The Effect of Childbirth Education on Labor and Delivery Outcomes and Maternal Satisfaction in Primiparous Woman

Pamela Webb MS and Colleen Mueller BSN
Purpose

- Evaluate childbirth education effects on labor and delivery
- Evaluate childbirth education effects on maternal satisfaction with the birth experience
- Evaluate overall education and care satisfaction of the hospital maternity experience
How much time in a day do you think maternity nurses have to spend teaching?

- 40%
- 20%
- Less than 10%
- More than 50%
Background

- Studies support childbirth education
- Studies support maternal satisfaction
- CDC rates, Healthy People 2020 initiative
- Patient satisfaction
What percentage of women delivering at our hospital take a childbirth class?

43%

10%

26%

83%
Parenting with Providence

- Childbirth classes
- 24 couples/month average
- 26% of total deliveries
- 30% attrition rate = goal 192
- 1007 term, singleton infants born to first time mothers; averaging 84 per month (2017)
IRB approval

Participants recruited, consented and completed a survey on Survey Monkey over a 10 month time period.

Labor & Delivery data collected from the chart
Subject Inclusion

- Primiparous, low-risk women
- Age
- Gestation
- Timing
- Delivery
- Nurse Family Partnership
Recruitment Methods

- Parenting with Providence classes
- Signs and instructions posted
- Mother-Baby Unit
- Incentive
Data Collection Method

- Verified candidate
- Consent
- Survey Monkey
- Data collection from the chart
Survey was a Likert type survey based on the five domains of control as defined by Namey and Lyerly (2010)

- Self-determination
- Respect
- Personal Security
- Attachment
- Knowledge
Results

- 208 women were recruited and consented
- 11 excluded
- 197 total participants met the criteria
- 82 mothers attended a childbirth class
- 115 mothers did not attend a childbirth class
- Statistical analysis completed by Stephanie Morgan Ph.D., APU
Ethnicity

No Class

- White/Caucasian: 56%
- Black/African American: 9%
- American/AK Native: 18%
- Asian: 0%
- Native Hawaiian/Other Pacific Islander: 7%
- Hispanic/Latino: 5%
- Multi Race: 5%

Attended Class

- White/Caucasian: 83%
- Black/African American: 1%
- American/AK Native: 6%
- Asian: 1%
- Native Hawaiian/Other Pacific Islander: 6%
- Hispanic/Latino: 6%
- Multi Race: 0%
## Results of Labor and Delivery Interventions

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Did Not Attend Class</th>
<th>Attended Class</th>
<th>Overall, Both Groups</th>
<th>P-Value</th>
<th>$X^2$</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal Birth</td>
<td>74%</td>
<td>73%</td>
<td>74%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cesarean Section</td>
<td>26%</td>
<td>27%</td>
<td>26%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Induction *</td>
<td>30%</td>
<td>17%</td>
<td>24%</td>
<td>.0441</td>
<td>4.053</td>
<td>1</td>
</tr>
<tr>
<td>Induction → C/S</td>
<td>35%</td>
<td>50%</td>
<td>40%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Augmentation (not induced)</td>
<td>59%</td>
<td>63%</td>
<td>61%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epidural</td>
<td>67%</td>
<td>71%</td>
<td>69%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spinal</td>
<td>9%</td>
<td>7%</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analgesics *</td>
<td>54%</td>
<td>29%</td>
<td>44%</td>
<td>.0006</td>
<td>11.82</td>
<td>1</td>
</tr>
<tr>
<td>Second Stage Interventions</td>
<td>9%</td>
<td>12%</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Statistically significant using a standard 95% confidence level. The difference between the 2 groups has a < 5% probability of occurring by chance or sampling error (p<0.05)
**Labor and Delivery Interventions Subsets**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>No Class</th>
<th>Attended Class</th>
<th>Overall, Both Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induced and/or Augmented</td>
<td>89%</td>
<td>80%</td>
<td>85%</td>
</tr>
<tr>
<td>Cervical ripening</td>
<td>20%</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>Pitocin</td>
<td>55%</td>
<td>54%</td>
<td>54%</td>
</tr>
<tr>
<td>AROM</td>
<td>35%</td>
<td>32%</td>
<td>34%</td>
</tr>
<tr>
<td>Episiotomy</td>
<td>7%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Forceps</td>
<td>&lt;1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Vacuum</td>
<td>3%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Epidural &gt;2hr and had CS</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
</tr>
</tbody>
</table>
## Reasons for Cesareans and Inductions

<table>
<thead>
<tr>
<th>Reason C/S</th>
<th>No Class</th>
<th>Attended Class</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breech</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Elective</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>2nd Stage Arrest</td>
<td>9</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Arrest Active Phase</td>
<td>6</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>LGA</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>FHR</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason Induction</th>
<th>No Class</th>
<th>Attended Class</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>FHR</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>IUGR</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>LGA</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Postdates</td>
<td>12</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>ROM</td>
<td>11</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
Women who attended a childbirth class had less interventions than women who did not attend a class.

Logistic regression was used in predicting Cesarean risk.
Survey Results

- Two groups comparable in their satisfaction
- 78% vs 95% were exclusively breastfeeding *
- Cultural Awareness
Looking at Individual Response of Those Dissatisfied with Birth Experience

- Demographically: all married, 2 of 3 Hispanic, range of education and income
- Had C/S, Labor >24hrs, and had 3 or more interventions
- Common feelings of dissatisfaction:
  - Level of feeling out of control
  - Pain management
  - Equipment used being bothersome
- Other reason:
  - Fear
  - Anxiety
  - Nurse meeting her needs in MBU
Take Away

- Power of Knowledge
- Every encounter counts
- Cultural awareness with evidence based education
- The effect of childbirth education on the health of the community
Why? (Why do you want families to take a childbirth series)
Why? (Do you think families want to take a childbirth class)
Further Analysis

- Why are women taking a childbirth class? Their goals vs. Ours
- Effect of childbirth education on breastfeeding rates
- Timing of survey
- Consideration of other variables in labor process such as doula use, type of provider, type of pain management, etc.
What this study means for our childbirth classes

- Outreach to minorities
- E-class addition
- Scholarships
- Family Foundation Co-parenting class addition
- Meeting expectant couples objectives in curriculum