



ADVANCED PRACTICE NURSES

DEDICATED | CARING | QUALIFIED

CERTIFIED REGISTERED NURSE ANESTHETISTS (CRNA)

As anesthesia specialists, CRNAs take care of patients before, during and after surgical or obstetrical procedures. CRNAs stay with patients for the entire procedure, monitoring every important body function and modifying the anesthetic to ensure maximum safety and comfort. Because CRNAs are experts in establishing an airway and other procedures necessary to stabilize critically ill or injured patients, CRNAs also provide anesthesia related services in other settings, both inside and outside hospitals.

- *More efficient use of CRNAs in the U.S. could save \$50,000,000 in health care costs annually.*
- *CRNAs have provided quality, cost-effective anesthesia care for 150 years.*

- 6.7 CRNAs can be educated for the cost of educating one anesthesiologist.
- Those 6.7 CRNAs provide a cumulative total of 26.8 years of anesthesia before the anesthesiologist begins practice.
- There is no difference in mortality and complication rates when:
 - CRNAs provide anesthesia independently, or
 - CRNAs work under the supervision of an anesthesiologist, or
 - anesthesiologists provide anesthetics.

CRNAs Maintain Access to Essential Health Care Services.

- CRNAs provide trauma stabilization services and 32 million anesthetics in the U.S. annually.
- 98% of Texas counties that have obstetrical or surgical services depend on CRNAs.
- CRNAs are the sole anesthesia providers in 59 rural Texas Counties
- 43% of all Texas hospitals rely completely on independent CRNAs to provide obstetrical, surgical and trauma stabilization services.

Extensive research over the last 40 years highlights CRNAs' competence.

REFERENCES

An analysis of anesthesia services provided in the 14 states that opted out of the CMS requirement for CRNA supervision by a surgeon or anesthesiologist by 2005, showed outcomes remained excellent in opt out states and mortality and complication rates for CRNAs practicing independently did not vary significantly between the period before opting out and the period after. The authors recommend "that CMS return to its original intention of allowing nurse anesthetists to work independently of surgeon or anesthesiologist supervision with requiring state governments to formally petition for an exemption. Dulisse, B. and Cromwell, J. (August 2010). No harm found when nurse anesthetists work without supervision by physicians. *Health Affairs*, 29(8).

The Lewin Group found anesthesiologists and CRNAs can perform the same high quality anesthesia services but it costs an average of \$161,809 to educate a CRNA and \$1,083,795 to educate an anesthesiologist. The most cost effective model of anesthesia care is a CRNA delivering anesthesia independently. Hogan, P.F., Seifert, R. F., Moore, C.S., and Simonson, B.E. (May-June 2010). Cost effectiveness analysis of anesthesia providers. *Nursing Economics*, 28(3), 159-169.

A study of 1,141,641 obstetrical patients from 369 hospitals in six representative states shows anesthesia complication rates in anesthesiologist-only hospitals were 0.27 percent compared with 0.23 percent in certified registered nurse anesthetist (CRNA) only hospitals. The study concludes that hospitals using only CRNAs or a combination of CRNAs and anesthesiologists do not have poorer maternal outcomes compared with hospitals using anesthesiologist-only models. Needleman, J., Minnick, A.F. (April 2009). Anesthesia provider model, hospital resources, and maternal outcomes. *Health Services Research*, 44(2), 464-482. Retrieved from www3.interscience.wiley.com/journal/121501340/abstract.

Michael Pine, M.D., analyzed 404,194 cases in 22 states involving 8 types of common surgical procedures, and compared anesthesia mortality rates when the anesthesia was provided by an anesthesiologist alone, a CRNA directed by an anesthesiologist or a CRNA alone. When adjusted for risk, the authors concluded there was no difference among the three groups. Pine, M., Holt, K., You-Bei, L. (2003). Surgical mortality and type of anesthesia provider. *American Association of Nurse Anesthetists Journal* 71, 109-116.

The outcomes of obstetrical anesthesia provided in Washington State from 1993 to 2004 were compared between hospitals whose anesthesia was provided solely by CRNAs and hospitals with only anesthesiologists. OB anesthesia was equally safe when provided by CRNAs or Anesthesiologists. Simonson, D.C., Ahem, M.M., and Hendryx, M.S. (2007). Anesthesia staffing and anesthetic complications during cesarean delivery. *Nursing Research*, 56, 9-17.

The Center for Health Economics Research (CHER) completed a report to the Health Care Financing Administration (HCFA) in January 1988. CHER cited three studies that examined anesthesia outcomes by provider type and concluded, "none of the studies detected significant differences in anesthesia outcomes among nurse anesthetists versus anesthesiologists.

A 10-member Anesthesia Study Committee (ASC) of the North Carolina Medical Society studied anesthetic-related deaths in that state from 1969-1976. The ASC determined, "when we calculated the incidence of anesthetic related deaths for each group which administered the anesthetic, we found that the incidence among the three major groups (CRNA, anesthesiologist, and the combination of CRNA and anesthesiologist) to be rather similar. Although CRNAs working alone accounted for about half of the anesthetic-related deaths, the CRNA working alone also accounted for about half of the anesthetics administered." Bechtoldt, A, Jr. (April 1981). Committee on anesthesia study. Anesthetic-related deaths: 1969 – 1976. *North Carolina Medical Journal*, 42, 253-259.

The Stanford Center for Health Care Research conducted a 17 hospital intensive study of institutional differences. A report of the study states: "Thus, using conservative statistical methods, we concluded that there were no significant differences in outcomes between the two groups of hospitals defined by type of anesthesia provider." Forrest, W.J. Jr. (1980). Outcome – the effect of the provider. In Hirsh, R.A. et al (eds): *Health Care Delivery in Anesthesia* (p. 137). Philadelphia: George F. Strickley Company.

A study mandated by the US Congress and performed by the National Academy of Sciences, National Research Council, reported: "There was no association of complications of anesthesia with the qualifications of the anesthetist or with the type of anesthesia." House Committee Print No. 36 (June 7, 1977). Health care for American veterans, 156.

The practice of anesthesia has become very safe due to improvements in pharmacological agents and sophisticated technology. Studies show a dramatically low anesthesia mortality rate (approximately 1 per 250,000 anesthetics). In 1990, the Center for Disease Control (CDC) intended to research morbidity and mortality in anesthesia. Following a review of the anesthesia data, the CDC concluded that injury and death related to anesthesia was too low to warrant the study.

Estimate of potential annual cost savings is based on cost of education for anesthesia providers and average salaries from the following sources:

1. Correspondence from the director of Hospital Payment Policy, Health Care Financing Administration (HCFA) dated July 27, 1992, to Kathleen A. Michels, RN, JD, Director of Federal Government Affairs at the AANA.
2. 1995 AANA Membership Survey. Park Ridge, Illinois: American Association of Nurse Anesthetists. 1996.
3. Physician Compensation and Production Survey: 1995 Report Based on 1994 Data. Englewood, Colorado: Medical Group Management Association. July 1995.

"Anesthesia seems to be an area where, beyond a certain level, outcome is only minimally affected by medical knowledge but is greatly affected by factors such as attention, concentration, organization and the ability to function as part of a team; factors towards which all professions strive but which no profession may claim a monopoly."

Blumenreich G.A., Wolf B.L. 1995. Restrictions on CRNAs imposed by physician-controlled insurance companies. *AANA Journal*, 54(6), 539.