The pleasures of home birth?

Having said that "there is no indication of increased risk associated with planned home birth," the authors of your study added: "The consequences of some of the expected complications … may be more serious for women and their babies when women deliver at home."[1] Indeed, the parents of the 5 home-birth babies requiring assisted ventilation for more than 24 hours (versus none in the other groups) should wonder about their choice of home delivery, no matter how reassuring a midwife is about the lack of "statistical significance" suggesting problems with home deliveries.

The neonatal resuscitation course followed by most physicians and obstetrical nurses in rural hospitals suggests that a neonate requiring prolonged assisted ventilation should be intubated within a few minutes. Was this done by the midwives in the home? The fact that less than half the babies born with thick meconium received the indicated tracheal suctioning (versus virtually 100% in the other groups) suggests that the midwives overseeing the home births were either unable or unwilling to intubate. If this was the case, would this not affect the subsequent duration of respiratory morbidity? What are the long-term effects of the prolonged period of assisted ventilation, both respiratory and neurological?

The study stated: "The median total time from a 911 call to arrival at hospital was 37 minutes, with a range of 15–93 minutes." Oh, how this vapid statement glosses over an incredible amount of needless suffering. If it takes 90 minutes from the decision to call 911 (and that is only after the immediate attempts at resuscitation have been recognized as insufficient) until arrival at the hospital, then presumably it takes at least 40 minutes for the ambulance to arrive. What do the midwife and patient talk about while the hemorrhaging uterus is being massaged and the blood pressure drops? ("There were no differences in rates of postpartum hemorrhage … but the only 2 cases of obstetric shock occurred in the home-birth group.") Do they reassure themselves that the pleasure of delivering at home is worth the agony of waiting for an ambulance while the blood continues to gush, or the gasping/flat/blue baby continues to be bagged? What if the ambulance personnel are also unable to perform neonatal intubation, so that inadequate assisted bag and mask ventilation continues for another 30 or 40 minutes in the ambulance? Are any doubts about the home-birth process ever entertained by the participants? Judging from this article, the answer is no.

As long as statistical twisting can be used to advantage, the obvious will be ignored, and the health of mothers and their babies will be sacrificed at the altar of personal choice.

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Reference
1. Janssen PA, Lee SK, Ryan EM, Etches DJ, Farquharson DF, Peacock D, et al. Outcomes of planned home births versus planned hospital births after regulation of midwifery in British Columbia. *CMAJ* 2002;166(3):315-23.

How likely is it that anyone who had any significant risk opted for home birth?[1] Inconceivable. No midwife or doctor would ever suggest a home birth for a mother with a less-than-perfect situation. How could it be otherwise?

My interpretation of these results would be: the study showed a similar outcome for home births because the poorer outcomes expected of the more vigorous mothers who gave birth at home matched the better outcomes of the less healthy mothers who opted for hospital birth.

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Reference
1. Janssen PA, Lee SK, Ryan EM, Etches DJ, Farquharson DF, Peacock D, et al. Outcomes of planned home births versus planned hospital births after regulation of midwifery in British Columbia. *CMAJ* 2002;166(3):315-23.

Some of the outcomes cited in your study[1] seem to fit better under characteristics of the study populations. They look more like input (independent) variables than output (dependent) variables: pregnancy-induced hypertension, prolapsed cord and placenta previa. The absence of placenta previa in the home-delivery group, while prudent for the safety of mothers and babies, further detracts from the comparison of outcomes.

I was alerted to this important study by the CBC, whose editors might have been wise to put a question mark in their lead: "Home births safe as hospital births?: study."

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Reference
1. Janssen PA, Lee SK, Ryan EM, Etches DJ, Farquharson DF, Peacock D, et al. Outcomes of planned home births versus planned hospital births after regulation of midwifery in British Columbia. *CMAJ* 2002;166(3):315-23.

This study's[1] stated purpose was to evaluate the safety of home births by comparing perinatal outcomes for planned home births involving regulated midwives with those for planned hospital births. However, it was not designed to detect differences affecting the most clinically significant adverse outcomes. If a study is not designed to detect clinically relevant differences, it may fail to detect a statistically significant one despite the presence of clinically important differences between the study groups.

The interpretation section states that "there are no indications of increased risk associated with planned

home birth." This is dangerously misleading: rates for perinatal mortality and assisted ventilation were both higher in the home-birth population.

Although the authors acknowledge that the rates of some adverse outcomes were too low to provide statistical comparisons, they still suggest no difference in adverse outcomes. Clearly, one preventable episode of perinatal mortality or requirement for assisted ventilation is one too many. Given that this study is not large enough to detect a clinically relevant difference in these major outcomes, the authors have no basis to make this claim.

Unfortunately, the claims have already made it into the popular press, with the CBC stating: "Home births with a midwife are as safe as births in a hospital with a doctor." Once again, a medical publication has played a hand in misinforming the public.

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Reference

1. Janssen PA, Lee SK, Ryan EM, Etches DJ, Farquharson DF, Peacock D, et al. Outcomes of planned home births versus planned hospital births after regulation of midwifery in British Columbia. *CMAJ* 2002;166(3):315-23.

As a family physician who has provided obstetric services in rural British Columbia for over 20 years, I am upset by the implied safety attached to home births.[1] Statistically significant or not, in the study group involving 862 home births there were 3 times as many perinatal deaths compared with the cohort group involving 1314 in-hospital births. As well, 5 infants in the study group required prolonged ventilatory support versus none in the cohort group, and the only 2 cases of hemorrhagic shock occurred in the study group.

If, as the authors state, 7 to 8 years of data collection are required to compare perinatal death rates accurately, why did they then feel compelled to state that "there are no indications of increased risk associated with planned home births attended by regulated midwives"? The lay press has concluded that home births have been shown to be as safe as, if not safer than, in-hospital births. If we look at serious complications, this is clearly not the case.

If nothing else, the study should raise legitimate concerns regarding the safety of home births. Unfortunately, these concerns have not been conveyed to expectant mothers trying to make an informed choice.

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Reference

1. Janssen PA, Lee SK, Ryan EM, Etches DJ, Farquharson DF, Peacock D, et al. Outcomes of planned home births versus planned hospital births after regulation of midwifery in British Columbia. *CMAJ* 2002;166(3):315-23.

This study[1] contained significant biases. The groups were not like for like[2-5] because members of the hospital specialist group were shorter, more likely to have had a previous cesarean section, weighed more and were less likely to be multiparous. Hence, they were more prone to dystocia than members of the home-birth group.

As well, comparisons were made for induction of labour and epidural/spinal analgesia, but these interventions are usually unavailable during home births.[3] Are the authors implying that they are available at home in British Columbia? The overall transfer rate of about 22% was high. What were the major indications for transfer prepartum and intrapartum?

This article is too biased to allow us to draw any meaningful comparisons between home and hospital births. Moreover, the conclusions are not justified by the evidence presented.[6] The first step would be to compare like for like — a randomized selection of appropriate patients for home or hospital birth.[1-4]

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References

1. Janssen PA, Lee SK, Ryan EM, Etches DJ, Farquharson DF, Peacock D, et al. Outcomes of planned home births versus planned hospital births after regulation of midwifery in British Columbia. *CMAJ* 2002;166(3):315-23.
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3. Chamberlain G, Wraight A, Crowley P. Birth at home. *Pract Midwife* Jul-Aug;2(7):35-9.
4. Wiegers TA, Keirse MJ, van der Zee J, Berghs GA. Outcome of planned home and hospital births in low risk pregnancies: prospective study in midwifery practices in The Netherlands. *BMJ* 1996;313:1309-13.
5. Woodcock HC, Rad AW, Bower C, Stanley FJ, Moore DJ. A matched cohort study of planned home and hospital births in Western Australia 1981-1987. *Midwifery* 1994;10:125-35.
6. Olsen O, Jewell MD. Home versus hospital birth [Cochrane Review]. In: The Cochrane Library; 2000. Oxford: Update Software.

Janssen and colleagues[1] present data on a variety of adverse events and outcomes associated with childbirth. Although they compare home births attended by midwives, hospital births attended by midwives and hospital births attended by physicians, their primary focus is on the outcomes in births assisted by midwives. Those delivering at home would be expected to be at lower risk of medical interventions than those delivering in hospital. However, it might have helped to understand the results had they used a composite score of outcomes. The outcomes, taken from their data, are in my view important (see Table 1).

Comparing home delivery to hospital delivery attended by midwives (thus evaluating site of delivery and possibly selection criteria) eliminates the issue of different caregivers. A composite outcome variable of the need for obstetri-

Table 1: Births attended by midwives

Outcome	Home births *n = 862*	Hospital births *n = 571*
Obstetric shock	2	0
Blood transfusion	3	1
Ventilation > 24 hours	5	0
Perinatal death	3	1
Total no. of women	11*	2

*13 events