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• **Population Health Research Team Project:**
  Impact of Race on Post-Partum Birth Control Methods – Mom’s Health Experiences Survey Study (WMed IRB #2016-0127)

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Impact of Race on Post-Partum Birth Control Methods

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Infant Mortality Kalamazoo

- The Infant mortality rate – a marker for community health
- A reflection of maternal health and the socioeconomic status of the community
- A way to identify disparities in population health

3 Year Moving Average Infant Mortality Rates per 1000 Live Births

- Rates in US
- Rates in Michigan
- Rates in Kalamazoo

- Black infant mortality 4X higher in Kalamazoo
Rapid repeat pregnancies associated with poor birth outcomes

- Shorter IPI have higher infant mortality rates
- RRP more common in blacks than in whites

Birth Control Methods

Effectiveness of Family Planning Methods

- **Most Effective**
  - Percent Unintended Pregnancy: 0.005 - 0.8%
  - Examples: Implant (0.05 %), Reversible Intrauterine Device (0.2 %), Male Sterilization (Nasectomy) (0.15 %), Female Sterilization (Abdominal, Laparoscopic, Hysteroscopic) (0.5 %)

- **Moderately Effective**
  - Percent Unintended Pregnancy: 5 - 12%
  - Examples: Injectable (6 %), Pill (9 %), Patch (9 %), Ring (9 %), Diaphragm (12 %)

- **Least Effective**
  - Percent Unintended Pregnancy: 15 - 30%
  - Examples: Male Condom (18 %), Female Condom (21 %), Withdrawal (22 %), Sponge (24 % parous women, 12 % nulliparous women)

*Note: The percentages indicate the number out of every 100 women who experienced an unintended pregnancy within the first year of typical use of each contraceptive method.*
Birth control affects the interval between pregnancies.

![Graph showing the probability of RRP over months following delivery for different levels of birth control effectiveness: Most effective, Moderately effective, Least effective, None.](image-url)
Study Question

To understand if the disparity in poor birth outcomes in Kalamazoo county is impacted by birth control, we looked at post-partum birth control choices stratified by race.
Study Design

• Observational prospective study
  – Recruited 345 recently-delivered women from post-partum floors of Borgess and Bronson in Kalamazoo, MI

• Mixed methods data collection
  – Telephone surveys (6-8 weeks post delivery)
    • Completed surveys with 270 women
  – Administrative record review
# Variables in the Database

<table>
<thead>
<tr>
<th>Type of birth control</th>
<th>Socioeconomic</th>
</tr>
</thead>
<tbody>
<tr>
<td>IUD</td>
<td>Transportation</td>
</tr>
<tr>
<td>Vasectomy</td>
<td>Non-private health insurance</td>
</tr>
<tr>
<td>Tubal Ligation</td>
<td>Household income - Poverty</td>
</tr>
<tr>
<td>Implant</td>
<td>Medical home</td>
</tr>
<tr>
<td>Birth Control Pill</td>
<td>Primary doctor</td>
</tr>
<tr>
<td>Injection</td>
<td></td>
</tr>
<tr>
<td>Condom</td>
<td></td>
</tr>
<tr>
<td>Withdrawl</td>
<td></td>
</tr>
<tr>
<td>Abstinence</td>
<td></td>
</tr>
<tr>
<td>Nothing</td>
<td></td>
</tr>
</tbody>
</table>
## Primary Outcomes

<table>
<thead>
<tr>
<th>Contraception Choice</th>
<th>Total N = 243</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td><strong>14.4% (35)</strong></td>
</tr>
</tbody>
</table>

### Top 3 Birth Control Methods used in Michigan:
- Condoms
- Birth Control Pills
- Withdrawal

**Legend:**
- Most Effective
- Moderately Effective
- Least Effective
Factors Impacting Access to Postpartum Birth-Control

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Black Women (N = 96)</th>
<th>White Women (N = 148)</th>
<th>Chi Square P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of reliable</td>
<td>11.5%</td>
<td>0%</td>
<td>&lt;.001 *</td>
</tr>
<tr>
<td>Transportation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Private Insurance</td>
<td>62.5%</td>
<td>25.7%</td>
<td>&lt;.001 *</td>
</tr>
<tr>
<td>Poverty</td>
<td>42.7%</td>
<td>16.2%</td>
<td>&lt;.001 *</td>
</tr>
<tr>
<td>Medical Home</td>
<td>88.4%</td>
<td>95.9%</td>
<td>0.32</td>
</tr>
<tr>
<td>Primary Doctor</td>
<td>34.7%</td>
<td>54.7%</td>
<td>.002 *</td>
</tr>
</tbody>
</table>
Conclusions

- A majority of women are using some of the least effective options of birth control methods post-partum.
- Abstinence is one of the leading postpartum birth control methods chosen by black women in this study.
- There are differences in postpartum birth control choices between white women and women of color in Kalamazoo County.
- Women of color experience more barriers that may impact contraception choice.
Implications

- Knowing that women are using less-effective methods of birth control, such as abstinence, advocating for more reliable methods of birth control may reduce poor birth outcomes.

- Investigation into the factors that impact postpartum birth control choice by women may address the race-related and socioeconomic disparities seen in infant mortality.
Thank you

Questions?