ASSESSING RACIAL AND ETHNIC DIFFERENCES IN LOW-RISK UNPLANNED CESAREAN BIRTH

Gabriella Mayne, M.A., Kevin Flores, B.S., Natalie Taylor, M.D., Virginia Lijewski, MPH, and K. Joseph Hurt, M.D., PhD.

Introduction

• Black birthing individuals have highest rates of cesarean births and 2.6 times more likely to die from pregnancy/childbirth related causes
• Inequities in maternal mortality prompt researchers to assess upstream factors contributing to poorer outcomes
• Anti-racist health equity initiatives underscore importance of identifying/monitoring disparities at national, state, and institutional level to implement targeted quality care improvements
• Unplanned cesarean birth may contribute to severe maternal morbidity and may be an important modifiable pathway to reduce disparities

Objectives

• Primary aim: Determine differences in rates of unplanned cesarean birth disaggregated by patient race/ethnicity
• Secondary aim: Assess differences in intrapartum care factors by patient race/ethnicity
• We hypothesize Black patients experience more frequent unplanned cesarean birth

Methods

• Secondary analysis of a retrospective obstetric cohort
• University of Colorado Hospital, 2013-2018
• Inclusion: 18-50 y/o. old patients with a live, singleton, vertex, full term fetus
• Exclusion: Multiple gestation, fetal anomaly, fetal growth restriction, planned cesarean birth (without attempt at trial of labor), or complications precluding low-risk management (N=7,094)
• Final nested cohort (N=7,691)
• Primary Outcome: Unplanned cesarean birth
• Primary Exposure: Patient self-reported race/ethnicity in mutually exclusive census categories
• Statistical Analyses: One-way analysis, ², and logistic regression

We found differences in unplanned cesarean birth by patient race/ethnicity

Figure 1. The rate (%) of unplanned cesarean birth by groups compared with the rate (%) in the total cohort (far left, green bar). NH stands for non-Hispanic.

Rates of Unplanned Cesarean Birth by Race/Ethnicity Compared to Overall Cohort Rate

Table 1

<table>
<thead>
<tr>
<th>Material Characteristic</th>
<th>aOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>1 (Reference)</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>1.05 [1.01 – 1.09]</td>
</tr>
<tr>
<td>Non-Hispanic Other</td>
<td>1.86 [1.33 – 2.60]</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.84 [1.15 – 2.98]</td>
</tr>
<tr>
<td>Non-Hispanic Asian</td>
<td>1.57 [1.14 – 2.16]</td>
</tr>
</tbody>
</table>

Results

• 906 patients out of 7,061 had an unplanned cesarean birth, Figure 1
• Non-Hispanic Asian and non-Hispanic Black patients had highest rates of unplanned cesarean birth, Figure 1
• Hispanic patients had lowest rates of unplanned cesarean birth, Figure 1
• Patients who had a cesarean birth were nulliparous (62%) with higher rates of obesity (16% vs. 11.5%)

These findings suggest future clinical quality studies to improve disparities in outcomes by patient race/ethnicity

Figure 2. Of the 906 patients who had an unplanned cesarean birth, 525 patients (58%) were indicated for non-reassuring fetal heart tones and 473 (52%) patients indicated for arrest of dilation/descent. 113 patients were indicated for both.

• Non-Hispanic Black patients most likely indicated non-reassuring fetal heart tones, Figure 2
• Non-Hispanic Asian patients most likely indicated for arrest of dilation/descent, Figure 2
• In our adjusted model, non-Hispanic Black patients had highest odds of unplanned cesarean birth followed by non-Hispanic Asian, non-Hispanic Other, and Hispanic, Table 1

Figure 3

Rates of the Two Most Common Indications for Cesarean Delivery by Race/Ethnicity

Table 2

<table>
<thead>
<tr>
<th>Indication</th>
<th>Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Reassuring Fetal Heart Tones</td>
<td>11.8</td>
</tr>
<tr>
<td>Arrest of Dilation/Descent</td>
<td>6.3</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>7.4</td>
</tr>
<tr>
<td>Non-Hispanic Other</td>
<td>7.6</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5.6</td>
</tr>
<tr>
<td>Non-Hispanic Asian</td>
<td>7.0</td>
</tr>
<tr>
<td>Other</td>
<td>6.8</td>
</tr>
</tbody>
</table>

www.PosterPresentations.com

Gabriella Mayne, M.A., Kevin Flores, B.S., Natalie Taylor, M.D., Virginia Lijewski, MPH, and K. Joseph Hurt, M.D., PhD.

Health and Behavioral Sciences
University of Colorado
University of Colorado Anschutz Medical Campus

Gabriella Mayne, M.A., Kevin Flores, B.S., Natalie Taylor, M.D., Virginia Lijewski, MPH, and K. Joseph Hurt, M.D., PhD.

Health and Behavioral Sciences
University of Colorado
University of Colorado Anschutz Medical Campus