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Women's Health Care Physicians

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Planned Home Birth

ABSTRACT: Although the Committee on Obstetric Practice believes that hospitals and birthing centers are the safest setting for birth, it respects the right of a woman to make a medically informed decision about delivery. Women inquiring about planned home birth should be informed of its risks and benefits based on recent evidence. Specifically, they should be informed that although the absolute risk may be low, planned home birth is associated with a twofold to threefold increased risk of neonatal death when compared with planned hospital birth. Importantly, women should be informed that the appropriate selection of candidates for home birth; the availability of a certified nurse–midwife, certified midwife, or physician practicing within an integrated and regulated health system; ready access to consultation; and assurance of safe and timely transport to nearby hospitals are critical to reducing perinatal mortality rates and achieving favorable home birth outcomes.

In the United States, approximately 25,000 births (0.6%) per year occur in the home (1). Approximately one fourth of these births are unplanned or unattended (2). Among women who originally intend to give birth in a hospital or those who make no provisions for professional care during childbirth, subsequent unplanned home births are associated with high rates of perinatal and neonatal mortality (3). The relative risk versus benefit of a planned home birth, however, remains the subject of current debate.

High-quality evidence to inform this debate is limited. To date there have been no adequate randomized clinical trials of planned home birth (4). In developed countries where home birth is more common than in the United States, attempts to conduct such studies have been unsuccessful largely because pregnant women have been reluctant to participate in clinical trials involving randomization to home or hospital birth (5, 6). Consequently, most information on planned home births comes from observational studies. Observational studies of planned home birth often are limited by methodological problems, including small sample sizes (7–10); lack of an appropriate control group (11–14); reliance on birth certificate data with inherent ascertainment problems (2, 15); ascertainment relying on voluntary submission of data or self-reporting (7, 12, 14, 16); a limited ability to accurately distinguish between planned and unplanned

home births (15, 17); variation in the skill, training, and certification of the birth attendant (14, 15, 18); and an inability to account for and accurately attribute adverse outcomes associated with antepartum or intrapartum transfers (8, 15, 19). Although some modern observational studies overcome many of these limitations, the reports describe planned home births within tightly regulated and integrated provincial health care systems, which may not be generalizable to current practice in the United States (7, 8, 10, 11, 15, 16, 20–23). Furthermore, no studies are of sufficient size to compare maternal mortality between planned home and hospital birth and few, when considered alone, are large enough to compare perinatal and neonatal mortality rates. Despite these limitations, when viewed collectively, recent reports have clarified a number of important issues regarding the maternal and newborn outcomes of planned home birth when compared with planned hospital births.

Wax and colleagues recently conducted a meta-analysis of observational studies comparing the newborn and maternal outcomes for planned home birth with those of planned hospital birth (24) (Table 1). Although perinatal mortality rates were similar among planned home births and planned hospital births, planned home births were associated with a twofold-increased risk of neonatal death. When limited to only nonanomalous newborns, the increased risk of neonatal death was even

Table 1. Maternal and Neonatal Outcomes in Planned Home Birth Versus Planned Hospital Births

	Planned Home Birth	Planned Hospital Birth	Odds Ratio	95% Confidence Interval
Neonatal death— all newborns	2.0/1,000	0.9/1,000	2.0	1.2–3.3
Neonatal death— nonanomalous	1.5/1,000	0.4/1,000	2.9	1.3–6.2
Episiotomy	7.0%	10.4%	0.26	0.24–0.28
Operative vaginal delivery	3.5%	10.2%	0.26	0.24–0.28
Cesarean delivery	5.0%	9.3%	0.42	0.39–0.45
Third- or fourth- degree laceration	1.2%	2.5%	0.38	0.33–0.45
Maternal infection	0.7%	2.6%	0.27	0.19–0.39

Data from Wax JR, Lucas FL, Lamont M, Pinette MG, Cartin A, Blackstone DO. Maternal and newborn outcomes in planned home birth versus planned hospital births—a meta-analysis. *Am J Obstet Gynecol* 2010;203:243.e1–8.

higher—almost threefold higher in planned home births. These results did not change when the investigators performed sensitivity analyses excluding older studies or poorer quality studies. No maternal deaths were reported among 10,977 planned home births (95% confidence interval, 0–27.3/100,000 live births). When compared with planned hospital births, planned home births are associated with fewer maternal interventions, including epidural analgesia, electronic fetal heart rate monitoring, episiotomy, operative vaginal delivery, and cesarean delivery. Planned home births are associated with fewer third-degree lacerations or fourth-degree lacerations, less maternal infection and similar rates of postpartum hemorrhage, perineal laceration, vaginal laceration, and umbilical cord prolapse. Rates of preterm birth before 37 weeks of gestation and low birth weight were lower for planned home birth, likely because of selection bias. The reported risk of needing an intrapartum transport to a hospital is 25–37% for nulliparous women and 4–9% for multiparous women (25). Most of these intrapartum transports are for lack of progress in labor, nonreassuring fetal status, need for pain relief, hypertension, bleeding, and fetal malposition.

It is important to note that reports suggesting that planned home births are safe involved only healthy pregnant women. Recent cohort studies reporting lower perinatal mortality rates with planned home birth describe the use of strict selection criteria for appropriate candidates (21, 22). These criteria include the absence of any preexisting maternal disease, the absence of significant disease arising during the pregnancy, a singleton fetus, a cephalic presentation, gestational age greater than 36 weeks and less than 41 completed weeks of pregnancy, labor that is spontaneous or induced as an outpatient, and that the patient has not been transferred from

another referring hospital. Failure to adhere to such criteria (because of postterm pregnancy, twins, or breech presentation) is clearly associated with a higher risk of perinatal death (23, 26). Although patients with one prior cesarean delivery were considered candidates for home birth in both Canadian studies, neither report provided details of the outcomes specific to patients attempting vaginal birth after cesarean delivery at home. Because of the risks associated with a trial of labor after cesarean delivery and that uterine rupture and other complications may be unpredictable, the American College of Obstetricians and Gynecologists recommends that a trial of labor after cesarean delivery be undertaken in facilities with staff immediately available to provide emergency care (27). The American College of Obstetricians and Gynecologists' Committee on Obstetric Practice considers a prior cesarean delivery to be an absolute contraindication to planned home birth.

Another factor influencing the safety of planned home birth is the availability of safe and timely intrapartum transfer of the laboring patient. The relatively low perinatal and newborn mortality rates reported for planned home births from Ontario, British Columbia, and the Netherlands were from highly integrated health care systems with established criteria and provisions for emergency intrapartum transport (12–14). Cohort studies conducted in areas without such integrated systems and those where the receiving hospital may be remote with the potential for delayed or prolonged intrapartum transport generally report higher rates of intrapartum and neonatal death (6, 9, 11, 19). The Committee on Obstetric Practice believes that the availability of timely transfer and an existing arrangement with a hospital for such transfers is a requirement for consideration of a home birth.

A characteristic common to those cohort studies reporting lower rates of perinatal mortality in North America is the provision of care by well-educated, highly trained, certified midwives who are well integrated into the health care system (21, 22). In the United States, certified nurse–midwives and certified midwives are certified by the American Midwifery Certification Board. This certification depends on the completion of an accredited educational program and meeting standards set by the American Midwifery Certification Board. According to the National Center for Health Statistics, more than 90% of attended home births in the United States are attended by midwives (28). However, only approximately 25% of these are attended by certified nurse–midwives or certified midwives. The remaining 75% are attended by other midwives; the category used by the National Center for Health Statistics that includes certified professional midwives, lay midwives, and others. The recognition and regulation of certified professional midwives and lay midwives varies tremendously from state to state. At this time, for quality and safety reasons, the American College of Obstetricians and Gynecologists does not support the provision of care by lay midwives or other midwives who are not certified by the American Midwifery Certification Board.

Summary

Although the Committee on Obstetric Practice believes that hospitals and birthing centers are the safest setting for birth, it respects the right of a woman to make a medically informed decision about delivery. Women inquiring about planned home birth should be informed of its risks and benefits based on recent evidence. Specifically, they should be informed that although the absolute risk may be low, planned home birth is associated with a twofold to threefold increased risk of neonatal death when compared with planned hospital birth. Importantly, women should be informed that the appropriate selection of candidates for home birth; the availability of a certified nurse–midwife, certified midwife, or physician practicing within an integrated and regulated health system; ready access to consultation; and assurance of safe and timely transport to nearby hospitals are critical to reducing perinatal mortality rates and achieving favorable home birth outcomes.

References

1. MacDorman MF, Menacker F, Declercq E. Trends and characteristics of home and other out-of-hospital births in the United States, 1990–2006. *Natl Vital Stat Rep* 2010; 58:1,14–16.
2. Wax JR, Pinette MG, Cartin A, Blackstone J. Maternal and newborn morbidity by birth facility among selected United States 2006 low-risk births. *Am J Obstet Gynecol* 2010;202:152.e1,152.e5.
3. Collaborative survey of perinatal loss in planned and unplanned home births. Northern Region Perinatal Mortality Survey Coordinating Group. *BMJ* 1996;313:1306–9.

4. Olsen O, Jewell D. Home versus hospital birth. *Cochrane Database of Systematic Reviews* 1998, Issue 3. Art. No.: CD000352. DOI: 10.1002/14651858.CD000352.
5. Dowswell T, Thornton JG, Hewison J, Lilford RJ, Raisler J, Macfarlane A, et al. Should there be a trial of home versus hospital delivery in the United Kingdom? *BMJ* 1996; 312:753–7.
6. Hendrix M, Van Horck M, Moreta D, Nieman F, Nieuwenhuijze M, Severens J, et al. Why women do not accept randomisation for place of birth: feasibility of a RCT in The Netherlands. *BJOG* 2009;116:537,42; discussion 542–4.
7. Wieggers TA, Keirse MJ, van der Zee J, Berghs GA. Outcome of planned home and planned hospital births in low risk pregnancies: prospective study in midwifery practices in The Netherlands. *BMJ* 1996;313:1309–13.
8. Ackermann-Liebrich U, Voegeli T, Gunter-Witt K, Kunz I, Zullig M, Schindler C, et al. Home versus hospital deliveries: follow up study of matched pairs for procedures and outcome. Zurich Study Team. *BMJ* 1996;313:1313–8.
9. Davies J, Hey E, Reid W, Young G. Prospective regional study of planned home births. Home Birth Study Steering Group. *BMJ* 1996;313:1302–6.
10. 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;166:315–23.
11. Woodcock HC, Read AW, Bower C, Stanley FJ, Moore DJ. A matched cohort study of planned home and hospital births in Western Australia 1981–1987 [published erratum appears in *Midwifery* 1995;11:99]. *Midwifery* 1994;10: 125–35.
12. Anderson RE, Murphy PA. Outcomes of 11,788 planned home births attended by certified nurse-midwives. A retrospective descriptive study. *J Nurse Midwifery* 1995;40: 483–92.
13. Murphy PA, Fullerton J. Outcomes of intended home births in nurse-midwifery practice: a prospective descriptive study. *Obstet Gynecol* 1998;92:461–70.
14. Johnson KC, Daviss BA. Outcomes of planned home births with certified professional midwives: large prospective study in North America. *BMJ* 2005;330:1416.
15. Pang JW, Heffelfinger JD, Huang GJ, Benedetti TJ, Weiss NS. Outcomes of planned home births in Washington State: 1989–1996. *Obstet Gynecol* 2002;100:253–9.
16. Lindgren HE, Radestad IJ, Christensson K, Hildingsson IM. Outcome of planned home births compared to hospital births in Sweden between 1992 and 2004. A population-based register study. *Acta Obstet Gynecol Scand* 2008;87:751–9.
17. Mori R, Dougherty M, Whittle M. An estimation of intrapartum-related perinatal mortality rates for booked home births in England and Wales between 1994 and 2003 [published erratum appears in *BJOG* 2008;115:1590]. *BJOG* 2008;115:554–9.
18. Schramm WF, Barnes DE, Bakewell JM. Neonatal mortality in Missouri home births, 1978–84. *Am J Public Health* 1987;77:930–5.

19. Parratt J, Johnston J. Planned homebirths in Victoria, 1995–1998. *Aust J Midwifery* 2002;15:16–25.
20. de Jonge A, van der Goes BY, Ravelli AC, Amelink-Verburg MP, Mol BW, Nijhuis JG, et al. Perinatal mortality and morbidity in a nationwide cohort of 529,688 low-risk planned home and hospital births. *BJOG* 2009;116:1177–84.
21. Janssen PA, Saxell L, Page LA, Klein MC, Liston RM, Lee SK. Outcomes of planned home birth with registered midwife versus planned hospital birth with midwife or physician [published erratum appears in *CMAJ* 2009;181:617]. *CMAJ* 2009;181:377–83.
22. Hutton EK, Reitsma AH, Kaufman K. Outcomes associated with planned home and planned hospital births in low-risk women attended by midwives in Ontario, Canada, 2003–2006: a retrospective cohort study. *Birth* 2009;36:180–9.
23. Kennare RM, Keirse MJ, Tucker GR, Chan AC. Planned home and hospital births in South Australia, 1991–2006: differences in outcomes. *Med J Aust* 2010;192:76–80.
24. Wax JR, Lucas FL, Lamont M, Pinette MG, Cartin A, Blackstone J. Maternal and newborn outcomes in planned home birth vs planned hospital births: a metaanalysis. *Am J Obstet Gynecol* 2010;203:243.e1,243.e8.
25. Wax JR, Pinette MG, Cartin A. Home versus hospital birth—process and outcome. *Obstet Gynecol Surv* 2010;65:132–40.
26. Bastian H, Keirse MJ, Lancaster PA. Perinatal death associated with planned home birth in Australia: population based study. *BMJ* 1998;317:384–8.
27. Vaginal birth after previous cesarean delivery. Practice Bulletin No. 115. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2010;116:450–63.
28. Centers for Disease Control and Prevention. Data access: VitalStats. Available at: <http://www.cdc.gov/nchs/vitalstats.htm>. Retrieved October 15, 2010.

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