Prevalence and impact of obstetric overweight and obesity in Rural Queensland

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Objectives

- To assess the prevalence and impact of mothers being overweight and obese in the antenatal and perinatal periods, on rural hospitals
- To evaluate the rate of negative maternal and neonatal outcomes, including transfer to larger birthing centres

Background

- Obesity is prevalent in Australian women
  - 35% of women aged 25-34 overweight or obese
  - 46.2% of women aged 35-44 \(^1\)
- Identified as a public health issue
  - especially in obstetric populations

Methodology

- 50 consecutive patients from each of 5 Qld rural hospitals (n=250) with an EDC in 2016
- Percentages within each group were calculated for the outcomes of interest
- Chi square calculations were conducted on categorical outcome data for transfer to another hospital and for caesarean sections
Main outcome measures

Demographics
- Age
- Ethnicity
- smoking status
- Pre-pregnancy BMI

Obstetric/neonatal data
- Gravidy/parity
- Transfer
- Mode of delivery/complications
- Neonatal outcomes (birthweight and complications)

<table>
<thead>
<tr>
<th></th>
<th>BMI &lt;24.9 (n=110)</th>
<th>BMI 25–39.9 (n=124)</th>
<th>BMI &gt;40 (n=13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>27.0</td>
<td>27.4</td>
<td>29.4</td>
</tr>
<tr>
<td>BMI</td>
<td>21.4</td>
<td>30.6</td>
<td>44.1</td>
</tr>
<tr>
<td>Gravidity</td>
<td>2.7</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Parity</td>
<td>1.3</td>
<td>1.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Smoking</td>
<td>21.8%</td>
<td>23.4%</td>
<td>23.1%</td>
</tr>
</tbody>
</table>
Results

- Over 50% of our population was overweight/obese
- 5.3% of mothers were morbidly obese
- Average birth weight increased with maternal BMI
- Increased rate of gestational diabetes with increased BMI
- Morbidly obese women were more likely (p<0.05) to be transferred
- Increased number of elective and emergency (p<0.05) caesareans with BMI >40
- No adverse neonatal outcomes were identified
Figure 3. Transfer reasons.

Conclusion
A high prevalence of obesity was found in the rural obstetric population. As BMI increases so too does birth weight, transfer rate and caesarean delivery rate. These findings have implications on rural hospital operation and resources.