Implementing the criteria lead urinary catheter removal protocol

Sue Lovell-Smart
IP&C: CNC
Orange Health Service
Orange Health Service

B1 Major hospitals group
Referral Centre for Western NSW
Local Health District

Total number of beds

- 130 Acute
- 40 Surgical beds
- 5 Operating Theatres
Implement

Oxford dictionary meaning

*Verb* – to complete, fulfil or perform

*Noun* - Tool or instrument of labour
Early removal of IDC in Elective Joint Surgery

• In total 156 elective joint replacements (Hips and knees) were reviewed.

Local Operating Protocol
Title: Removal of Indwelling Urinary Catheter after Elective Joint Arthroplasty

Document Control Register Number: 16.04.25 v1

Summary:
Catheterising patients places them at significant risk of acquiring a urinary tract infection. The longer a urinary catheter is in place, the greater the risk of infection (NHMRC 2010). Removing an Indwelling Urinary Catheter (IDC) within 24 hours post elective hip or knee arthroplasty will aim to promote early patient mobility and reduce the risk of catheter associated urinary tract infection (CAUTI) providing better health outcomes for the patient.
Team Links

• Ward rounds occurred between 5 - 6am for removal of urinary catheters in 24 hr post elective joint surgery cases

• Teachable moment..

• Monthly Operating Theatre meeting, which included orthopaedic and general surgeons, addressed pilot program and data

• Early removal practice continued with the implementation of the CEC pilot
Urinary Catheter Removal in Elective Joint Surgery

<table>
<thead>
<tr>
<th></th>
<th>OCT</th>
<th>Nov</th>
<th>Dec</th>
<th>June</th>
<th>July</th>
<th>August</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;24hrs</td>
<td>36%</td>
<td>50%</td>
<td>70%</td>
<td>58%</td>
<td>82%</td>
<td>64%</td>
</tr>
<tr>
<td>&gt;24hrs</td>
<td>64%</td>
<td>50%</td>
<td>30%</td>
<td>42%</td>
<td>18%</td>
<td>36%</td>
</tr>
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</table>

Audit | <24hours | >24Hours
---|-----------|-------
2014 | 55%       | 45%   |
2015 | 73%       | 27%   |
Clinical Excellence Commission
Pilot Project
Reducing Catheter associated Urinary Tract Infections
Criteria Lead Urinary Catheter Removal Protocol

Orange Health Service
OHS Executive
Director of Nursing
And
Medical Superintendent

SURGICAL UNIT TEAM
NUM Surgical – Jenny Cahill
Educator – Anna
Nursing Champions on ward
IP&C – Sue Lovell-Smart / Alex Brown
Medical – Dr Evan Jones VMO

Introduction to the Pilot
## Phase 1 May 2015

### Data Collection – 8 weeks

<table>
<thead>
<tr>
<th>Phase</th>
<th>Week</th>
<th>Date</th>
<th>Time of today’s data collection</th>
<th>Number of CAUTI episodes identified in unit today</th>
<th>Number of people with a catheter in place today</th>
<th>Number of patients in unit today</th>
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### Preliminary Survey
# URINARY CATHETER REMOVAL

## EVALUATION SURVEY

<table>
<thead>
<tr>
<th>Designation:</th>
<th>Registered Nurse or higher</th>
<th>Registered Midwife</th>
<th>Consultant/Staff specialist</th>
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<tbody>
<tr>
<td></td>
<td>Enclosed/Enrolled Nurse</td>
<td>Student Midwife</td>
<td>Registrar/Fellow</td>
</tr>
<tr>
<td></td>
<td>Assistant in Nursing</td>
<td></td>
<td>Intern/Resident</td>
</tr>
<tr>
<td></td>
<td>Student Nurse</td>
<td></td>
<td>Student Doctor</td>
</tr>
</tbody>
</table>

### Q1. In the last month, how often were you required to decide whether to remove an indwelling catheter from a patient (circle one)?
- Every day
- 2-3 times a week
- 2-3 times a month
- Never
- I am not required to make that decision

### Q2. How do clinicians in your unit determine whether it is time to remove an indwelling urinary catheter from a patient (Circle all that apply)?
- Refer to local procedures/policies that addresses this
- Use a decision support tool
- Refer to a documented removal date
- Use own clinical judgement
- Follow a clinical pathway
- Ask attending medical officer
- Ask urology or continence service for advice
- Everyone in the unit uses a different approach
- Other (please describe):

### Q3. Before you remove an indwelling catheter, do you routinely do any of the following (Circle all that apply)?
- Check fluid balance
- Check bowel movement
- Review reason for catheter insertion
- Check with the attending medical officer
- Review history for insertion difficulty

### Q4. When do you normally remove indwelling urinary catheters?
- As soon as it catheter removal is ordered or determined, regardless of the time of the day
- Around midnight
- Between midnight to 6 AM
- Around 6 AM
- Anytime in the morning
- Anytime in afternoon

### Q5. In your professional opinion, please describe how you feel about current indwelling catheter removal practices in your unit by rating on the scale below:

- Catheters are removed too early
- Catheters are removed when they are no longer needed
- Catheters remain in place for too long
Preliminary Survey
Suggestions for Implementation

The results of the preliminary survey indicate some nursing staff are initiating catheter removals using the local pathway.

**Recommendation** – that all staff use the CEC standardised pathway

The results also indicated that Medical Officers are the key resource when it comes to initiating catheter removal

**Recommendation** - Medical Officers on the ward are provided with education prior to implementation
Phase 2 : July 2015

Four weeks education

Ten minute daily education topic discussed at handover

Commence 1:30 – 1:40pm (Ten minutes in length)

Morning and evening staff attended prior to clinical handover

<table>
<thead>
<tr>
<th>Week 3</th>
<th>In-service Topic</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>Monday - 27/07/2015</td>
<td>Bladder scan Technique</td>
<td>Cath Whiteman CNE ED</td>
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<tr>
<td>Tuesday – 28/07/2015</td>
<td>What is a UTI/Urosepsis</td>
<td>ANNA- Surgical CNE</td>
</tr>
<tr>
<td>Wednesday 29/07/2015</td>
<td>Antibiotic usage associated with UTIs</td>
<td>Maggie Steventon Pharmacist</td>
</tr>
<tr>
<td>Thursday 30/07/2015</td>
<td>Criteria Initiated Urinary catheter removal protocol</td>
<td>Danielle Foley CNS Surgical</td>
</tr>
<tr>
<td>Friday 31/07/2015</td>
<td>Sample collection and urinalysis</td>
<td>Zoe Bolus CNE CCU</td>
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</tbody>
</table>
Dr Kate Clezy, from CEC, presented reducing catheter associated urinary tract infections in NSW.

Sue Lovell-Smart, IP&C CNC Orange Health Service, presented hospital acquired urinary infections.
## Phase 3: August 2015

### Data Collection

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### Repeat Survey
Project Results

Impact of criteria-led removal protocol
Orange Health Service - Surgical Unit
Weekly CAUTIs rates

Rate

0.0000
20.0000
40.0000
60.0000
80.0000
100.0000
120.0000

Weekly CAUTI rate (#new CAUTIs events/#catheter days) *1000
Weekly population CAUTI rate (#new CAUTIs events/#patient days) *1000

Week Number
Impact of criteria-led removal protocol - Orange Health Service, Surgical Unit

Weekly catheter utilisation rate

Figure 11 Weekly catheter utilisation rate - Orange Health Service
Outcome Survey

- No major change in responses observed after implementing the protocol

- After implementation of the tool, clinicians had a heightened awareness that catheters were left in place for an unnecessary period

- After implementation of the protocol, an increased proportion of clinicians are checking the reason for catheter insertion but did not increase removal rate.
Orange Health Service

Acknowledgement-
Jenny Cahill – NUM
Surgical Unit Team- Medical & Nursing
Sue Patterson- DON at time of Pilot
Sandra Wharton – IP&C CNC WNSWLHD for support and review.