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Steven Donahue & Micaela Sunday

What We Learned

Our completed literature review showed a significant decrease in cesarean section when patient care was primarily led by certified midwives. The nursing-led research article literature review was completed to fulfill our nursing curriculum's research class requirements.

Background

- The current cesarean section rate in the United States is around 33%.
- The World Health Organization recommends a rate of 15%.
- Preliminary studies indicate that midwife led care can:
 - Reduce cesarean section rates
 - Reduce medical costs.
- Only 7.6% of U.S. births are attended by a certified midwife.

Purpose & Aims

Conduct a literature analysis to compare cesarean section rates in midwife led facilities versus obstetrician led facilities.

Population of Interest

- The majority of research focused on participants that were considered to have “low risk pregnancies”.
- Participants were:
 - Full-term gestation
 - Singleton pregnancies
 - Uncomplicated obstetric history.

Methods

- Database search: CINAHL & Google Scholar.
- Four quantitative, peer-reviewed, primary journal articles were selected.
 - Published 2011-2014
- Search terms: midwife, cesarean section, and obstetrics.

Results

Cesarean Section Rates

- Varied from **1.9% to 6.1%** when low risk women received care in **midwife-led facilities** (Prelec et al., 2014; Stapleton et al., 2013).
- Varied from **13.4% to 36.5%** (Barber et al., 2011; Prelec et al., 2014) when a similar population of women received care in **obstetric led units**.

Medical Interventions

- Labor arrest and non-reassuring fetal heart tones (55 per 1000 births) contributed to the most cesarean sections (Barber et al., 2011).
 - **Labor arrest** cesarean section in the hospital based facility (88 per 1000 births) (Barber et al., 2011), compared to those in the birth center study (1.5 per 1000 births).
 - **Abnormal fetal heart tones** as a primary indicator for cesarean section is less utilized in midwife led care (Stapleton et al., 2013).
- Significantly **less pharmacological analgesia** (58.4% vs. 79.6% in OB facility) and **epidural analgesia** (30.4% vs. 34.6% in OB facility) were utilized in the midwife led care settings.

Medical Savings

- Stapleton et al. (2013) explored this phenomenon by analyzing Medicare reimbursement rates for 2011, and determined that by utilizing the birth center model instead of a hospital facility, approximately **\$2,000 per birth** could be saved.



Conclusions

Across all research studies, there was a **significant decrease in cesarean section** when patient care was primarily led by certified midwives (Barber et al., 2011; McLachlan et al., 2012; Prelec et al., 2014; Stapleton et al., 2013).

Next Steps

- Further research to qualitatively explore:
 - The motivations and mentality of mothers who choose the midwife led care model over the obstetrician led model.
 - The motivations of obstetricians to conduct cesarean sections; determine if liability concerns or revenue have significant roles in the increased cesarean section rate.
- Clinical application:
 - Findings should be utilized to provide adequate pre-conception and birth planning education for expecting parents.

Limitations

- Limited to four quantitative articles.
- Significant variation for low risk pregnancy inclusion criteria.
- Inconsistency in setting of care and country of origin.

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