Clinical Policy Title: Planned home births

Clinical Policy Number: 12.02.04

Effective Date: October 1, 2016
Initial Review Date: June 15, 2016
Most Recent Review Date: May 1, 2018
Next Review Date: May 2019

Related policies:

None.

ABOUT THIS POLICY: Select Health of South Carolina has developed clinical policies to assist with making coverage determinations. Select Health of South Carolina’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 Select Health of South Carolina 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 shall control. Select Health of South Carolina’s 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. Select Health of South Carolina’s clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, Select Health of South Carolina will update its clinical policies as necessary. Select Health of South Carolina’s clinical policies are not guarantees of payment.

Coverage policy

Select Health of South Carolina considers planned home births to be an elective alternative to delivery in a birthing center or hospital setting, the efficacy of which is not clinically proven, and therefore is considered investigational/experimental.

Limitations:

None.

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
U.S. Centers for Disease Control and Prevention reported that about 37,451 of 4,000,000 U.S. births occurred in the home in 2014 (MacDorman, 2016; Grunebaum, 2017).

The percentage of out-of-hospital births in the United States (including those in birthing centers and home births) increased from 0.87 to 1.50 between 2004 and 2014. 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 percent), lower smoking rates (2.8 versus 8.5 percent), higher college graduation rates (39.3 versus 30.0 percent), and higher breastfeeding initiation rates (94.3 versus 80.8 percent). Vaginal births after cesarean comprised 4.6 percent of home births, compared to only 1.6 percent in hospitals and birth centers. Over two-thirds (67.1 percent) of planned home births were self-paid, compared to only 31.9 and 3.4 percent of birth center and hospital births (MacDorman, 2016).

The greatest recent increase in rates of out-of-hospital births occurred in those born at home, which, after several decades of virtually no change, increased 59 percent, from 56 to 89 births per 1,000 from 2004 to 2012 (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 percent are of advanced maternal age.
- 27.8 versus 13.6 percent are post-term.
- 20.5 versus 7.5 percent of newborns have macrosomia (over 8 lb., 13 oz.).
- 7.8 versus 2.3 percent have precipitous labor.
- 3.1 versus 1.2 percent have prolonged labor.

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

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 (ACOG, 2017).
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 system, and inability to transport mother and newborn to a hospital in a timely manner as factors behind its recommendation (AAP, 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, 2017).

**Searches**

Select Health of South Carolina searched PubMed and the following databases:

- UK National Health Services Centre for Reviews and Dissemination.
- Agency for Healthcare Research and Quality’s National Guideline Clearinghouse and other evidence-based practice centers.
- The Centers for Medicare & Medicaid Services (CMS).

We conducted searches on March 16, 2018. The search term was “planned home birth.”

We included:

- **Systematic reviews**, which pool results from multiple studies to achieve larger sample sizes and greater precision of effect estimation than in smaller primary studies. Systematic reviews use predetermined transparent methods to minimize bias, effectively treating the review as a scientific endeavor, and are thus rated highest in evidence-grading hierarchies.
- **Guidelines based on systematic reviews**.
- **Economic analyses**, such as cost-effectiveness, and benefit or utility studies (but not simple cost studies), reporting both costs and outcomes — sometimes referred to as efficiency studies — which also rank near the top of evidence hierarchies.

**Findings**

Several systematic reviews, meta-analyses, and Cochrane reviews have been conducted to assess outcomes of planned home births vs. births in other settings.

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 2016 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 2012 Cochrane review compared outcomes for planned home births and planned hospital births in selected low-risk women. Only two trials met criteria, and only one of these, including 11 women, provided any outcome data; therefore, no conclusions could be made. However, authors noted the improving outcomes in home births and recommended future reviews of planned home births (Olsen, 2012). 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).

The United States has been the site of large studies on efficacy of planned home births. Of 16,924 U.S. women who planned home births from 2004 to 2009, 89.1 percent did give birth at home. Just 4.5 percent of these deliveries required oxytocin augmentation and/or epidural analgesia. Reported rates of spontaneous vaginal birth (93.6 percent), assisted vaginal birth (1.2 percent), and cesarean section (5.2 percent) were considered positive. Of the 1,054 women who attempted vaginal birth after a cesarean, 87 percent succeeded. Low Apgar scores (< 7) were reported in only 1.5 percent of newborns. Postpartum maternal and neonatal transfer rates (1.5 and 0.9 percent) were low. Most newborns (86 percent) 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 (Cheyney, 2014).

The 1,335,741 U.S. births attended by midwives from 2000 to 2004 showed a higher neonatal mortality rate per 1000 live births for home births (Malloy, 2010):

- 0.5 (n = 614) for in-hospital certified nurse midwife-attended births.
- 0.4 (n = 7) for in-hospital “other” midwife-attended births.
- 0.6 (n = 16) for birthing center certified nurse midwife-attended births.
- 1.0 (n = 14) for home certified nurse midwife-attended births.
- 1.8 (n = 75) for home “other” midwife-attended births.

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 percent) and neonatal seizure (0.06 versus 0.02 percent) but had fewer interventions, such as operative vaginal delivery and labor induction and augmentation (Cheng, 2013).
The most recent large U.S. 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 percent) 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).

Studies of planned home births from other nations have also been conducted. One of the largest studies comparing outcomes by birth setting took place in the Netherlands, where 60 percent of known planned birth places (n = 743,070) occurred in the home. Combined intrapartum and neonatal death rates were slightly lower for home births (1.02 percent vs. 1.09 percent). 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 review of births in England and Wales from 1994 to 2003 found intrapartum related perinatal mortality rates for booked home births to be slightly lower than that of all births (0.74 versus 0.79 per 1,000 births). However, the rate for the home birth group did not decline during the study period (Mori, 2008). All 64,538 English mothers giving births to singleton over 37 weeks’ gestation who had planned home births from 2008 – 2010, compared to a sample of comparable hospital births, had a similar weighted morbidity incidence of 4.3 per 1,000 births (Birthplace in England Collaborative Group, 2011).

A study of Swedish planned home births from 1992 to 2004 had similar outcomes; the 897 planned home births had a neonatal mortality rate of 2.2 per 1,000, compared to 0.7 per 1,000 in infants born in hospitals, an insignificant difference. The home group had no emergency complications, plus lower risk of a sphincter rupture, cesarean section, or instrumental delivery (Lindgren, 2008).

Canadian researchers compared outcomes of midwife-attended (planned) home and hospital births (n = 2,889 and 4,752), along with physician-attended hospital births (n = 5331). The home birth group was significantly less likely to have obstetric interventions (electronic fetal monitoring, assisted vaginal delivery) or adverse maternal outcomes (third- or fourth-degree perineal tear, postpartum hemorrhage). Newborns in the home group were also less likely to require resuscitation at birth or oxygen therapy beyond 24 hours (Janssen, 2009). A similar study from Canada found planned home births had similar perinatal and neonatal mortality or serious morbidity and significantly lower rates of serious maternal morbidity (Hutton, 2009). A 2016 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 survey of 225 nulliparous women revealed that those in the planned hospital group used more pharmacological pain management techniques and experienced more obstetric interventions than those in the planned home group, but also had a higher rate of postpartum hemorrhage and achieved spontaneous vaginal birth less often (Miller, 2012).

Vaginal birth after Cesarean deliveries has also been the topic of evaluations of outcomes by birth setting. Numbers of planned home vaginal births after cesarean sections have risen in the United States, from 664 to 1,000 between 2003 and 2008 (Macdorman, 2012). 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 percent, although transfer rates were higher for women with a prior cesarean (18 percent versus 7 percent). 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 5-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, 2017).

A study of 1372 Dutch women who planned a home birth rated “quality of treatment by caregiver” higher than 829 women who planned a hospital birth. Primiparous women who had a home birth in this sample rated their care as satisfactory, compared to those with hospital births, even those who planned a home birth and were transferred to a hospital during labor (Geerts, 2017).

No studies in the professional literature address outcomes of planned home births for populations with special needs, such as the Medicaid population.

**Policy updates:**

A total of one guideline/other and two peer-reviewed references were added to this policy in March 2018.

**Summary of clinical evidence:**

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| Review of studies of home birth safety | • Systematic review of 15 cohort studies, comparing planned home births and planned hospital births.  
• Two studies of high-risk births and two studies of low-risk births found home births had higher neonatal mortality.  
• No difference between groups in Apgar scores and NICU admissions.  
• While mortality is important, it is a rare occurrence compared to morbidity, and may not be the best measure of safety. |
| De Jonge (2015) | **Key points:**  
• Study of births in the Netherlands; 466,112 had planned home birth and 276,958 had planned hospital birth.  
• Planned home births had similar rate of deaths up to 28 compared to planned hospital births days for nulliparous women (1.02% vs. 1.09%), and parous women (0.59% vs. 0.58%).  
• Planned home births had lower rates of NICU admission and low Apgar scores for nulliparous women (3.41% vs. 3.61%) and parous women (1.36% vs. 1.95%). |
| Malloy (2010) | **Key points:**  
• United States, 2000 – 2004, death rates within 28 days.  
• Rates for planned home births higher.  
• 1.8%, n = 75 for 42,375 “other” midwife-attended births.  
• 1.0%, n = 14 for 13,529 home certified nurse midwife-attended births.  
• 0.5%, n = 614 for 1,237,129 in-hospital certified nurse midwife-attended births.  
• 0.4%, n = 7, for 17,389 in-hospital “other” midwife attended births.  
• 0.6%, n = 16 for 25,319 birthing center certified nurse midwife-attended births. |
| Wax (2010) | **Key points:**  
• Meta-analysis of 12 trials of (n = 342,056) planned home deliveries (n=342,056) and planned hospital deliveries (n=207,551) in the United States, United Kingdom, Canada, Sweden, Switzerland, and Australia.  
• Maternal outcomes: fewer mothers in planned home births had > third-degree lacerations, infections, postpartum bleeding, perineal laceration, vaginal laceration, and retained placenta. No difference between groups in cord prolapse.  
• Maternal interventions: fewer mothers with planned home births had epidural analgesia during labor, electronic fetal heart monitoring, episiotomy, operative vaginal delivery, and cesarean delivery.  
• Neonatal outcomes: Newborns in planned home births were less likely to be premature (< 37 weeks) or less than 2,500 grams.  
• No difference in groups in perinatal death rate, but neonatal death rate higher |
Janssen (2009)

Outcomes of planned home birth with registered midwife vs. hospital birth with midwife or physician

Key points:
- Includes births 2000 – 2004 in British Columbia, including home births attended by registered midwives (n = 2,889), planned hospital births attended by midwives (n = 4,752), and physician-attended planned hospital births (n = 5,331).
- Perinatal death rate lowest for planned home births (0.35 per 1,000, compared to midwife attended (0.57) and physician attended (0.64).
- Newborns in home group less likely to require resuscitation at birth or oxygen therapy beyond 24 hours.

References

Professional society guidelines/other:


Peer-reviewed references:


Grunebaum A, McCullough LB, Arabin B, Chervanak 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*. 2017;12(3):e0173952. Doi: 10.1371/journal.pone.0173952.


Janssen PA, Saxell L, Page LA, Klein MC, Liston RM, Lee SK. Outcomes of planned home birth with


**CMS National Coverage Determinations (NCDs):**

No NCDs identified as of the writing of this policy.

**Local Coverage Determinations (LCDs):**
No LCDs identified as of the writing of this policy.

**Commonly submitted codes**

Below are the most commonly submitted codes for the service(s)/item(s) subject to this policy. This is not an exhaustive list of codes. Providers are expected to consult the appropriate coding manuals and bill accordingly.

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