THE TIMING OF URINARY CATHETER REMOVAL AFTER CAESAREAN SECTION
WHY INSERT A CATHETER FOR C-SECTION?

• Emptying the bladder helps protect it from injury during surgery

• Emptying the bladder improves visualisation of the surgical field

• Central neuraxial blocks (spinal, epidural) can cause urinary retention and distension injuries
CATHETER COMPLICATIONS

• Increased incidence of UTI
• Urethral pain
• Voiding difficulties following removal
• Delayed mobilisation
• Increased length of hospital stay
THE AUDIT

• Aim: To help inform best practice regarding the timing of urinary catheter removal after caesarean section

• 2 sets of data to present (both for low risk, elective cases)
  • Pre enhanced recovery - March 2014
  • Post enhanced recovery - December 2014
FIRST DATA SET

- Data collection from 4\textsuperscript{th} March to 4\textsuperscript{th} April
- Midwives to complete data collection form
- 42 women
- 31 (74\%) women with complete data collection form
Mean 17.8, SD 3.5

Median 19.0, IQR 4.6 (15-19.6)
Number of women

Time of day of urinary catheter removal

- 00:00 - 02:00
- 02:00 - 04:00
- 04:00 - 06:00
- 06:00 - 08:00
- 08:00 - 10:00
- 10:00 - 12:00
- 12:00 - 14:00
- 14:00 - 16:00
- 16:00 - 18:00
- 18:00 - 20:00
- 20:00 - 22:00
- 22:00 - 00:00
RECATHETRISATION

- 2 women

- Rate of 4.8% to 6.5% (optimistically)
SECOND DATA SET

- Data collection December 2014
- Data collection from the post-natal care plan
- 27 women
Mean 9.8, SD 5.7

Median 7.0, IQR 5.0 (6.0-11.0)
Introduction of the enhanced recovery program:

- Reduction in length of time urinary catheters in-situ
- Urinary catheters no longer simply removed at a convenient time

<table>
<thead>
<tr>
<th></th>
<th>First data set</th>
<th>Second data set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>17.8</td>
<td>9.8</td>
</tr>
<tr>
<td>SD</td>
<td>3.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Median</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>IQR</td>
<td>4.6</td>
<td>5</td>
</tr>
</tbody>
</table>
UNANSWERED QUESTIONS

• Why aren’t all women having their catheters removed at 6 hours as per the enhanced recovery program?

• Has the earlier removal of catheters led to a change in the rate of re-catheterisation?
WHY AREN’T ALL WOMEN HAVING THEIR CATHETERS REMOVED AT 6 HOURS AS PER THE ENHANCED RECOVERY PROGRAM?

- 8 women with catheter in-situ for more than 10 hours
  - 2 due to postpartum bleeding
  - 2 surmised due to postpartum bleeding
  - 2 due to women’s request
  - 2 no clear reason
HAS THE EARLIER REMOVAL OF CATHETERS LED TO A CHANGE IN THE RATE OF RE-CATHETERISATION?

- 2 women

- Rate of 7.4% (compared to first data set of 4.8-6.5%)
CONCLUSIONS

• The introduction of the enhanced recovery program for low risk women undergoing caesarean section has led to a reduction in the length of time that urinary catheters are in-situ without increasing the need for re-catheterisation

• Note: Ongoing data collection is now underway to capture all women undergoing caesarean section, not just low risk, elective cases
ANY QUESTIONS?