**Select Maternal and Fetal Outcomes in Penicillin Allergy**

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**BACKGROUND**
- 10% of the US population reports a penicillin (PCN) allergy1
- The negative implications of the PCN allergy label (PAL) have been well demonstrated in inpatient populations1
- There are limited data regarding the effects of the PAL on maternal and fetal outcomes2

**METHODS**
- Live births from 2013-2018 occurring at 3 hospitals within Rochester Regional Health were identified through the electronic health record (Epic Hyperspace, WI)
- We examined the association of the PAL with select outcomes:
  - **Maternal**: Group B Streptococcus (GBS) colonization, C-section rate, labor duration, and length of stay (LOS)
  - **Neonatal**: Gestational age, LOS, antibiotic therapy, 5 min APGARs, neonatal intensive care unit (NICU) admission, oxygen therapy, and birthweight
- We also examined these same outcomes in GBS-positive women only

**RESULTS**
- There were a total of 20,267 live births analyzed, with 1,819 (9%) of women with a PAL
- There was no difference in the select maternal and fetal outcomes in women with and without the PAL
- There was no difference in the same outcomes in GBS-positive women with and without the PAL

**DISCUSSION**
- We hypothesize our negative study is due to our sample size and that a larger sample size would show differences in select outcomes or that differences would exist in outcomes not examined
- Given the potential benefits of PCN allergy de-labeling in the obstetric population and the unquestionable benefits of de-labeling in other populations, PCN allergy evaluations should be a part of all medical care

**REFERENCES**

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**Table 1. Baseline Demographics**

<table>
<thead>
<tr>
<th>Total live births</th>
<th>20,267</th>
</tr>
</thead>
<tbody>
<tr>
<td>No PCN allergy</td>
<td>18,448 (91%)</td>
</tr>
<tr>
<td>Median age, years (IQR)</td>
<td>31 (27-35)</td>
</tr>
</tbody>
</table>

**PCN allergy**

| Median age, years (IQR) | 32 (28-36) |

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**Table 2. Select Maternal and Fetal Outcomes**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No PAL (n=18,448)</th>
<th>PAL (n=1,819)</th>
<th>p value</th>
<th>No PAL (n=2,974)</th>
<th>PAL (n=291)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBS + freq (%)</td>
<td>2974 (22)</td>
<td>291 (22)</td>
<td>0.98</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>C-section, freq (%)</td>
<td>5783 (32)</td>
<td>575 (32)</td>
<td>0.70</td>
<td>943 (32)</td>
<td>95 (32)</td>
<td>0.60</td>
</tr>
<tr>
<td>NICU freq (%)</td>
<td>2061 (11)</td>
<td>176 (11)</td>
<td>0.14</td>
<td>331 (12)</td>
<td>34 (12)</td>
<td>0.52</td>
</tr>
<tr>
<td>Labor, hrs (mean,IQR)</td>
<td>6.13 (0.32-8.58)</td>
<td>6.51 (0.46-9.03)</td>
<td>0.10</td>
<td>6.18 (0.27-8.67)</td>
<td>7.48 (1.12-9.78)</td>
<td>0.06</td>
</tr>
<tr>
<td>Mat. Abx freq (%)</td>
<td>1812 (10)</td>
<td>174 (10)</td>
<td>0.76</td>
<td>294 (10)</td>
<td>34 (12)</td>
<td>0.38</td>
</tr>
<tr>
<td>Mat. LOS, (mean,IQR)</td>
<td>2.71 (2.00-3.30)</td>
<td>2.76 (2.00-3.30)</td>
<td>0.12</td>
<td>2.83 (2.00-3.00)</td>
<td>2.93 (2.00-3.00)</td>
<td>0.41</td>
</tr>
</tbody>
</table>

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**In penicillin allergic pregnant women, a penicillin allergy label was not associated with:**
- ✔ Higher C-section rates
- ✔ Labor duration
- ✔ Increased maternal antibiotic therapy
- ✔ NICU admissions
- ✔ Length of stay

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