Home Birth versus Hospital Birth in Low Obstetrical Risk Pregnancies: What is Safest?

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Background

Deciding where and how to give birth and find postpartum care can be a challenging task for low-risk pregnant patients in the United States due to affordability, comfort, and overall safety. There are three options for patients to choose from to give birth: the hospital, a birth center, or at home. An OBGYN or Midwife are both providers patients utilize for this type of care. Midwives (CM/CNM) are educated in a graduate-level midwifery program and pass a national exam to provide prenatal and postpartum care and assist with vaginal deliveries.[1] Maternal mortality is defined as death while pregnant or within 42 days after the end of pregnancy. The maternal mortality rate in the United States has been increasing, currently at 17.4 per 100,000 live births which raises concern for patients deciding where and how to give birth if something does go wrong.[2]

Purpose

Determine if there is a difference between home birth on maternal and neonatal morbidity and mortality, procedure rates, postpartum care, and overall cost compared to a hospital birth. This will help to guide women with low-risk pregnancies in determining the best location to give birth for them in the United States.

PICOT

In women with low-risk pregnancies, what is the effect of home birth on neonatal/maternal morbidity and mortality, procedure rates, postnatal care and overall cost compared to a hospital birth in the United States?

Design & Methods

Keywords: home birth complications, cost of birth in the United States, and postnatal care after birth

•**Inclusion:** Cost, procedure rates, postpartum care and mortality rates in home versus hospital birth, Studies published after 2018

•**Exclusion:** Women with high-risk pregnancies and studies published before 2018

Table 1: Summary of Evidence Search

Database	Yielded	Reviewed	Included in Analysis
Valpo Library Summon	5,224	12	3
Google Scholar	48,100	16	3
Total:	53,324	28	6

Abbreviations

CNM = Certified Nurse Midwife (RN license)

CM = Certified Midwife

Table 2: Synthesis of Evidence

Type of Study	Total
Meta-analyses	3
Retrospective cohort	2
Decisional analysis	1

Results

NEONATAL MORTALITY

- No significant difference was seen in neonatal mortality between home or hospital birth.[3]
- In-Hospital Births with Midwives were the safest option for both 5-minute APGAR <4 and Neonatal Death compared to MD/OBGYN and birthing centers.[4]
- Adverse neonatal outcomes are less likely in an in-hospital birth assisted by a MD/DO than a birthing center.[4]

MATERNAL MORTALITY

- Patients with a home birth had a lower risk of labor augmentation, maternal infection, and postpartum hemorrhage with no significant difference identified for maternal mortality.[3,5,6]

PROCEDURE RATES

- Nulliparous women in well-integrated settings of home birth are more likely to have a 3rd or 4th degree perineal lacerations, but less likely for other intrapartum interventions than a hospital birth (C-section, Operative VB, Epidural, Episiotomy, Oxytocin Augmentation).[5,6]

POSTPARTUM CARE

- Only 59.7% of patients had at least 1 postpartum outpatient visit within 8 weeks of hospital discharge.[7]

COST

- Cost for home birth assisted by a midwife $4,650: including prenatal, delivery and postpartum care, no insurance coverage currently.[8]
- Cost for vaginal hospital birth $13,562: excluding prenatal and postpartum care, out of pocket with insurance $4,925.[8]
- Increase of midwife-led care to 10% can lead to cost savings of $19 million annually for Medicaid and $539 million for private insurance.[9]
  - Savings are created due to lower rates of obstetrical procedures

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Discussion

- This review investigated home and hospital birth in the United States based on five outcomes. Neonatal mortality had no significant difference between home and hospital, but freestanding birth centers in the United States were found to have increased risk of poor neonatal outcomes including AGPAR scores <4. Home births were less likely overall to have adverse neonatal outcomes such as labor dystocia, low APGAR scores, NICU admission and neonatal mortality.
- Maternal mortality was similar between well-integrated centers for home and hospital birth. There is lower risk of maternal infection and postpartum hemorrhage with a home birth.
- Planned hospital births were more likely to have a 3rd or 4th degree perineal tear, less likely to have intrapartum interventions, and higher rates of spontaneous vaginal delivery in midwives.
- There is a lack of postpartum care follow-up in the United States, with only 60% of patients attending 1 postpartum visit within 8 weeks of hospital discharge.
- Midwife-led care has lower costs of delivery but is not covered by insurance and the cost savings of increasing the percentage of midwife-led care can lead to millions of dollars saved.

Limitations/Further study

- Limited data was found on maternal mortality in the United States to determine a definitive conclusion.
- Postpartum care was only studied with commercially insured patients, leaving out Medicaid which could impact results.
- Differentiation between midwives is not listed throughout the studies.
- Further study on reason for lack of postpartum care visits, maternal mortality, and obstetric procedures in the United States needs to be reviewed.

Conclusion

Midwife-assisted hospital birth is the safest option currently in the United States. Midwifery-led care has lower adverse neonatal and maternal outcomes. Procedure rates are globally higher in hospital births. Postpartum care is severely lacking in the United States. Cost of home birth and midwife-led care is less than obstetricians, but not all covered by insurance.

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