



**SANDHILLS  
CENTER**



# Planned home births

Clinical Policy ID: CCP.1240

Recent review date: 3/2021

Next review date: 7/2022

Policy contains: Nurse midwives, perinatal mortality, planned home births.

*This policy is a Sandhills Center Clinical Coverage Policy adopted from AmeriHealth Caritas of North Carolina. These clinical policies are used to assist with making coverage determinations. Sandhills Center's clinical policies are based on guidelines from established industry sources, such as the Centers for Medicare & Medicaid Services (CMS), state regulatory agencies, the American Medical Association (AMA), medical specialty professional societies, and peer-reviewed professional literature. These clinical policies along with other sources, such as plan benefits and state and federal laws and regulatory requirements, including any state- or plan-specific definition of "medically necessary," and the specific facts of the particular situation are considered by Sandhills Center when making coverage determinations. In the event of conflict between this clinical policy and plan benefits and/or state or federal laws and/or regulatory requirements, the plan benefits and/or state and federal laws and/or regulatory requirements shall control. Sandhills Center clinical policies are for informational purposes only and not intended as medical advice or to direct treatment. Physicians and other health care providers are solely responsible for the treatment decisions for their patients. Sandhills Center's clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, Sandhills Center will update its clinical policies as necessary. Sandhills Center clinical policies are not guarantees of payment.*

## Coverage policy

Planned home births, as an elective alternative to delivery in a birthing center or hospital setting, are investigational/not clinically proven and, therefore, not medically necessary.

### Limitations

No limitations were identified during the writing of this policy.

### Alternative covered services

- Participating hospitals for inpatient births.
- Participating birthing centers with licensed certified nurse-midwives.

## Background

A planned home birth is an elective alternative to delivery in a birthing center or hospital setting. The Centers for Disease Control and Prevention reported that about 62,228 of about 4,000,000 U.S. births occurred in the home in 2017 (MacDorman, 2019; Grunebaum, 2017).

The number of planned home births in the United States increased 77% between 2004 and 2017, while the number of birth center births more than doubled during this period. In 2017, 1.61% of U.S. births occurred outside the hospital; the highest rates are in the Pacific northwest, and the lowest in Deep South states like Alabama, Louisiana, and Mississippi. More than two-thirds of planned home births were self-paid, compared to

one-third in birth centers and 3% in hospitals (MacDorman, 2017). The rate of planned home births for non-Hispanic whites is three to five times greater than for any other major racial or ethnic group (MacDorman, 2012).

Those women giving birth outside of the hospital were generally at lower risk than those delivering in a hospital. Out-of-hospital mothers had lower pre-pregnancy obesity (12.5% versus 25.0%), lower smoking rates (2.8% versus 8.5%), higher college graduation rates (39.3% versus 30.0%), and higher breastfeeding initiation rates (94.3% versus 80.8%). Vaginal births after cesarean comprised 4.6% of home births, compared to only 1.6% in hospitals and birth centers. Over two-thirds (67.1%) of planned home births were self-paid, compared to only 31.9% and 3.4% of birth center and hospital births (MacDorman, 2014).

The prevailing standard for planned home deliveries is to ensure that low-risk mothers and newborns be selected. However, despite the above-cited lower rates of smokers and obese women, along with higher educational levels, the belief that women electing home births are of lower risk has been challenged. The 37,892 U.S. planned home births in 2009 and 2010 have been compared to the 8,038,365 hospital births in that period. Higher incidence of five risk factors has been identified in the planned home birth group (compared to hospital births):

- 21.7% versus 14.3% are of advanced maternal age.
- 27.8% versus 13.6% are post-term.
- 20.5% versus 7.5% of newborns have macrosomia (over 8 lb., 13 oz.).
- 7.8% versus 2.3% have precipitous labor.
- 3.1% versus 1.2% have prolonged labor.

In addition, higher prevalence of prior cesarean delivery (4.3%), nulliparity (19.7%), and preterm births (2.3%) were identified in the planned home birth population (Chu, 2014).

A review of 2016-2018 U.S. home births estimated the proportion to be at high risk was 35.1%. Neonatal factors that define high-risk include large for gestational age (39.5%), small for gestational age (20.5%), maternal diabetes (17.1%), maternal hypertension (16.9%), vaginal births after Cesarean section (10.6%), and preterm deliveries (10.1%) (Goyal, 2020).

## Findings

Two professional practice guidelines serve as the standard for U.S. medical practice for planned home births. The American College of Obstetricians and Gynecologists does not state that planned home births should not be performed, but recommends that women interested in planned home births should be informed about potential risks and benefits by their providers. More specifically, the College states providers should consider factors that reduce risk for planned home births, including appropriate selecting of candidates; ensuring midwives are certified and licensed; providing the woman ready access to consults; and ensuring the availability of timely transport to hospitals. The College also states that contraindications for planned home births include fetal malpresentation, multiple gestations, or prior cesarean deliveries (American College of Obstetricians and Gynecologists, 2018).

The American Academy of Pediatrics policy, written four years before that of the American College of Obstetricians and Gynecologists, declares hospitals and birthing centers are the safest settings for births in the United States. The statement, designed to guide pediatricians in providing informed and supportive counsel to

women considering home births, states, "A woman's choice to plan a home birth is not well supported in the

United States.” The American Academy of Pediatrics cites a lack of trained providers, lack of supporting systems, and inability to transport mother and newborn to a hospital in a timely manner as factors behind its recommendation (American Academy of Pediatrics, 2013).

A recent report suggests that other contraindications for planned home births could be added to the current American College of Obstetricians and Gynecologists list, specifically nulliparous pregnant women, gestational age over 41 weeks, and breech deliveries (Grunenbaum, 2017b).

A systematic review/meta-analysis of 14 studies (n = 500,000 intending home births), the odds ratio of perinatal or neonatal mortality of women intending home births compared to those intending hospital birth were similar for nulliparous women (1.07) and for multiparous women (1.08) (Hutton, 2019).

Asystematic review/meta-analysis included 28 studies (16 from Europe, nine from Australia/New Zealand, two from the U.S., and one from Japan), and compared planned home births to planned hospital births (by actual location of delivery). Among infants, planned home births had significantly lower rates of neonatal intensive care admissions, but were similar to planned hospital births in stillbirth and early neonatal death rates. Among mothers, the study reported significantly superior outcomes among planned home births in rates of normal vaginal births, Cesarean sections, instrumental births, intact perineum, severe perineal trauma, and postpartum hemorrhage > 1000 ml (Scarf, 2018).

Asystematic review/meta-analysis compared 14,637 planned home births and 30,177 planned hospital births from 2000-2017. Planned home births were significantly more likely to spontaneously deliver, and less likely to undergo cesarean sections, receive medical interventions, and experience fetal dystocia and post-partum hemorrhage. Neonatal morbidity and mortality are similar for the two groups (Rossi, 2018).

A review of 71,704 planned home births that took place at home in Quebec, Canada, showed an early neonatal mortality rate of 1.5 deaths ]per 1000 births. Risk factors (odds ratio) for early neonatal deaths included nulliparous births (2.71), women with a previous cesarean section (2.62), non-vertex presentations (4.27), plural births (9.79), preterm births (4.68), and births at ≥41 weeks of gestation (1.76) (Bachilova, 2018).

A meta-analysis of 12 studies compared 342,056 planned home deliveries with 207,551 planned hospital deliveries. The home group had lower utilization of epidural analgesia during labor, electronic fetal heart monitoring, episiotomy, operative vaginal delivery, and cesarean delivery. Mothers delivering at home had fewer third-degree (or greater) lacerations, infections, instances of postpartum bleeding, perineal lacerations, vaginal lacerations, and retained placentas. Home births were less likely to have gestation < 37 weeks, but more likely to have gestation of > 42 weeks. No differences were observed in perinatal deaths, but neonatal deaths were significantly higher for home births (Wax, 2010).

A systematic review of 15 studies noted that four of these linked home births with higher neonatal mortality, but stated that mortality rates are very low. Studies that focused on low-risk pregnancies, planned birth locations, and well-trained birth attendants showed no difference in instances of neonatal morbidity, which occur at much higher rates than mortality (Elder, 2016).

A 2016 Cochrane review including 15 trials (n = 17,674) found women with planned home births were less likely to experience intervention, more likely to be satisfied with their care, and have comparable rates of adverse outcomes (Sandall, 2016).

Of 16,924 U.S. women who planned home births from 2004 to 2009, 89.1% did give birth at home. Just 4.5% of

these deliveries required oxytocin augmentation and/or epidural analgesia. Reported rates of spontaneous vaginal birth (93.6%), assisted vaginal birth (1.2%), and cesarean section (5.2%) were considered positive. Of the 1,054 women who attempted vaginal birth after a cesarean, 87% succeeded. Low Apgar scores (< 7) were reported in only 1.5% of newborns. Postpartum maternal and neonatal transfer rates (1.5% and 0.9%) were low. Most newborns (86%) were breast-feeding within six weeks. Excluding lethal anomalies, intrapartum, early neonatal, and late neonatal mortality were 1.30, 0.41, and 0.35 per 1,000 births (Cheyney, 2014).

A study of all 2,081,753 singleton U.S. births in 2008 (12,039 of which were planned home births) documented the planned home birth group had higher rates of five-minute Apgar scores < 4 (0.37% versus 0.24%) and neonatal seizure (0.06% versus 0.02%) but had fewer interventions, such as operative vaginal delivery and labor induction and augmentation (Cheng, 2013).

.A study comparing planned home births to hospital births focused on the 90,000 births in Oregon in 2012 and 2013. The home group had a significantly higher perinatal death rate (3.9 versus 1.8 per 1,000), along with higher incidence of neonatal seizures and neonatal intensive care unit admissions. The home group also had a higher proportion of unassisted vaginal delivery (93.8% versus 71.9%) and decreased risk of an obstetrical procedure (Snowden, 2015). These findings were consistent with a review of 859,873 Missouri births from 1989 to 2005 that identified higher rates of newborn seizures or intrapartum fetal deaths among planned home births (Chang, 2011).

One of the largest studies comparing outcomes by birth setting took place in the Netherlands, where 60% of known planned birth places (n = 743,070) were in the home. Combined intrapartum and neonatal death rates were slightly lower for home births (1.02% vs. 1.09%). Rates of neonatal Intensive Care Unit admissions and low Apgar scores did not differ by birth setting among nulliparous women, but were lower for parous women with planned home deliveries (de Jonge, 2015).

A study of 679,952 women from the Dutch Perinatal Registry who delivered from 2000-2007 found rates of interventions (defined as operative vaginal delivery and/or cesarean section) were significantly lower in planned home (versus planned hospital) births (10.9% versus 13.8%). Mortality was lower in planned home births (0.15% versus 0.18%). In at-risk groups, the mortality rate < seven days was elevated in planned home births (van der Kooy, 2017).

A review of 11,493 planned home births and 11,493 planned hospital births in Canada — all considered low risk — found no difference in stillbirth, neonatal death, or serious morbidity rates between groups (Hutton, 2016).

A study of all 300,011 births in Australia from 1991 to 2006 (1,140 were planned home births and the remainder planned hospital births) documented no difference in perinatal mortality rates (7.9 versus 8.2 per 1,000 births) but an intrapartum death rate seven times higher and an intrapartum asphyxia death rate 27 times higher for the home births. These differences were attributed to inappropriate inclusion of women with risk factors (Kennare, 2010).

A study analyzing outcomes for 13,144 women attempting a planned home vaginal delivery, of whom 1,052 had a prior cesarean section, found a successful vaginal birth after Cesarean rate of 87%, although transfer rates were higher for women with a prior Cesarean (18% versus 7%). The prior Cesarean group had higher proportions of blood loss, maternal postpartum infections, uterine rupture, and neonatal Intensive Care Unit admissions,

along with a significantly higher neonatal mortality, based on five deaths (Cox, 2015).

A study that analyzed U.S. women (excluding gestation <37 weeks and infants <2500 grams) from 2007-2014 who underwent a trial of labor after cesarean revealed that those who attempted labor at home versus those who did so in hospitals had a rate of adverse neonatal outcomes 10 times greater; a risk of five-minute Apgar score 0-1 nine times greater; and a risk of neonatal seizures or severe neurologic dysfunction 11 times greater, all statistically significant. Authors strongly recommend that any trial of labor after cesarean should be done solely in hospitals (Grunebaum, 2017a).

No studies in the professional literature address outcomes of planned home births for populations with special needs, such as the Medicaid population. In 2017, Medicaid was the payment source for 43.4% of all U.S. hospital births and 17.9% of all birth center births, but just 8.6% of planned home deliveries. States with the highest proportions of planned home deliveries covered by Medicaid include New Mexico (45.6%), Vermont (38.5%), Florida (30.4%), and Alaska (29.4%), Rhode Island (28.6%), and Washington (27.9%) (MacDorman, 2019).

## References

On January 5, 2021, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were “planned home births.” We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

American Academy of Pediatrics. Planned home birth: Policy Statement. AAP Committee on fetus and newborn. <http://pediatrics.aappublications.org/content/pediatrics/early/2013/04/24/peds.2013-0575.full.pdf>. Published 2013. Accessed January 5, 2021.

American College of Obstetricians and Gynecologists. Committee Opinion 697. Planned Home Births. [https://journals.lww.com/greenjournal/Fulltext/2017/04000/Committee\\_Opinion\\_No\\_697\\_Planned\\_Home\\_Birth.52.aspx](https://journals.lww.com/greenjournal/Fulltext/2017/04000/Committee_Opinion_No_697_Planned_Home_Birth.52.aspx). Published 2017. Accessed January 5, 2021.

Bachilova S, Czuzoj-Shulman N, Abenhaim HA. Effect of maternal and pregnancy risk factors on early neonatal death in planned home births delivering at home. *J Obstet Gynaecol Can*. 2018;40(5):540-546. Doi: 10.1016/j.jogc.2017.07.029.

Chang JJ, Macones GA. Birth outcomes of planned home births in Missouri: a population-based study. *Am J Perinatol*. 2011;28(7):529-536. Doi: 10.1055/s-0031-1272971.

Cheng YW, Snowden JM, King TL, Caughey AB. Selected perinatal outcomes associated with planned home births in the United States. *Am J Obstet Gynecol*. 2013;209(4):325.e1-8. Doi: 10.1016/j.ajog.2013.06.022.

Cheyney M, Bovbjerg M, Everson C, Gordon W, Hannibal D, Vedam S. Outcomes of care for 16,924 planned home births in the United States: the Midwives Alliance of North America Statistics Project, 2004 to 2009. *J Midwifery Womens Health*. 2014;59(1):17-27. Doi: 10.1111/jmwh.12172.

Chu S, Chervanek FA, Grunebaum A. Are planned home births really low risk? *Obstetrics & Gynecology*. CCP.1240

2014. Doi 10.1097/01.AOG.0000447236.

Cox KJ, Bovbjerg ML, Gneyney M, Leeman LM. Planned home VBAC in the United States, 2004-2009:

outcomes, maternity care practices, and implications for shared decision making. *Birth*. 2015;42(4):299-308. Doi: 10.1111/birt.12188.

De Jonge A, Geerts CC, van der Goes BY, Nol BW, Buitendijk SE, Nijhuis JG. Perinatal mortality and morbidity up to 28 days after birth among 743,070 low-risk planned home and hospital births: a cohort study based on the three merged national perinatal databases. *BJOG*. 2014;122(5):720-728. Doi: 10.1111/1471-0528.13084.

Elder HR, Alio AP, Fisher SG. Investigating the debate of home birth safety: A critical review of cohort studies focusing on selected infant outcomes. *Jpn J Nurs Sci*. 2016;13(3):297-308. Doi: 10.1111/jjns.12116.

Goyal S, Kortsmiit K, Cox S, et al. Prevalence of home births and associated risk profile and maternal characteristics, 2016-2018. *Obstet Gynecol*. 2020;136(6):1195-1203. Doi: 10.1097/AOG.0000000000004129.

Grünebaum A, McCullough LB, Arabin B, Chervenak FA. Serious adverse neonatal outcomes such as 5-minute Apgar score of zero and seizures or severe neurologic dysfunction are increased in planned home births after cesarean delivery. *PLoS One*. 2017a;12(3):e0173952. Doi: 10.1371/journal.pone.0173952.

Grünebaum A, McCullough LB, Sapra KJ, Arabin B, Chervanak FA. Planned home births: the need for additional contraindications. *Am J Obstet Gynecol*. 2017b;216(4):401.e1-401.e8. Doi: 10.1016/j.ajog.2017.01.012.

Hutton EK, Cappelletti A, Reitsma AH, et al. Outcomes associated with planned place of birth among women with low-risk pregnancies. *CMAJ*. 2016;188(5):E80-90. Doi: 10.1503/cmaj.150564.

Hutton EK, Reitsma A, Simioni J, Brunton G, Kaufman K. Perinatal or neonatal mortality among women who intend at the onset of labour to give birth at home compared to women of low obstetrical risk who intend to give birth in hospital: A systematic review and meta-analysis. *EClinicalMedicine*. 2019;14:59-70. Doi: 10.1016/j.eclinm.2019.07.005.

MacDorman MF, Mathews TJ, Declercq E. Trends in Out-of-Hospital Births in the United States, 1990–2012. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/nchs/products/databriefs/db144.htm>. Published March 2014. Accessed January 5, 2021.

MacDorman MF, Declercq E. Trends and state variations in out-of-hospital births in the United States, 2004-2017. *Birth*. 2019;46(2):279-288. Doi: 10.1111/birt.12411.

Rossi AC, Prefumo F. Planned home versus planned hospital births in women at low-risk pregnancy: A systematic review with meta-analysis. *Eur J Obstet Gynecol Reprod Biol*. 2018;222:102-108. Doi: 10.1016/j.ejogrb.2018.01.016.

Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database Syst Rev*. 2016;4:CD004667. Doi: 10.1002/14651858.CD004667.pub5.

Scarf VL, Rossiter C, Vedam S, et al. Maternal and perinatal outcomes by planned place of birth among women with low-risk pregnancies in high-income countries: A systematic review and meta-analysis. *Midwifery*. 2018;62:240-255. Doi: 10.1016/j.midw.2018.03.024.

Snowden JM, Tilden EL, Snyder J, Quigley B, Caughey AB, Cheng YW. Planned out-of-hospital birth and birth outcomes. *N Engl J Med*. 2015;373(27):2642-2653. Doi: 10.1056/NEJMsa1501738.

Van der Kooy J, Birnie E, Denktas S, Steegers EAP, Bonse GJ. Planned home compared with planned hospital births: mode of delivery and perinatal mortality rates, an observational study. *BMC Pregnancy Childbirth*. 2017;17(1):177. Doi: 10.1186/s12884-017-1348-y.

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(3):243.e1-8. Doi: 10.1016/j.ajog.2010.05.028.

## Policy updates

6/2016: initial review date and clinical policy effective date: 10/2016

6/2017: policy references updated.

3/2018: policy references updated.

3/2020: policy references updated.

3/2021: policy references updated.