

APRN Cost-Effectiveness Studies Summary

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Study	Key Findings
Naylor, M.D. and Kurtzman, E.T. "The Role of Nurse Practitioners in Reinventing Primary Care," <i>Health Affairs</i> , May 2010, Vol. 29, No. 5, pp. 893-99.	In a review of studies comparing the cost of primary care when delivered by NPs and Physician assistants (PAs) to care provided by MDs, researchers found that, in studies where NPs and Pas assumed care roles previously occupied by MDs, "substitution of visits to physicians by visits to NPs and PAs achieved savings in the first year of implementation."
Kelley, R. (2009, October). <i>Where can \$700 billion in waste be cut annually from the U.S. health care system?</i> Thomson Reuters; ECRI Institute.	Inefficient use of professional staff extenders such as nurse practitioners and physician assistants result in significant waste. Many provider process inefficiencies are similar to those experienced in other types of organizations, such as resource scheduling; appropriate mix of general lower-cost and specialized higher-cost resources; facility or equipment utilization or throughput; and timing and coordination of multiple procedures for a single patient to minimize downtime.
Laurant, L. M., Reeves, D., Hermens, R., Braspenning, J., Grol, R., & Sibbald, B. (2006). Substitution of doctors by nurses in primary care. <i>The Cochrane Database of Systematic Reviews</i> , issue 1.	The findings suggest that appropriately trained nurses can produce as high quality care as primary care doctors and achieve as good health outcomes for patients.
Aigner, M. J., Drew, S., & Phipps, J. (2004). A comparative study of nursing home resident outcomes between care provided by nurse practitioners/physicians versus physicians only. <i>Journal of the American Medical Directors Association</i> , 5, 16–23.	The level of care provided for patients by the two groups of providers was basically the same and of similar quality; however, the nurse practitioner/physician group patients were seen more often. Increased visits by nurse practitioners are assumed to result in time and cost savings for physicians and improved access to care for patients.
Carter, M. W., & Porell, F. W. (2005). Vulnerable populations at risk of potentially avoidable hospitalizations: The case of nursing home residents with Alzheimer's disease. <i>American Journal of Alzheimer's Disease and Other Dementia</i> , 20, 349.	The findings suggest that nursing home residents with AD/DRD are more likely to be hospitalized for certain ACS conditions, including gastroenteritis and kidney/ urinary tract infections. Availability of increased registered nurse staffing levels and on-site nurse practitioners appears to attenuate this risk.
Ettner, S. L., Kotlerman, J., Afifi, A., Vazirani, S., Hays, R. D., Shairo, M., et al. (2006). An alternative approach for reducing the costs of patient care: A controlled trial of the multi-disciplinary doctor-nurse practitioner (MDNP) model. <i>Medical Decision Making</i> , 26(1), 9–17.	Hospitals adapt to changing market conditions by exploring new care models that allow them to maintain high quality while containing costs. The authors examined the net cost savings associated with care management by teams of physicians and nurse practitioners, along with daily multidisciplinary rounds and post discharge patient follow-up.
Paez, K.A. and Allen, J.K. "Cost-Effectiveness of Nurse Practitioner Management of Hypercholesterolemia Following Coronary Revascularization," <i>Journal of the American Academy of Nurse Practitioners</i> , September 2006, Vol. 18, No. 9, pp. 436-44.	A study comparing NP versus MD management of post-revascularization hypercholesterolemia found that patients managed by NPs are more likely to comply with the prescription regimen and achieve their health goals at a lower cost.
The Florida Legislature (2010) Office of Program Policy Analysis and Government Accountability, "Expanding Scope of Practice for Advanced Registered Nurse Practitioners, Physician Assistants, Optometrists, and Dental Hygienists" Retrieved from http://www.floridanurse.org/arnpcorner/ARNPDocs/OPPAGAScopeofPracticeMemo.pdf.	Estimates of potential cost savings from expanding scope of practice in primary care range from \$7 million to \$44 million annually for Medicaid, \$744,000 to \$2.2 million for state employee health insurance, and \$339 million across Florida's entire health care system.
Weinberg, Micah, PhD, Kallerman, Patrick "Full Practice Authority for Nurse Practitioners Increases Access and Controls Cost" The Bay Area Council, April 2014. Available at: http://www.bayareaeconomy.org/media/files/pdf/BACEI_NPs_CA_Final.pdf.	Allowing nurse practitioners (NP) to practice to the full extent of their education and training could save the state (California) \$1.8 billion on preventative care visits alone over 10 years while increasing the number of preventative care visits by 2 million per year.
Eibner, C.E., Hussey, P.S., Ridgely, M.S., et al. "Controlling Health Care Spending in Massachusetts: An Analysis of Options," <i>RAND Corporation</i> , August 2009. Available at: www.rand.org/pubs/technical_reports/TR733.html (last accessed January 11, 2011).	Using Massachusetts-specific MEPS data, a recent RAND study estimated NP and PA visits are 35 percent less expensive than physician visits. They estimate that if scope of practice laws were expanded and the number of NPs and PAs visits increased, Massachusetts could save between \$4.2 and \$8.4 billion over the course of the next ten years.

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Study	Key Findings
Julie Stanik-Hutt, PhD, ACNP-BC, Robin P. Newhouse, PhD, NEA-BC, Kathleen M. White, PhD, NEA-BC, Meg Johantgen, PhD, RN, Eric B. Bass, MD, MPH, George Zangaro, PhD, RN, Renee Wilson, MS, Lily Fountain, MS, CNM, Donald M. Steinwachs, PhD, Lou Heindel, DNP, CRNA, and Jonathan P. Weiner, DrPH. The Quality and Effectiveness of Care Provided by Nurse Practitioners.	The evidence identified in this review supports the premise that outcomes of NP-provided care are equivalent to those of physicians. Thus the question of the comparability of NP/MD quality, safety, and effectiveness of care is answered, to a very considerable degree, by this review.
Mehrotra, A., Wang, M.C., Lave, J.R., et al. "Retail Clinics, Primary Care Physicians, And Emergency Departments: A Comparison of Patients' Visits," <i>Health Affairs</i> , September/October 2008, Vol. 27, No. 5, pp. 1272-282.	In a cross-sectional comparison of retail clinics (staffed almost exclusively by NPs and PAs), researchers found that the cost of care provided in retail clinics is far lower than care provided in primary care physician practices and emergency departments, while quality remained constant.
Chenoweth, D., Martin, N., Pankowski, J., et al. "A Benefit-Cost Analysis of a Worksite Nurse Practitioner Program: First Impressions," <i>Journal of Occupational and Environmental Medicine</i> , November 2005, Vol. 47, No. 11, pp. 1110-116.	In an analysis of an on-site NP program launched by a U.S. metal and plastic manufacturing firm covering 4,284 employees and their dependents, researchers observed substantial reductions in annual health care costs (\$1.3 million) as a result of the investment (\$83,000), yielding a cost-benefit ratio of 1:15.
Rosenblatt, R.A., Dobie, S.A., Hart, L.G., et al. "Interspecialty Differences in the Obstetric Care of Low-Risk Women," <i>American Journal of Public Health</i> , March 1997, Vol. 87, No. 3, pp. 344-51.	A random sampling of providers delivering pre and perinatal care to low-risk women in Washington State found that certified nurse midwives used 12.2% fewer resources than obstetricians, with comparable outcomes in terms of number of live births and birth weight. Researchers attributed the lower resource use to reduced rates of Caesarean sections, labor induction, and epidural anesthesia.
Coddington J. (2010). Quality of Care and Policy Barriers to Providing Health Care at a Pediatric Nurse-Managed Clinic. <i>Journal of Pediatric Healthcare</i> , 24 (5):e9.	Clinics run by nurse practitioners create cost savings associated with reduced use of emergency rooms, urgent care centers, hospitals, and emergency medical services.
Hansen-Turton, T. (2005). The Nurse-Managed Health Center Safety Net: a Policy Solution to Reducing Health Disparities. <i>Nursing Clinics of North America</i> , 40, 729-738.	Nurse-managed clinic patients have higher rates of generic medication fills at pharmacies, and lower rates of hospitalizations when compared to patients of similar providers.
Perryman Group (2012). The economic benefits of more fully utilizing advanced practice registered nurses in the provision of care in Texas. Author: Waco, TX. Accessed March 20, 2013 at http://www.texasnurses.org/associations/8080/files/PerrymanAPRN_UtilizationEconomicImpactReport.pdf .	Analyzed the potential economic impact that would be associated with greater use of NPs and other advanced practice nurses, projecting over \$16 billion in immediate savings which would increase over time.
Spitzer, R. (1997). The Vanderbilt experience. <i>Nursing Management</i> , 28(3), 38-40.	NPs practicing in Tennessee's state-managed managed care organization (MCO) delivered health care at 23% below the average cost associated with other primary care providers, achieving a 21% reduction in hospital inpatient rates and 24% lower lab utilization rates compared to physicians.
Cowan, M.J., Shapiro, M., Hays, R.D., Afifi, A., Vazirani, S., Ward, C.R., et al. (2006). The effect of a multidisciplinary hospitalist physician and advanced practice nurse collaboration on hospital costs. <i>The Journal of Nursing Administration</i> , 36(2), 79-85.	Collaborative NP/physician management was associated with decreased length of stay and costs and higher hospital profit, with similar readmission and mortality rates.
Larkin, H. (2003). The case for nurse practitioners. <i>Hospitals and Health Networks</i> , (2003, Aug.), 54-59. Newhouse, R. et al (2011). Advanced practice nurse outcomes 1999-2008: A systematic review. <i>Nursing Economics</i> , 29 (5), 1-22.	The introduction of an NP model in a health system's neuroscience area resulted in over \$2.4 million savings the first year and a return on investment of 1600 percent; similar savings and outcomes were demonstrated as the NP model was expanded in the system.

About the Economic Alliance for Michigan (EAM)

Our goal is maintaining and growing Michigan's economy for both employers and workers. For over thirty years, the Economic Alliance for Michigan (EAM) has facilitated cooperation between businesses and labor unions by collaborating on matters that affect Michigan's economic environment. We are the leader in state government relations when it comes to bringing both political parties together for a common cause – the success of Michigan. We focus on the issues that matter most to our members and legislation that is favorable to job growth. The EAM rallies behind issues that affect the state's economy, such as the cost of healthcare.

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