AANA | GET THE FACTS

Quality of care.

There is overwhelming evidence that CRNAs provide superb anesthesia care.

Research shows there is no difference in safety between CRNAs and anesthesiologists. The safety record of CRNAs is demonstrated by recent studies published in leading health policy journals and an independent review by Cochrane, a world-renowned organization that supports evidence-based decision-making in healthcare.

KEY STUDIES OF PATIENT SAFETY

Dulisse & Cromwell, 2010 (Health Affairs)

METHODS
Analysis of Medicare data for 1999–2005 in opt-out and non-opt-out states comparing CRNA solo, MDA solo, and Team anesthesia delivery models for over 481,000 hospitalizations.

KEY FINDINGS
No evidence that opting out of the Medicare supervision requirement resulted in increased inpatient deaths or complications.

POLICY IMPLICATIONS
"Despite the shift to more anesthetics performed by nurse anesthetists, **no increase in adverse outcomes was found in either opt-out or non-opt-out states ...** These results do not support the hypothesis that allowing states to opt out of the supervision requirement resulted in increased surgical risks to patients." (p. 1474)

Dulisse, B., & Cromwell, J. (2010). No harm found when nurse anesthetists work without supervision by physicians. Health Affairs (Project Hope), 29(8), 1469–1475.

Negrusa et al., 2016 (Medical Care)

METHODS
Analysis of 5.7 million commercial claims from 2011-2012 by state SOP and delivery models including CRNA alone, MDA alone, and various direction and supervision models.

KEY FINDINGS
The odds of a complication did not differ based on degree of state SOP restrictions or by delivery model.

POLICY IMPLICATIONS
"...there is no statistically significant difference in the risk of anesthesia complications based on the degree of restrictions placed on CRNAs by state SOP laws. Nor is there evidence that the risk of complications varies by delivery model. This evidence suggests that there is **no empirical evidence for SOP laws that restrict CRNAs** from practicing at levels that are below their education and training based on differences in anesthesia complication risk." (p. 7)

Negrusa, B., Hogan, P. F., Warner, J. T., Schroeder, C. H., & Pang, B. (2016). Scope of Practice Laws and Anesthesia Complications: No Measurable Im-pact of Certified Registered Nurse Anesthetist Expanded Scope of Practice on Anesthesia-related Complications. Medical Care, 54(10), 913–920.

Lewis et al., 2014 (Cochrane)

METHODS
Systematic review conducted by independent organization of 6 studies evaluating physician and non-physician anesthesia providers.

KEY FINDINGS
This evaluation of currently available scientific evidence was unable to draw conclusions about the superiority of any particular type of anesthesia provider. While the evaluation noted important limitations of the existing studies, the bottom line is that evidence to support the claim that physicians provide better anesthesia care compared to CRNAs is just not there.

POLICY IMPLICATIONS
"Overall, while some studies have shown small and inconsistent differences in some outcomes, the quality and nature of the **evidence are insufficient to draw firm conclusions about relative benefits and risks** of the different models of anaesthetic provision." (p. 14-15).

Lewis, S. R., Nicholson, A., Smith, A. F., & Alderson, P. (2014). Physician anaesthetists versus non-physician providers of anaesthesia for surgical patients. The Cochrane Database of Systematic Reviews, (7), CD010357.

AANA | GET THE FACTS

Quality of care.

The American Society of Anesthesiologists tries very hard to discredit the critical research on anesthesia safety funded by the AANA.

They would have you believe there is clear evidence of superior care when it's supervised by an anesthesiologist. **But there isn't.** These studies are all published in ASA or other medical anesthesiology-sponsored journals.

ASA-PREFERRED STUDIES OF PATIENT OUTCOMES

Silber et al, 2000 (Anesthesiology)

Inaccurately touted as the "gold standard", this study has significant methodological problems including:

- The data is 25+ years old
- The use of a 30-day mortality measure, which cannot assess anesthesia care where outcomes are measured within 48 hours
- No determination of provider type in the majority of undirected cases
- The large reported differences in mortality and failure-to-rescue are widely inconsistent with other reported rates of anesthesia-related mortality and complications, suggesting that these differences are not due to anesthesia care at all, but rather to unrelated perioperative care processes

HCFA determined this study to be irrelevant as evidence supporting physician supervision of CRNAs. According to HCFA/CMS published in the Federal Register, **"One cannot use this analysis (Silber) to make conclusions about CRNA performance with or without physician supervision."**

Silber, J. H., Kennedy, S. K., Even-Shoshan, O., Chen, W., Koziol, L. F., Showan, A. M., & Longnecker, D. E. (2000). Anesthesiologist direction and patient outcomes. Anesthesiology, 93(1), 152–163.

Memtsoudis et al, 2012 (Journal of Clinical Anesthesia)

This study tries to demonstrate that poorer outcomes and higher costs are associated with CRNA-provided anesthesia care based on selected years of data 10 years apart. However, an editorial in the same issue describes the problems with the methods and assumptions of this study:

- No adjustment for patient-level risk such as comorbidities
- No adjustment for geography despite known regional variation in discharge to residence based on research
- Outcome is not anesthesia specific and ignores many other factors that might affect discharge status like duration and end time of the procedure or complications unrelated to anesthesia
- Advancements in perioperative care and anesthesia techniques 1996-2006 indicate these should not be treated as comparable populations
- Only two types of procedures were analyzed, severely limiting generalizability

Memtsoudis, S. G., Ma, Y., Swamidoss, C. P., Edwards, A. M., Mazumdar, M., & Liguori, G. A. (2012). Factors influencing unexpected disposition after orthopedic ambulatory surgery. Journal of Clinical Anesthesia, 24(2), 89–95.

Miller et al, 2016 (A&A Practice)

The ASA uses this study to show that anesthesiologists are "affiliated" with hospitals exclusively billing with the QZ modifier (i.e. CRNA without medical direction), but the ASA inaccurately concludes that "potential" MDA involvement translates to "actual" involvement in CRNA cases. Other notable findings of the study include:

- The median number of MDAs at QZ only hospitals is 0.5 MDAs compared to 2.3 CRNAs, suggesting that MDAs often are not readily available and it actually is CRNAs providing the bulk of anesthesia care at those facilities, most likely without substantial involvement of MDAs

Miller, T. R., Abouleish, A., & Halzack, N. M. (2016). Anesthesiologists are affiliated with many hospitals only reporting anesthesia claims using modifier QZ for medicare claims in 2013. A&A Practice, 6(7), 217–219.