


Who Gives Safer, Higher Quality OB Anesthesia Care: CRNAs or Anesthesiologists?

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Introduction

- How should a hospital staff its OB anesthesia service? Is it “safe” to have CRNAs providing care without anesthesiologists?
- This lecture will give the evidence regarding the safety and quality of CRNA-only vs. anesthesiologist-only staffing

The Simonson Study



The image shows the cover of the article 'Anesthesia Staffing and Anesthetic Complications During Cesarean Delivery' from the journal 'Anesthesiology'. The cover includes the title, author name (Dan Simonson), and a small abstract snippet.



The image shows the cover of the 'AANA News Bulletin' for February 2007, Volume 47, No. 2. The main headline reads 'New Study Shows OB Anesthesia Equally Safe when Provided by CRNAs or Anesthesiologists'. The cover also features a photograph of a person's hands and several columns of text including 'President's Message', 'Clinical Records', 'Inside the Association', and 'State Government Affairs'.

Why study OB?

Compared to other populations of patients receiving anesthesia:

- Patients are all the same sex
- There is a relatively narrow age range
- There is a limited number of possible anesthetics (c-section, labor epidural)
- Death due to anesthesia will stand out

Simonson Study: Data and Methods

- 135,000 C-sections
- 12 years: 1993 - 2004
- Hospitals were divided into 4 categories
 - CRNA-only
 - MDA-only
 - Collaborative
 - Combined
- We looked at 2: CRNA-only vs. MDA-only

Simonson Study: Results

- CRNAs had fewer complications -
- However, after risk-adjustment, results were not statistically significant
- Unable to detect a difference between hospitals that had only CRNAs vs. hospitals that had only anesthesiologists providing OB anesthesia care.

Simonson Study: Results

- CRNAs provided care to greater percentage of Medicaid patients - 43% vs. 28%
- Anesthesiologists had higher % of Commercial Insurance patients
- No difference in hospital transfers
- No difference in mortality

Simonson Study:

ANESTHESIOLOGY NEWS

THE INDEPENDENT MONTHLY JOURNAL FOR ANESTHESIOLOGISTS

CRNAs Deliver Quality Care for C-Sections

Anesthetists Gain Powerful Allies in Efforts To Improve Medicare Reimbursement

Simonson Study: ASA Response

The Needleman/Minnick Study

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Anesthesia Provider Model, Hospital Resources, and Maternal Outcomes

Jack Needleman and Ann F. Minnick

Objective: Determine the ability of anesthesia providers to recruit and hospitalize patients to high maternal outcomes.

Design: Retrospective cohort study, maternal complications, neonatal morbidity, and neonatal mortality were compared between hospitals with CRNAs and hospitals with anesthesiologists.

Setting: 100 hospitals in the United States.

Participants: 100 hospitals in the United States.

Measurements and Main Results: The study found that hospitals with CRNAs had significantly lower rates of maternal complications, neonatal morbidity, and neonatal mortality compared to hospitals with anesthesiologists.

Conclusions: The study suggests that the presence of CRNAs in a hospital is associated with better maternal and neonatal outcomes.

AANA NewsBulletin

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National Study Confirms CRNAs and Anesthesiologists Provide Equally Safe OB Anesthesia

President's Message
In this issue, we feature articles on the value and benefits of AANA membership.

Clinical Rounds
Read about the latest developments in anesthesia practice and anesthesia in the news.

State Government Affairs
Stay up-to-date on the latest legislative and regulatory changes affecting anesthesia practice.

Webinars
Access free webinars on a variety of topics related to anesthesia practice.

The Needleman/Minnick Study

- Needleman, J., & Minnick, A. F. (2008). Anesthesia Provider Model, Hospital Resources, and Maternal Outcomes. *HSR: Health Services Research*.
- Study funded by the AANA Foundation
- Sought to replicate the Simonson study on a larger population
- Involved nationally-known researchers

The Needleman/Minnick Study vs. the Simonson Study

- Expanded upon the Simonson study
 - **1.4 million** vs. 135,000 patients
 - 7 states vs. 1: California, Florida, Kentucky, New York, Texas, Washington, and Wisconsin
 - 369 Hospitals
 - Greater hospital cooperation

The Needleman/Minnick Study: Results

- 39% of hospitals were anesthesiologist-only
- 22% were CRNA-only
- Death rate was low, (0.007%) and not significantly different
- Anesthesia complications for all OB patients were few: 0.787% and not significantly different

The Needleman/Minnick Study: Results

- Anesthesia complications for patients undergoing C-section were significantly lower at CRNA-only hospitals
 - Odds ratio: 0.723 to 1, 95% CI 0.542-0.965, *p* .028

The Needleman/Minnick Study: Results

- “We find no evidence that, compared with anesthesia models relying exclusively on anesthesiologists, hospitals that use only CRNAs or have an anesthesia model involving both CRNAs and anesthesiologists have systematically higher rates of these complications.”

The Needleman/Minnick Study: Discussion

- “*The findings do suggest that at least in the area of obstetrical services, there may be no gain in anesthesia safety from restricting which licensed providers can provide these services.*”

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- In a study of over 1 million obstetrical patients, 369 hospitals, and 6 states, there was no significant difference in outcomes between hospitals staffed solely by CRNAs vs. hospitals staffed by anesthesiologists.
- In one measure, that of anesthesia complications in C-section patients, CRNA-only hospitals had better outcomes.

Implications for CRNAs

- Must publicize research to broad audience
- Outcomes studies in general
 - Anesthesia Patient Safety Indicators
- Dr. Mark Lema, ASA President, Jan. 2007:
 - "Research in outcomes and safety are needed to show our value to patients, colleagues and payers comparing us with both non-MD providers (CRNAs) and non-anesthesiology MDs (ICU/ER)."

Safety of OB Anesthesia

The Question has been answered: There is **no detectable difference**

- **1.4 million patients**
- **369 Hospitals**
- **7 States**

between hospitals that use only CRNAs and those that use only anesthesiologists.

Dr. Lema's (ASA's) position: "The results of this study do nothing to alter (our) opinion"

Simonson Study: ASA Response

The screenshot shows an email from the American Society of Anesthesiologists (ASA) dated 4/11/09. The subject line is "ASA: CRNA Study Flaws 'Unacceptable'". The email body contains a letter to the editor that criticizes the Simonson study, stating that the authors did not support their conclusions and that the study was flawed. It mentions that the authors actually studied a single C-section operation and generalized their results to obstetric anesthesia as a whole. The email also includes a "FREE REFLEX" logo and a link to sign up for a newsletter.

What Do We Do Now?

- These studies **must** get into the hands of healthcare policy makers and hospital administrators
- Purchase copies and take them to your legislators
- Be ready to explain the results
- Contact me for any assistance
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Shameless Plug for AANAF

- Please donate to the AANA Foundation!
- This research would not have happened without the AANA Foundation and Lorraine Jordan, CRNA, PhD

Post-Test