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Nurse Practitioner Cost-Effectiveness

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Cost-Effectiveness

Nurse Practitioners (NPs) are a proven response to the evolving trend towards wellness and preventive health care driven by consumer demand. For over four decades, NPs have been proven to be cost-effective providers of high-quality care.

Over 25 years ago, the Office of Technology Assessment (1981) conducted an extensive case analysis of NP practice and reported that NPs provided equivalent or improved medical care at a lower total cost than physicians. The authors determined that NPs could manage up to 80% of adult primary care and 90% of pediatric primary care needs at that time. NPs in a physician-practice were found to have the potential to decrease the cost per patient visit by as much as one-third, particularly when seeing patients in an independent, rather than complementary manner. Since that time, continued reports have supported ongoing cost-effectiveness of NP practice. When OTA later re-examined the role of NP practice, the positive analysis was confirmed (OTA, 1986)

In 1981, the OTA reported that the hourly cost of an NP was one-third to one-half the cost of a physician. The median total compensation for primary care physicians in 2004 ranged from \$130,000 to \$208,700, depending on type and size of practice (Lowe, 2005). The median 2004 salary for NPs across all specialties who practiced full-time was \$71,000, with a mean of \$73,630. (AANP, 2004). NP preparation currently costs 20-25% that of physician preparation (AACN, 2000). When productivity measures, salaries, and costs of education are considered, NPs are cost-effective providers of health services.

A recent study of 26 capitated primary care practices with approximately two million visits by 206 providers determined that the practitioner labor costs per visit and total labor costs per visit were lower in practices where NPs and physician assistants (PA) were used to a greater extent (Roblin et al, 2004).

A cost analysis comparing the cost of providing services at an NP managed center for homeless clients with other community alternatives showed earlier and less costly interventions by the NP managed center (Hunter, et al, 1999). NPs delivering care in Tennessee's state-managed MCO, TennCare, delivered health care at 23% below the average cost of other primary care providers with a 21% reduction in hospital inpatient rates and 24% lower lab utilization rates compared to physicians ((Spitzer, 1997). Jenkins & Torrisi (1995) performed a one-year study comparing a family practice physician managed practice with an NP managed practice within the same managed care organization. The NP managed practice had 43% of the total emergency department visits, 38% of the inpatient days, and a total annualized per member monthly cost that was 50% that of the physician practice.

A study conducted in a large HMO setting found that adding an NP to the practice could virtually double the typical panel of patients seen by a physician. The projected increase in revenue was \$1.28 per member per month, or approximately \$1.65 million per 100,000 enrollees per year (Burl, Bonner, & Rao, 1994).

Chenoweth et al (2005) analyzed the health care costs associated with an innovative on-site NP practice for over 4000 employees and their dependents. Compared with claims from earlier years, the NP care resulted in significant savings of \$.8 to 1.5 million, with a benefit-to-cost ratio of up to 15 to 1. Paez and Allen (2006) compared NP and physician management of hypercholesterolemia following revascularization. Patients in the NP-managed group were more likely to achieve their goals and comply with prescribed regimen, with decreased drug costs.

When comparing the cost of physician-only teams with the cost of a physician-NP team in a long-term care facility, the physician-NP team's cost were 42% lower for the intermediate and skilled care residents and 26% lower for those with long-term stays. The physician-NP teams also had significantly lower rates of emergency department transfers, shorter hospital lengths of stays, and fewer specialty visits (Hummel & Pirzada, 1994).

A collaborative NP/physician team was associated with decreased length of stay and costs and higher hospital profit, with similar readmission and mortality rates (Cowan et al, 2006; Ettner et al, 2006). Larkin (2003) cites a number of studies supporting decreased costs, complication rates, and lengths of stay associated with NP-managed care. For instance, he cites University of Virginia health System's 1999 introduction of an NP model in the area of neuroscience, resulting in over \$2.4 million savings the first year and a return on investment of 1600 percent. The NP model has been expanded in this system, with similar savings and improved outcomes documented. Another example cited includes an NP model introduced at Loyola University Health System's cardiovascular area, with a decrease in mortality from 3.7% to 0.6% and over 9% decreased cost per case (from \$27,037 to \$24,511).

In addition to absolute cost, other factors are important to health care cost-effectiveness. These include illness prevention, health promotion, and outcomes. See Documentation of Quality of Nurse Practitioner Practice (AANP, 2007) for further discussion.