improved glucose control for patients. Custer, M.L. (2010). Outcomes of clinical nurse specialist-initiated system-level standardized glucose management. *Clinical Nurse Specialist, 24*(3), 132-139.

A physician and CNS communication team intervention for ICU patients at end of life was compared with usual care. The patients who had the communication team intervention had shorter ICU stays (6.1 vs. 9.5 days) and hospital stays (11.3 vs. 16.4 days). They also had lower fixed costs (\$15,559 vs. \$24,080) and variable costs (\$5,087 vs. \$8,035. Ahrens T, Yancey V & Kollef M. (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.

Prenatal, maternal, and infant outcomes and costs through one year were examined for women at high risk to deliver low-birthweight infants. The group that received half of their prenatal care in the home from CNSs had 77.7% of twin pregnancies carried to term (control group = 33.3%), 2 fetal/infant deaths (control group = 9), 4 fewer prenatal hospitalizations, and 6 fewer infant re-hospitalizations. CNS prenatal home care saved 750 total hospital days estimated at a savings of \$2,500,000. Brooten D, Youngblut J, Brown L, Finkler S, Neff D & Madigan E, (2001). A randomized trial of nurse specialist home care for women with high-risk pregnancies: outcomes and costs. *American Journal of Managed Care*, 7(8), 793-803.

Orthopedic hospital units with CNSs showed shorter lengths of stay and about 1/3 the number of complications in units than those without. Source: Wheeler E. (1999). The effect of the clinical nurse specialist on patient outcomes. *Critical Care Nurse Clinics of North America*, 11(2), 269-275.

In a nurse-managed program for children with asthma, patients in the CNS groups demonstrated a significant reduction in the frequency of ER visits (2.6 ± 1.1 vs. 0.6 ± 0.9 ER visits per patient, $p < 0.001$) when compared with the 12-month period prior to enrollment. Control group subjects demonstrated no change in ER utilization (2.5 ± 1.5 vs. 2.4 ± 2.1 ER visits per patient). [Source: Alexander J, Younger, R, Cohen, R & Crawford, L. (1998). Effectiveness of a nurse-managed program for children with chronic asthma. *Journal of Pediatric Nursing*, 3(5), 312-317.]

Over a 12-month period, case management for patients with congestive heart failure by a CNS resulted in statistically significant reduced length of stay and hospital charges. Topp R, Tucker D, & Weber C. (1998). Effect of a clinical case manager/clinical nurse specialist on patients hospitalized with congestive heart failure. *Nurse Case Manager*, 3(4), 140-145.

The intervention group of high risk pregnant women receiving care from a CNS had 44% lower hospital charges. There were significantly fewer re-hospitalizations and only 8.3% of diabetic women in the intervention group had low birth weight infants as compared to 29% in the control group. York R, Brown L, Samuels P, Finkler S, Jacobsen B, Persely C, et al. (1997). A randomized trial of discharge and nurse specialist follow-up care of high-risk childbearing women. *Nurse Research*, 46(5), 254-260.

This study evaluated safety and cost-effectiveness of care by CNSs for early discharge of very low birth weight infants with follow-up. Mean hospital costs were 27% less than the control group (\$47,520 vs. \$64,940, $p = < 0.01$), and the mean physician's charges were 22% less (\$5,933 vs. \$7,649, $p = < 0.01$). The mean cost of home follow-up care was \$576, yielding a net saving of \$18,560 for each infant. Brooten D, Kumar, S, Brown L, Butts P, Finkler S, Bakewell-Sachs S, 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.

A CNS implemented a critical path in which nursing, respiratory therapy, and physical therapy had a coordinated teaching plan for providing services. Over the following 2 years, average length of stay decreased from 12.6 days to 3.7 days. Cost of care was reduced by more than 50%. Patton M, & Schaerf R. (1995). Thoracotomy critical pathway, and clinical outcomes. *Cancer Practice*, 3(5), 286-294.

Clinical Nurse Specialist, Patrice Capan, started a nurse managed clinic for low-income women in North Texas. The clinic has provided women's health and prenatal care since 1988 with excellent outcomes. Capan, P., Beard, M., & Mashburn, M. (1993). Nurse-managed clinics provide access and improved health care. *Nurse Practitioner*, 18, 50-55.

■ Psychiatric-Mental Health CNSs

A national study conducted by the top executives at a national managed mental health care company did not find any statistically significant differences in the provision of specific psychiatric services when delivered by psychiatrists or psychiatric-mental health CNSs or NPs. Feldman, S et.al. (2003). Advanced practice psychiatric nurses as a treatment resource: Survey and analysis. *Administration in Policy and Mental Health*, 30(6):479-494.

Physician researchers conducted a study using a mental health CNS as the intervention nurse. They found that limited intervention could improve recognition and initial management of depression in a VA primary care setting. Dobscha S., Gerrity M. & Ward M. (2001). Effectiveness of an intervention to improve primary care provider recognition of depression. *American College of Physicians*, 4(4), 163-171.

A geropsychiatric CNS facilitated interventions for 109 patients for 1 year. Length of stay and financial losses were significantly reduced and approximately half the patients had improved outcomes. [Source: Mathew L, Gutsch H, Hackney N, & Munsat E. (1994). Promoting quality and cost-effective care of geropsychiatric patients. *Issues in Mental Health Nursing*, 15, 169-185.]

Clinical Nurse Specialists provide care to patients with complex health problems.