February 24, 2009

Editorial Office
BioMed Central Pregnancy and Childbirth Journal

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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 Pregnancy and Childbirth. The revised manuscript has addressed the points made by the editors and reviewers as described below:

EDITORS’ COMMENTS:

1. Competing Interests Section.
Noted, section added to manuscript.

2. Authors’ Contributions.
Noted, section added to manuscript.

3. Acknowledgements.
No acknowledgements or sources of funding applicable for study or manuscript preparation.

4. Formatting.
The revised manuscript conforms to the journal style. Two additional authors who were inadvertently missed on the original submission due to format inconsistencies have been appropriately added to the title page.

**REFeree 1 COMMENTS:**

**Minor Essential Revisions**

1. Your divisions regarding Latino, white, African American, and Asian/others are confusing. When you looked at white race did that include the Latino ethnic population? When you compared Latino to non-Latino, was that comparing the Latino population to all non-Latino whites, African Americans and Asian/other? Perhaps that section on the table needs to be labeled Ethnicity/Racial Groups. If you did the comparisons using Latino ethnicity in contrast to all the other groups that that needs to be made clear in the text. This especially impacts Tables 2 and 3.

Race and ethnicity are designated as separate variables in the NAMCS and NHAMCS database based on the physician’s knowledge of the patient. Categories of race include 1) White, 2) African American/Black, and 3) Asian/Other (which includes Native Hawaiian, American Indian/Alaska Native). NAMCS/NHAMCS has two categories for ethnicity, Hispanic/Latino or Not Hispanic/Latino. Latino ethnicity indicates all patients identified to be Latino and is unable to distinguish between Latino/Hispanic whites and Latino/Hispanic blacks. Therefore for each category of race, it is possible for those patients to be categorized as either Latino or non-Latino. For example, when race was designated as White that included a population of patients who were categorized as Latino. In the last paragraph of the Results section (p 10), when Latino ethnicity is being compared to non-Latino ethnicity, the Latino population is being compared to all non-Latino whites, African Americans and Asian/Other. For this reason, ethnicity and race were classified as 2 separate characteristics in Tables 2 and 3.

On Pg 5, 2nd paragraph, 2nd sentence was inserted to clarify the above points—Categories of race include White, African American/Black, and Asian/Other; while categories for ethnicity include Latino/Hispanic or Not Latino/Hispanic.

**Discretionary Revisions**

2. Page 4, the 5th line under Methods- should there be a comma between funded and community?

Noted, sentence revised to read more clearly.

3. In my print out Figure one is distorted and flattened out- is that a function of the original?

The original figure was slightly altered and appeared clear and accurate on reprint.
REFEREE 2 COMMENTS:

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 (pg 13 second paragraph) to reflect the insightful comments regarding interpretation of the study findings.

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.

As discussed in the Methods section, 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 obstetrical patients typically have greater numbers of visits?

As discussed in the Results section (p.8), 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. By utilizing the sampling and probability techniques discussed above, the CDC collects these surveys to provide national data on ambulatory services. Within the database, an individual patient cannot be tracked over the study period. Theoretically, if a patient made more than one visit to the office or hospital outpatient department within the one-week period that sampling occurred, then a patient may have been counted more than once. One would expect multiple visits within a one-week period to occur for complicated obstetrical patients. However,
Table 3 (pg 20) demonstrates that an equal proportion of complicated obstetrical visits occurred in low and high medical liability regions (16% vs 16%, p=0.99). Therefore, even if a patient visit was counted more than once, given the equal distribution of complicated obstetrical visits among low and high medical liability regions, one would not expect this to impact the study findings.

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.

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.

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.

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

Sincerely,

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