Author’s response to reviews

Title: Trends in Prenatal Care Settings: Association with Medical Liability

Authors:

Andrew S Coco (ascoco@lancastergeneral.org)
Donna Cohen (docohen@lancastergeneral.org)
Michael A Horst (mahorst@lancastergeneral.org)
Angela S Anderson (sanders@lancastergeneral.org)

Version: 3 Date: 30 June 2009

Author’s response to reviews: see over
June 20, 2009

Editorial Office
BioMed Central Journal

http://www.biomedcentral.com/

Tel: +44 (0)20 7631 9921

e-mail: editorial@biomedcentral.com

RE: Trends in Prenatal Care Settings: Association with Medical Liability,
MS 2142791766242056

Dear Editors,

I am submitting the revised manuscript for reconsideration for publication in BioMed Central, after incorporating the recommendations based on the prior review. The revised manuscript has addressed the points made by the editors and reviewer #2 as described below:

**EDITORS’ COMMENTS:**

1. **Formatting.**

The revised manuscript conforms to the journal style.

2. **Background sub-section of Abstract.**

Noted, changes made to reflect study context.

3. **Conclusions Section.**

Noted, dedicated section added with study conclusions.
4. Competing Interests Section.

Noted, section title changed.

5. Acknowledgements.

No acknowledgements or sources of funding applicable for study or manuscript preparation. Added to manuscript.

REVIEWER’S REPORT

Major Compulsory Revisions

1. I am concerned that the multivariate logistic regression model could not control for other variables that might have an impact on the conclusions drawn by the authors. For example, there may be temporal trends by region for where obstetricians and maternal-fetal medicine specialists are practicing….The authors need to acknowledge that a weakness of their study is that their conclusions must be tempered a bit more since their model could not control for other confounding variables. Providers may be moving their practices into hospital outpatient departments for other reasons that they have not been able to identify in this study. And these trends might be occurring in different ways in different regions of the country.

Noted, changes made to Discussion as reflected in first version of revised manuscript.

Minor Compulsory Revisions

2. The authors did explain how the NAMCS and NHAMCS do their sampling- but I found the explanation a bit cursory and vague and therefore was not entirely convinced by their description that the data collected in those surveys is representative of the country as a whole.

The following changes were added to the Methods section (p. 6, second paragraph) to clarify how the data is representative of the nation as a whole: The NAMCS and NHAMCS surveys incorporate a multistage probability design to generate a population-based sample, accounting for practice location, outpatient departments within hospitals, physician specialty, and patient visits. The sampling technique and probability design utilized by the National Center for Health Statistics (NCHS) allows extrapolation to national estimates for all aspects of the survey, making our study findings representative of the nation as a whole.
3. I was somewhat concerned whether the sample size ultimately used in the analysis was large enough: about 21,000 patient visits overall and about 5,800 complicated ones. Is this sufficient to draw conclusions about the nation as a whole? Was there any way to be sure that no patient was counted more than once since complicated patients typically have greater numbers of visits?

The Results section (p.8) explains that the sample size of 21,454 patient visits and 5,799 complicated visits was representative of approximately 211 million prenatal visits for the 10-year period. A paragraph was added to the Discussion (pg 13-14) to explain how this data is representative of the nation as a whole and the issue of accounting for a greater number of visits for complicated visits.

4. Were these visits only in obstetricians’ offices? What about family medicine providers’ offices?

The visits in the study only included visits to obstetricians’ offices. The National Hospital Ambulatory Medical Care Survey does not include data on visits made to family medicine outpatient departments (rather only general medical clinics where it is unclear the specialty of the provider). Therefore, we only included visits occurring in obstetricians’ offices, in order to allow for equitable comparisons and trend analyses in the study. This was added to the Methods section (pg. 7, 2nd paragraph).

5. In my area of the nation (Northeast)- maternal-fetal medicine specialists tend to be hospital based providers and not in private practice. That might explain why more complicated patients are seen in hospital clinics. Additionally the trend that more complicated patients are being seen in hospitals may be a sign that these patients are receiving better care now that they are being seen in hospital outpatient departments. Thus the implication in the manuscript that the shifting in care into outpatient departments is not a good trend may not be true. It may be a sign of better care being delivered.

The following paragraph was added to the Discussion (p. 14, 2nd paragraph) to address this concern: As discussed in the Introduction and Discussion sections, there are well-documented issues in the literature regarding the increasing burden on our nation’s health care safety net setting, including hospital outpatient departments. These studies validate that there are concerns over the ability of the safety net to provide adequate access to care to a population that likely includes sicker, higher risk patients. It is true that maternal-fetal medicine specialists, as well as experienced obstetricians involved with teaching programs for example, tend to be hospital based providers. Unfortunately, the database is unable to resolve this issue, as only a small proportion of visits within hospital outpatient departments were categorized as visits made to maternal-fetal medicine specialists. Although we would not dispute that these visits may represent improved care being delivered to this subset of patients, it is unlikely that the entire increasing trend represents a shift of patients fully being seen by maternal-fetal medicine. And
we would still expect that many of the conditions documented in previous studies (poor access, limited funding, insurance coverage, patient population with more complex social-medical issues) are associated with this increased shift of visits to hospital outpatient departments. Finally, as mentioned above, there was an equal proportion of complicated obstetrical visits in low and high medical liability regions (16% vs 16%, p=0.99). Therefore, one would expect the shift of visits being made to maternal-fetal medicine specialists to be equally distributed between low and high medical liability regions.

**Discretionary Revisions**

6. The authors speculate on why there was a trend for patient care to move into outpatient departments in regions with high medical liability - but why do they believe that in low risk regions that the trend was out of hospital outpatient departments and into physicians’ offices? I would guess that in low risk regions it would remain stable.

The assumption from our findings is that in regions of low risk medical liability, obstetricians felt more comfortable continuing to provide care to patients. Theoretically, if the medical liability climate within the low risk regions became more favorable over the decade of the study, then obstetricians might have been more comfortable seeing patients, including complicated obstetrical patients, and this might account for the trend into physicians’ offices in these regions. However, this study is based on the cross-sectional designation of medical liability by the ACOG and AMA in 2004. Therefore we do not have available data on the possible medical liability climate prior to the 10-year period in this analysis. One hypothesis for the reviewer’s comment, might be that if the low risk medical liability regions had experienced an improvement in medical liability practice climate compared to 1995 (for example), then one might see a shift from hospital outpatient departments into physicians’ offices as seen in our study. The current study does not have available data on the medical liability climate prior to 2004 but this may be a point of interest for future analyses. This has been added to the Discussion section (p. 16).

All of the reviewers’ comments have been incorporated into the manuscript, as noted throughout the revisions.

Thank you again for your thoughtful comments, time, and consideration.
Sincerely,

Andrew Coco, MD, MS
Lancaster General Hospital
Health Research Institute
555 North Duke St, PO Box 3555
Lancaster, PA 17604