Safety Action Bundle:
Catheter-Associated Urinary Tract Infection (CAUTI)

Background

- Catheter-associated urinary tract infections (CAUTI) are the most common type of health care associated infection (HAI), estimated to be >560,000 annually with a 2.3% mortality rate. Fortunately, many CAUTIs are preventable.

- As many as one-fourth of all hospital inpatients may have a short-term, indwelling urinary catheter placed during their hospital stay. A significant portion of these catheters are placed without appropriate indications.

- Complications associated with CAUTI cause discomfort to the patient, prolonged hospital stays, and increased cost and mortality.

- Patients with indwelling urinary catheters are at greater risk for developing UTIs. The risk of bacteriuria increases with each day of use:

  - Per day: ~5 percent
  - 1 week: ~25 percent
  - 1 month: ~100 percent

Aim

To reduce the incidence of CAUTI by 40% by December 31, 2013

* Hospitals in top quartile (zero) should focus on maintenance and hardwiring.

Measures

Outcome: CAUTI per Centers for Disease Control and Prevention (CDC)

Process: Urinary Catheter Removed on Postoperative Day (POD) 1 or POD 2 with Day of Surgery Being Zero

Submit: NHSN and Hospital Compare

Core Strategies

<table>
<thead>
<tr>
<th>Leadership</th>
<th>Definition</th>
<th>Reference</th>
<th>Tool</th>
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<tbody>
<tr>
<td>□ Set aims, goals and timelines for practice changes.</td>
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<td>□ Identify administrative and clinical leaders to champion.</td>
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<td>□ Educate care providers including assessment of need for urinary catheter, insertion, care and maintenance, removal and daily assessment of clinical need, the risk of CAUTI, and general infection prevention strategies. Ensure that new staff are educated as they begin caring for patients.</td>
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<td>□ Ensure that any health care professional, who inserts a urinary catheter, undergo a credentialing process demonstrating aseptic technique and use of bundle to ensure their competency before they independently insert.</td>
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<td>□ Educate clinicians about alternative, noninvasive strategies.</td>
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## Cather-Associated Urinary Tract Infection (CAUTI)

### Insertion of Catheter
- Implement facility criteria for use of indwelling catheters. For example:
  1. Urinary retention or blockage is present.
  2. Perioperative use in selective surgeries.
  3. Assist healing in perineal or sacral wounds in patients with incontinence.
  5. Immobilized due to trauma or surgery.
  6. Chronic indwelling catheter POA.
  7. Measurement of urinary output in the critically ill patient
- Ensure that only trained personnel insert urinary catheters.
- Always wash hands and wear gloves when inserting or handling urinary catheters.
- Ensure that supplies necessary for aseptic-technique catheter insertion are available (sterile gloves, drape, and sponges; a sterile or antiseptic cleaning solution for the urethral meatus; single dose sterile lubricant packet.
- Always choose the smallest catheter possible that can provide proper drainage with least amount of trauma to the urethra.
- Properly secure catheter after insertion to prevent movement and urethral traction.
- Implement a standardized process for documentation that includes indication for catheter insertion, date and time of insertion, individual inserting catheter and date and time of catheter removal.
- Develop a protocol that incorporates bladder scanners and use of intermittent catheterization for management of post-operative urinary retention.

### Ensure Appropriate Care and Maintenance of Urinary Catheters
- Maintain a closed drainage system. If the drainage system must be changed due to leaks or need for irrigation, replace the collection system using aseptic technique and disinfecting the catheter tubing junction before applying the new system.
- Maintain unobstructed urinary flow without kinks. The drainage bag should always be below the bladder and emptied frequently.
- Collection containers should never be used on multiple patients or be allowed to touch the spigot on the drainage bag.
- When sampling urine always disinfect the port and use a sterile needle and syringe to draw out specimen.
- Have a protocol for daily patient hygiene and catheter care.

### Remove Catheters as Soon as Possible
- Implement a process to monitor catheters daily for necessity.
- Remove catheters that no longer meet criteria list. Have a plan for alternatives to indwelling catheters, i.e. bladder scans, intermittent catheters, and condom catheters.

### Performance and Variation
- Present your performance compared to others to the board and other key stakeholder groups.

### Moving Towards Zero
- Expand monitoring and focus on reduction of CAUTI to all areas where the patient’s care includes a urinary catheter.
Cather-Associated Urinary Tract Infection (CAUTI)

| Have annual staff training in assessing catheter need, insertion, and early removal of urinary catheters in all inpatient and ambulatory care areas where patients require these devices. |
| Minimize usage of catheters through policies which designate when urinary catheters will be routinely used i.e., which types of surgeries or procedures, minimum criteria of patient needs to insert and continue to use, etc. |
| Collect urinary catheter days by clinical provider to identify potential opportunities. |
| Hardwire into computer system or other alert systems appropriate use of indwelling catheters. For example: |
| - Assessing need and length of time in use |
| - Alerts or reminders |
| - Stop orders |
| - Protocols for nurse-directed removal of unnecessary catheters |
| Know your catheter prevalence and symptomatic CAUTIs by unit and address outliers. |

**Patient and Family Engagement**

| Encourage and support patient and family participation in care planning and decision making by using tools like the “Prevent Urinary Tract Infections” checklist offered by Campaign Zero. |
| Educate patient and family on bundle and how they can help remind staff. |
| When an infection occurs, interview all staff, patient, and family for ways in which this might have occurred. |

**Hardwiring**

| Promote a blame-free environment where individuals are able to report errors or near misses without fear of reprimand or punishment. |
| Encourage collaboration across ranks and disciplines to seek solutions for patient safety problems. |
| Promote transparency of results from display on units to the board and public. |

**Key Resources**