

Here you go, all - it is finally here- just in time for Christmas:

Anesthesia Provider Model, Hospital Resources, and Maternal Outcomes
Jack Needleman and Ann F. Minnick

Data:

1,141,641 obstetrical patients from 369 hospitals in six representative states.

Principal Findings:

Anesthesia complication rates in anesthesiologist-only hospitals were 0.27 percent compared with 0.23 percent in certified registered nurse anesthetist (CRNA) only hospitals. Rates among other provider models varied from 0.24 to 0.37 percent with none statistically different from the anesthesiologist-only hospitals. A similar pattern was observed for rates of other outcomes. Multivariate analysis found no systematic differences between hospitals with anesthesiologist-only models and models using CRNAs. There was no consistent pattern of association of other hospital or patient characteristics with outcomes.

Conclusion:

Hospitals that use only CRNAs, or a combination of CRNAs and anesthesiologists, do not have systematically poorer maternal outcomes compared with hospitals using anesthesiologist-only models.

Every CRNA providing obstetrical anesthesia in the United States should go to this URL now and spend the \$29.95 to download the full text (as a .pdf file) of this article. On Christmas morning, leave a copy lying out on the table in the call room or some other suitable spot for every curious person to review.

<http://www3.interscience.wiley.com/journal/121501340/abstract>

If you are an educator, you should be able to access it through your institution. If you are not, you may be able to get your hospital medical librarian to access it for you. But don't let a mere \$30 keep you from getting your own copy!

And once you have done that, please send an email message to Lorraine Jordan, CRNA, PhD, ED of the AANA Foundation <ljordan@aana.com>, thanking her for her dogged determination to see this project through to its end. This has been a 9-year journey, and if not for Lorraine's vision and skill, it would have died many times.

The research was funded by a grant from the AANA Foundation. The authors, Jack Needleman and Ann Minnick, are two of the most highly-respected names in outcomes research. Dr. Needleman has published in the New England Journal of Medicine (an

article with Dr. Silber, of all people!), and his credentials are impeccable. The journal, Health Services Research (known simply as HSR in the health policy field), is similarly at the top of the list of health policy journals. I applied to them when I was trying to publish my study, and was pretty summarily rejected, lowly Master's degree supplicant that I was. But they obviously paid attention when this showed up- what an incredible piece of work!!!!

After this research, covering over one *million* patients and 360 hospitals, let no one state that CRNAs do not provide the same high-quality anesthesia as any other provider. We need to take 500 copies with us to the Mid-Year Assembly and leave one with each and every legislator on Capitol Hill.

Below is the full citation and abstract. It can currently be accessed only online, it is listed under "early publications". While some may be disappointed not to see it in print, the pdf version looks perfect.

Anesthesia Provider Model, Hospital Resources, and Maternal Outcomes
Jack Needleman 2 and Ann F. Minnick 1 *

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ABSTRACT

Objective. Determine the ability of anesthesia provider model and hospital resources to explain maternal outcome variation.

Data Source/Study Setting. 1,141,641 obstetrical patients from 369 hospitals that reported at least one live birth in 2002 in six representative states.

Study Design. Logistic regression of death, anesthesia complication, nonanesthesia maternal complication, and obstetrical trauma for all patients and those having cesarean deliveries on anesthesia provider model, obstetrical and anesthesia, and patient variables.

Data Collection/Extraction Methods. Data was assembled from information given by hospitals to state agencies and from a 2004 survey of obstetrical organization resources.

Principal Findings. Anesthesia complication rates in anesthesiologist-only hospitals were 0.27 percent compared with 0.23 percent in certified registered nurse anesthetist (CRNA) only hospitals. Rates among other provider models varied from 0.24 to 0.37 percent with none statistically different from the anesthesiologist-only hospitals. A similar pattern was observed for rates of other outcomes. Multivariate analysis found no systematic differences between hospitals with anesthesiologist-only models and models using

CRNAs. There was no consistent pattern of association of other hospital or patient characteristics with outcomes.

Conclusion. Hospitals that use only CRNAs, or a combination of CRNAs and anesthesiologists, do not have systematically poorer maternal outcomes compared with hospitals using anesthesiologist-only models.

Once again, a wonderful present for all of us.