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

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

Simmonson 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

The Needleman/Minnick Study

Anesthesiologists Provide Model Hospital Resources, and Material Outcome for Maternity and Obstetric Practices.

The Needleman/Minnick Study

AANA NewsBulletin

National Study Confirms CRNAs and Anesthesiologists Provide Equally Safe OB Anesthesia
The Needleman/Minnick Study

- 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: \(0.723 \text{ to } 1, \ 95\% \ CI 0.542-0.965, \ p \ .028\)

The Needleman/Minnick Study: Discussion

- "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 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

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