

OBSTETRICS

Perinatal risks of planned home births in the United States

Amos Grünebaum, MD; Laurence B. McCullough, PhD; Robert L. Brent, MD, PhD, DSc (Hon); Birgit Arabin, MD; Malcolm I. Levene, MD, FRCP, FRCPH; Frank A. Chervenak, MD

OBJECTIVE: We analyzed the perinatal risks of midwife-attended planned home births in the United States from 2010 through 2012 and compared them with recommendations from the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) for planned home births.

STUDY DESIGN: Data from the US Centers for Disease Control and Prevention's National Center for Health Statistics birth certificate data files from 2010 through 2012 were utilized to analyze the frequency of certain perinatal risk factors that were associated with planned midwife-attended home births in the United States and compare them with deliveries performed in the hospital by certified nurse midwives. Home birth deliveries attended by others were excluded; only planned home births attended by midwives were included. Hospital deliveries attended by certified nurse midwives served as the reference. Perinatal risk factors were those established by ACOG and AAP.

RESULTS: Midwife-attended planned home births in the United States had the following risk factors: breech presentation, 0.74% (odds ratio [OR], 3.19; 95% confidence interval [CI], 2.87–3.56); prior cesarean

delivery, 4.4% (OR, 2.08; 95% CI, 2.0–2.17); twins, 0.64% (OR, 2.06; 95% CI, 1.84–2.31); and gestational age 41 weeks or longer, 28.19% (OR, 1.71; 95% CI, 1.68–1.74). All 4 perinatal risk factors were significantly higher among midwife-attended planned home births when compared with certified nurse midwives—attended hospital births, and 3 of 4 perinatal risk factors were significantly higher in planned home births attended by non-American Midwifery Certification Board (AMCB)—certified midwives (other midwives) when compared with home births attended by certified nurse midwives. Among midwife-attended planned home births, 65.7% of midwives did not meet the ACOG and AAP recommendations for certification by the American Midwifery Certification Board.

CONCLUSION: At least 30% of midwife-attended planned home births are not low risk and not within clinical criteria set by ACOG and AAP, and 65.7% of planned home births in the United States are attended by non-AMCB certified midwives, even though both AAP and ACOG state that only AMCB-certified midwives should attend home births.

Key words: home birth, midwives, perinatal risks

Cite this article as: Grünebaum A, McCullough LB, Brent RL, et al. Perinatal risks of planned home births in the United States. *Am J Obstet Gynecol* 2015;212:350.e1-6.

There has been an increase in home births in the United States over the last 10 years.¹ Recent studies have shown that when compared with hospital births, planned home births by midwives are associated with an increase in adverse neonatal outcomes, such as neonatal deaths,²⁻⁴ Apgar score of 0, neonatal seizures, or serious neurological dysfunction.⁵

The American College of Obstetricians and Gynecologists (ACOG) and

the American Academy of Pediatrics (AAP) have concluded that planned hospital births are safer than planned home births, and both professional organizations have also identified clinical criteria for selecting low-risk patients for planned home births.^{6,7} ACOG and AAP have also stated that midwives attending planned home births should be certified by the American Midwifery Certification Board (AMCB).^{6,7}

The purpose of this study was to evaluate the frequency of certain perinatal risk factors that were associated with planned midwife-attended home births in the United States from 2010 through 2012 and to compare them with clinical criteria for planned home births established by the ACOG and AAP.

MATERIALS AND METHODS

We utilized data from the National Center for Health Statistics of the US Centers for Disease Control and Prevention (CDC) birth certificate data for 2010–2012, the most recent data available to analyze the 4 ACOG/AAP clinical criteria for planned home births. The CDC files contain detailed information on each of the approximately 4 million births in the United States each year.

Data on patient characteristics including birth setting, method of delivery, birth attendant, gestational age, infant birthweight, maternal age, history of

From the Department of Obstetrics and Gynecology, Weill Medical College of Cornell University, New York, NY (Drs Grünebaum, Brent, and Chervenak); Center for Medical Ethics and Health Policy, Baylor College of Medicine, Houston, TX (Dr McCullough); Departments of Obstetrics and Gynecology, Thomas Jefferson University, Philadelphia, PA, and Alfred I. DuPont Hospital for Children, Wilmington, DE (Dr Brent); Center for Mother and Child, Philipps University, Marburg, and Clara Angela Foundation, Berlin, Germany (Dr Arabin); and Division of Pediatrics and Child Health, University of Leeds, Leeds, England, UK (Dr Levene).

Received Aug. 29, 2014; revised Sept. 9, 2014; accepted Oct. 13, 2014.

The authors report no conflict of interest.

Corresponding author: Amos Grünebaum, MD. amg2002@med.cornell.edu

0002-9378/\$36.00 • © 2015 Elsevier Inc. All rights reserved. • <http://dx.doi.org/10.1016/j.ajog.2014.10.021>

prior cesarean delivery, and parity are reported on birth certificates filed each year with each of the states in the United States and compiled by National Center for Health Statistics. These data are publicly accessible on the Internet (<http://205.207.175.93/vitalstats/ReportFolders/ReportFolders.aspx>), where detailed tables can be created and downloaded for further evaluation.

According to CDC data, “almost all the home births attended by certified nurse-midwives/certified midwives (98%) or “other” midwives (99%) were planned,”^{8,9} and therefore, we defined planned home births as births attended at home by midwives. We excluded from planned home births those performed at home by others (eg, family members, emergency medical service, or police, taxi drivers as well as unattended births).

Planned US midwife home deliveries for the years 2010–2012, the most recent years available, were analyzed for ACOG and AAP perinatal risk factors that should be excluded from home births⁷: vaginal breech deliveries, prior cesarean delivery, twin gestations, and postdate pregnancies (gestational age 41 weeks or longer). Hospital births attended by certified nurse midwives served as a reference. Home birth—planned midwife-attended deliveries were compared with hospital-certified nurse midwives (CNM)—attended deliveries.

The CDC database separates midwives into CNM and other midwives. The AMCB certifies 2 kinds of midwives: CNMs and certified midwives (CMs), both of whom have graduated from a midwifery education program accredited by the American Commission for Midwifery Education. The total number of AMCB-certified midwives (CNMs plus CMs) includes only a small percentage of CMs because CMs are permitted to practice in only 5 states. Therefore, the CDC designation of CNMs captures nearly all of AMCB-certified midwives.

In addition to CNMs, the CDC also has a designation of other midwives, which includes certified professional midwives, who are not eligible for certification by the AMCB and who have no requirement of a Bachelor's degree or

graduate training. In addition, the CDC designation of other midwives may include lay midwives and others without any graduate midwifery training. We performed a subanalysis and compared the frequency with which certain perinatal risk factors were associated with home births attended by CNMs with those attended by other midwives (ie, midwives not eligible to get certified by the AMCB).

Data were abstracted from the US birth certificate data. Because non-identifiable data from a publicly available data set were used, this study was not considered human subject research and did not require review by the Institutional Review Board of Weill Medical College of Cornell University.

Statistical analyses were conducted for comparisons between planned midwife-attended home births and CNM-attended deliveries in the hospital. Odds ratios and 95% confidence intervals were calculated for each of the 3 provider groups (CNM-attended home birth, other midwife-attended home birth, and CNM-attended hospital birth) and 4 of the risk groups. All statistical analyses were conducted in OpenEpi.¹⁰

RESULTS

Between 2010 and 2012, there were a total of 11,905,817 deliveries in the United States, of which 736,070 were attended by CNMs in the hospital. There were 85,318 home births (0.71% of all births in the United States) and after exclusion of 29,178 home birth deliveries performed by others, we included 56,140 deliveries that were attended by midwives at home and are considered planned midwife-attended home births. CNMs attended 19,263 (34.3%) of these home births, whereas other midwives attended 36,877 (65.7%) of planned home births.

Table 1 shows the comparisons of perinatal risk factors between deliveries attended in the hospital by CNMs and planned midwife-attended home births by CNMs and other midwives. Of the midwife-attended planned home births, approximately 3 in 10 were at a gestation of 41 weeks or longer, 1 in 156 were

births with twins, approximately 1 in 23 were vaginal births after cesarean deliveries, and 1 in 135 home births were births with breech presentation.

Planned home births attended by CNMs and other midwives had a significantly higher frequency of certain perinatal risks when compared with CNM-attended hospital births. Planned home births attended by non-AMCB-certified other midwives had a significantly higher frequency of perinatal risks for breech presentation, prior cesarean deliveries, and twins, when compared with planned home births attended by CNMs.

COMMENT

The AAP and ACOG previously published policy statements on planned home birth with recommendations when to consider planned home birth, and they listed the use of strict selection criteria for planned home births (Tables 2 and 3).^{6,7} According to the ACOG, selection criteria for home births include singletons, cephalic pregnancies between 37 and 41 weeks, no prior cesarean deliveries, and certified midwives or physicians as birth attendants.

This study shows that 1 in 156 of midwife-attended planned home births (0.64%) were twin pregnancies, even though the ACOG considers twins a contraindication for home births because there is no adequate fetal monitoring, no experienced team, and no ultrasound available in home births.^{6,7} Studies on the safety of home births from Canada, England, and The Netherlands excluded twins as candidates for home birth because of increased risks.^{11–14} Even within hospitals, delivery of the second twin, especially when not engaged or nonvertex, requires an experienced obstetrician to prevent perinatal morbidity or even mortality.¹⁵ We note that our data indicate that in some hospitals there were apparently CNM deliveries of twin and breech-presentation pregnancies.

The data in this study show that 1 in 135 of planned home births attended by midwives (0.74%) were vaginal breech deliveries. Breech vaginal birth is associated with significantly increased risks.

Download English Version:

<https://daneshyari.com/en/article/6144350>

Download Persian Version:

<https://daneshyari.com/article/6144350>

[Daneshyari.com](https://daneshyari.com)