

## Erase CAUTI Program: Course & Competency

### Introduction

Indwelling urinary catheters are a familiar, even routine, aspect of patient care, yet catheterized patients are at increased risk of developing a catheter-associated urinary tract infection (CAUTI). Urinary tract infections can potentially lead to increased morbidity and mortality.

The most effective way to prevent a catheter-associated UTI (CAUTI) is to avoid catheterization.<sup>1</sup>

If a patient must be catheterized; proper aseptic and insertion technique must be followed. The number one recommendation made by the Centers for Disease Control (CDC) for reducing the risk of CAUTI is that healthcare personnel must be educated about the correct techniques of catheter insertion and care.<sup>2</sup>

Medline has developed the ERASE CAUTI education program following the CDC's guidelines to prevent CAUTI. The education program covers:

- Overview of catheter-associated urinary tract infections, including signs and symptoms
- Indications for placing urinary catheters
- Recommendations for alternatives to insertion of an indwelling urinary catheter
- Detailed instructions for placing a catheter using aseptic technique
- Care and maintenance of an indwelling urinary catheter
- Timely removal of indwelling urinary catheters

<sup>1</sup>Expert discusses strategies to prevent CA-UTIs. Infection Control Today Web Site. June 1, 2005. Available at [http://www.infectioncontrolday.com/articles/402/402\\_561feat2.html](http://www.infectioncontrolday.com/articles/402/402_561feat2.html) . Accessed July 10, 2009.

<sup>2</sup>Gould CV, et al. Guideline for Prevention of Catheter-Associated Urinary Tract Infections 2008.

## **Course Overview**

This course is consists of four parts. They are:

### **Module 1: Indications and Alternatives to Catheterization**

This section is based on the current CDC and APIC guidelines and discusses:

- Definitions, explains of how CAUTI occurs, risk factors, and signs/symptoms of catheter associated infection.
- Indications for placement of a closed system indwelling urinary catheter
- Assessment of the patient, ensuring the patient meets the CDC criteria for catheter placement.
- It also provides alternative solutions to catheterization.

### **Module 2: Aseptic Technique and Proper Insertion of a Foley Catheter**

This section will teach the ERASE methodology in detail.

E= Evaluate Indications

R= Read Directions

A= Aseptic Technique

S= Secure the Catheter

E= Educate the patient

### **Module 3: Care and Maintenance**

This section will discuss the daily care and maintenance of a closed system urinary catheter including urine sampling and emptying the drainage bag and discontinuing use.

### **Module 4: Competency**

This section will contain an interactive module that will allow the e-learner to virtually insert the catheter. It will review the current CDC guidelines for indications plus prevention of catheter associated infections.

## Module 1: Indications and Alternatives to Catheterization

### Learning Objectives

After finishing this module, you will be able to:

- Define CAUTI
- Identify pathways of infection for CAUTI
- Recognize the Centers for Disease Control (CDC) indications for using an indwelling urinary catheter
- Describe alternatives to indwelling urinary catheters
- Understand the benefits of using a bladder scanner

### What is a CAUTI?

More than 30 million indwelling urinary catheters are inserted annually in the United States, and these catheterization procedures probably contribute to 1 million CAUTIs. A catheter-associated urinary tract infection (CAUTI) can develop when bacteria are introduced into a patient's urinary tract via an indwelling urinary catheter. The presence of bacteria in the urine (bacteriuria) alone does not indicate infection.

Here are the facts about CAUTI:

- CAUTI is the #1 healthcare associated infection, accounting for 40% of all healthcare-associated infections<sup>3</sup>
- 1 in 4 patients receive an indwelling urinary catheter at some point during their hospital stay<sup>4</sup>
  - Up to 50% of these are unnecessarily placed<sup>5</sup>
  - The highest percentage of urinary catheters are placed in the Emergency Department<sup>5</sup>
- 56% of hospitals DO NOT have a system to keep track of which patients have indwelling urinary catheters<sup>6</sup>
  - 74% do not document how long the catheter is in place<sup>6</sup>
- Physicians may be unaware that a urinary catheter is still in place<sup>7</sup>
- Requests from nurses to place an indwelling urinary catheter for nursing convenience is not uncommon<sup>8</sup>
- As many as 86% of patients undergoing surgery have indwelling urinary catheters<sup>9</sup>
  - 50% of these remain in place for more than 2 days

<sup>3</sup> Catheter-related UTIs: a disconnect in preventive strategies. *Physician's Weekly*. 25(6), February 11, 2008.

<sup>4</sup> Saint S, Kaufman SR, Thompson M, Rogers MA, Chenoweth CE. A reminder reduces urinary catheterization in hospitalized patients. *Jt Comm J Qual Patient Saf*. 2005;31(8):455-462.

<sup>5</sup> Stokowski LA. Preventing catheter-associated urinary tract infections. *Medscape Nursing Perspectives*. February 3, 2009. Available at [http://www.medscape.com/viewarticle/587464\\_4](http://www.medscape.com/viewarticle/587464_4). Accessed July 6, 2009.

<sup>6</sup> Saint S, Kowalski CP, Kaufman SR, Hofer TP, Kauffman CA, Olmsted RN, et al. Preventing hospital-acquired urinary tract infection in the United States: a national study. *Clinical Infectious Diseases*. 2008;46:243-250.

<sup>7</sup> Saint S, Wiese J, Armory JK, Bernstein ML, Patel UD, Zemencuk JK, et al. Are physicians aware of which of their patients have indwelling urinary catheters? *Am J Med*. 2000;109:476-480.

<sup>8</sup> Ribby KJ. Decreasing urinary tract infections through staff development, outcomes, and nursing process. *J Nurs*

Care Qual. 2006;21:272-276.

<sup>9</sup>Wald HL, Ma A, Bratzler DW, Kramer AM. Indwelling urinary catheter use in the postoperative period: analysis of the national surgical infection prevention project data. Arch Surg. 2008;143:551-557.

## CAUTI Signs & Symptoms

The CDC's National Healthcare Safety Network has identified the following signs and symptoms of symptomatic CAUTI for a patient with an indwelling urinary catheter at the time of specimen collection:

- The patient must have at least one of the following with no other recognized cause:
  - Fever (> 38C or 100.4 F)
  - Suprapubic tenderness
  - Costovertebral angle pain or tendernessOR
- A positive urinalysis demonstrated by at least one of the following:
  - Positive dipstick for leukocyte esterase and/or nitrite
  - Pyuria
  - Microorganisms seen on gram stain of unspun urineAND
- A positive urine culture of > 10<sup>5</sup> CFU/ml with no more than two species of microorganisms\*

Click here for a printable version of all case scenarios which would fit the NHSN reportable CAUTI criteria.<sup>15</sup>

<sup>15</sup> NHSN (National Healthcare Safety Network) document flow sheet created by Illinois NHSN state program 3/2009

## Routes for Infection

Listed below are several ways an indwelling urinary catheter can become a pathway for bacteria to enter the urinary tract, potentially placing the patient at risk to develop a CAUTI:

- During catheter insertion, when any bacteria on the catheter are introduced with the catheter.
- While the catheter is indwelling, when bacteria can enter the body by migrating up the external and internal surfaces of the catheter.
- By cross-contamination from the gastrointestinal system.
- When a closed catheter system is broken. (Keep in mind that closed urinary drainage systems reduce the risk of CAUTI < 25% for up to 2 weeks of catheterization.<sup>12</sup> Any disconnection in the closed system allow for potential introduction of microorganisms into the urinary tract.)
- By contaminated urine reflux from the drainage back to the patient.

### **External (extraluminal) pathway**

- Microorganisms colonize the external catheter surface, most often creating a biofilm.
- Bacteria tend to ascend early after catheter insertion, which may indicate a lack of asepsis during insertion
- Bacteria can also ascend one to three days after catheterization, usually due to capillary action.

### **Internal (intraluminal) pathway**

- Bacteria tend to be introduced when opening the otherwise closed urinary drainage system.
- Microbes ascend from the urine collection bag into the bladder via reflux.
- Biofilm formation occurs, and damage to bladder mucosa facilitates biofilm on this surface.

<sup>12</sup> Maki DG, Tambyah PA. Engineering out the risk of infection with urinary catheters. *Emerging Inf Dis* 2001;7(2): 1-6.

### **Indications**

To minimize the risk of CAUTI, the CDC recommends that indwelling urinary catheters be inserted only for appropriate indications:<sup>2</sup>

- Patient has acute urinary retention or obstruction
- Need for accurate measurements of urinary output in critically ill patients
- Perioperative use for selected surgical procedures:
  - Patients undergoing urologic surgery or other surgery on contiguous structures of the genitourinary tract
  - Anticipated prolonged duration of surgery (catheters inserted for this reason should be removed in PACU)
  - Patients anticipated to receive large-volume infusions or diuretics during surgery
  - Operative patients with urinary incontinence
  - Need for intraoperative monitoring of urinary output
- To assist in healing of open sacral or perineal wounds in incontinent patients
- Patient requires prolonged immobilization (for example, potentially unstable thoracic or lumbar spine)
- To improve comfort for end-of-life care if needed

Indwelling catheters should not be used:

- As a substitute for nursing care of the patient or resident with incontinence
- As a means of obtaining urine for culture or other diagnostic tests when the patient can voluntarily void
- For a prolonged postoperative duration without appropriate indications

- Routinely for patients receiving epidural anesthesia/analgesia

<sup>2</sup> Gould CV, et al. Guideline for Prevention of Catheter-Associated Urinary Tract Infections 2008.

### **Alternatives**

The best way to prevent CAUTI is to avoid catheterization.<sup>1</sup> Avoidance, however, means that healthcare personnel need to recognize appropriate indications and be aware of alternatives.<sup>3</sup>

Alternatives to indwelling urinary catheters include:<sup>10</sup>

- Intermittent catheterization
- Condom catheters
- Suprapubic catheterization
- Absorbent briefs and bed pads

If an indwelling catheter must be used, minimizing the time it remains in place also reduces the risk of CAUTI.<sup>10</sup>

<sup>1</sup> Expert discusses strategies to prevent CA-UTIs. Infection Control Today Web Site. June 1, 2005. Available at [http://www.infectioncontrolday.com/articles/402/402\\_561feat2.html](http://www.infectioncontrolday.com/articles/402/402_561feat2.html). Accessed July 10, 2009.

<sup>3</sup> Catheter-related UTIs: a disconnect in preventive strategies. Physician's Weekly. 25(6), February 11, 2008.

<sup>10</sup> Lo E, Nicolle L, Classen D, Arias A, Podgorny K, Anderson DJ, et al. SHEA/IDSA practice recommendation: strategies to prevent catheter-associated urinary tract infections in acute care hospitals. Infect Control Hosp Epidemiol. 2008;29:S41-S50.

### **Additional Tools**

There are some additional tools that may help clinical staff when considering placement of an indwelling urinary catheter:

- Bladder Scanners
- Silver-coated Urinary Catheters

### **Bladder Scanners**

Portable bladder scanners can be used to measure urinary retention, and may reduce the need for catheterization, thereby decreasing the risk of CAUTI.

A bladder scanner is also helpful in:

- Monitoring post operative patients who are unable to void
- To determine bladder volume in a patient with decreased urine output.
- To assist staff in implementing a toileting program by determining the amount of urine in the bladder. See source

Bladder scanners have also proved effective in reducing unnecessary irrigation by confirming whether a decrease in urine output is due to a blockage or reduced urine in the bladder, thereby minimizing breaks in the closed drainage system.

### **Silver-coated Urinary Catheters**

Recent experience shows that indwelling urinary catheters impregnated or coated with silver inhibit adherence of infection-inducing microorganisms to the catheter surface.<sup>12</sup>

<sup>13</sup>

Silver ions have long been recognized for their broad-spectrum antimicrobial action.

- Ionic silver is effective against gram-positive and gram-negative bacteria, as well as against fungi.
- Ionic silver hydrophilic catheter coatings can be very effective against the most common and serious UTI pathogens, including MRSA, VRE, E. coli, Candida albicans, Staph aureus, Pseudomonas, Klebsiella, and others.

Silver coated urinary catheters, which incorporate the power of silver through a process that binds silver ions to the catheter's lubricious coating helping to reduce potential pathogens.

<sup>11</sup> <http://www.nlm.nih.gov/medlineplus/ency/article/003832.htm> (last accessed 06/24/09).

<sup>12</sup> Maki DG, Tambyah PA. Engineering out the risk of infection with urinary catheters. *Emerging Inf Dis* 2001;7(2): 1-6.

<sup>13</sup> Kassler J, Barnett J. A rehabilitation hospital experience with ionic silver Foley catheters. *Urologic Nursing* 2008;28(2): 97-100.

## Module 2: Aseptic Technique and Proper Insertion of a Foley Catheter

### Learning Objectives

After finishing this module, you will be able to insert an indwelling urinary catheter using the ERASE methodology:

- Evaluate indications
- Read the directions
- Aseptic technique
- Secure the catheter
- Educate the patient

### Indications

The first step in the ERASE CAUTI methodology is to **EVALUATE THE INDICATIONS**.

A clinically valid reason for placing a Foley Catheter Management System should be documented. Normally, a Foley Catheter should be inserted only with a signed order from a physician.

Even if your facility is using an electronic medical record, placing visual reminders and cues on product packaging helps to enforce evidence-based practice.

The Foley Catheter Management System has an external peel-off label that asks you to identify and document the clinical reason for catheterization:

- Acute urinary retention or obstruction
- Precise measurement of urinary output needed
- Select surgical procedures
- Open sacral or perineal wounds in incontinent patient
- Prolonged immobilization
- End-of-life care

Place a check next to the appropriate indication on the peel-off label. If the patient does not meet the criteria for placement of a Foley Catheter, **Do Not Insert a Foley Catheter**. Return the kit to the shelf and consider alternatives to an indwelling urinary catheter.

The same peel-off label also has a **CHECKLIST FOR FOLEY CATHETER INSERTION** to guide you through the steps for placing the Foley Catheter. As you complete each step, check the corresponding box. When all steps have been performed, the label can be placed on the patient's chart for documentation purposes.

**Read Directions**

With any closed drainage urinary catheter system, the next step would be to **READ THE DIRECTIONS**.

Before opening the the Foley Catheter Management System kit, read the package insert.

- The cover of the insert shows the catheter French size and identifies the contents of the kit.
- Note that the position of the kit in the illustration indicates the corresponding orientation in which you should place the actual kit when catheterizing the patient.

This innovative kit promotes the ERASE CAUTI methodology. Each letter of the word ERASE triggers the next step in the proper use of the tray and follows the recommended guidelines of the CDC, Joint Commission, SHEA, and APIC.

This unique, single kit design makes materials for catheterization available sequentially, as they are needed, reducing the risk of contamination from unnecessary manipulation of sterile components.

The contents of the kit are:

- Peel-off indications label and procedural checklist
- Package insert
- Under-buttocks drape
- Hand sanitizer
- Aloetouch 3G vinyl gloves (1 pair)
- Fenestrated drape
- 10 ml syringe (pre-filled with sterile water)
- Lubricating jelly
- S16 Fr 10 ml 100% silicone catheter
- Drainage bag with anti-reflux device and attached tubing
- Povidone-iodine swabsticks (3)
- Securement device
- Foley InserTag
- Specimen container with lid and label
- Tray

**Entering the Patient's Room**

Make sure you have all the supplies needed before entering the patient's room. It may be helpful to have extra sterile gloves and an additional sterile catheter.

Make sure there is sufficient light to see the insertion area clearly.

After entering, introduce yourself, check the patient's armband, and explain why the urinary catheter is being inserted. Be sure to explain the insertion procedure and take time to answer any questions the patient may have.

### **Hand Hygiene**

Proper hand hygiene is the first and most important preventive measure to take against CAUTI.<sup>5</sup> Both the Association for Professionals in Infection Control (APIC) and the CDC recommend hand antisepsis:

- Before and after patient contact
- And before and after putting on and removing gloves

In the healthcare setting, frequent decontamination of provider's hands with an alcohol based rub is the preferred method to reduce transmission of microorganisms to patients. Hand hygiene with professional grade alcohol hand rubs partnered with lotion is quicker, less drying and provides a reduction of microbes on the skin (as compared to soap and water) therefore Alcohol based hand rubs are recommended by the CDC for healthcare professionals when hands are not visibly soiled.

It is important to perform hand hygiene immediately before insertion (this can be an alcohol based rub) and after inspection or manipulation of the catheter device or site. The CDC recommends washing hands with soap and water for 10 to 15 seconds, if hands are visibly soiled with body fluids.<sup>2</sup>

### **APIC GUIDELINES**

APIC guidelines recommends performing hand antisepsis by alcohol-based rubs, washing hands for at least 10-15 seconds with soap or antimicrobial soap. Particular care should be taken to wash:

- Thumbs
- Backs of fingers
- Backs of hands
- Beneath fingernails

### **CDC RECOMMENDS**

The CDC recommends that healthcare workers wear gloves to:<sup>16</sup>

- Reduce the risk of personnel acquiring infections from patients
- Prevent healthcare work flora (normal bacteria) from being transmitted to patients
- Reduce transient contamination of the hands of personnel by flora (normal bacteria) that can be transmitted from one patient to another

Remember is it never acceptable to replace hand hygiene with glove usage.

## **WHO HAND HYGIENE**

The My 5 Moments for Hand Hygiene approach defines the key moments when health-care workers should perform hand hygiene. This evidence-based, field-tested, user-centred approach is designed to be easy to learn, logical and applicable in a wide range of settings.

This approach recommends health-care workers to clean their hands

1. before touching a patient,
2. before clean/aseptic procedures,
3. after body fluid exposure/risk,
4. after touching a patient, and
5. after touching patient surroundings.

<sup>5</sup> Stokowski LA. Preventing catheter-associated urinary tract infections. Medscape Nursing Perspectives. February 3, 2009. Available at [http://www.medscape.com/viewarticle/587464\\_4](http://www.medscape.com/viewarticle/587464_4). Accessed July 6, 2009.

<sup>2</sup> Gould CV, et al. Guideline for Prevention of Catheter-Associated Urinary Tract Infections 2008.

## **Preparation**

Prepare the patient for insertion.

1. Position the patient.
  - a. Place the female patient in the dorsal recumbent position with knees flexed and the feet about 2 feet apart.
  - b. Place the male patient in the supine position with legs extended and thighs slightly apart.
2. Cover the upper body and each leg and adjust the bed sheet for patient comfort.
3. Place the Indwelling Urinary Catheter Management System between the patient's legs.

Open the kit and remove the package insert booklet, which provides step-by-step insertion guide and tips for reducing CAUTI. The booklet also includes instructions for emptying the drainage bag, obtaining a urine sample, and a detachable patient education leaflet.

## **Aseptic Technique**

**Sterile Field**

The third step in the ERASE CAUTI methodology is to follow ASEPTIC TECHNIQUE for insertion.

The Indwelling Urinary Catheter Management System is designed to minimize the risk of components becoming contaminated from unnecessary handling. By following the instructions in the booklet and as described here, you should be able to catheterize the patient successfully and aseptically.

1. Orient the single layer tray with the folded flap pointing toward you. When you open the flap, it will open away from your body.
2. Remove the under-buttocks drape and place it under the patient.
3. Unfold the two side folds of the kit to uncover the hand sanitizer and gloves.
4. Use the hand sanitizer and don the gloves using aseptic technique.
5. Unfold the final flap aseptically to create the sterile field.
6. Place fenestrated drape over patient. Do not allow your gloves to touch the patient!

**Prepare Catheter**

Once the sterile field has been established, prepare the catheter for use:

1. Test the catheter balloon by injecting all 10 ml of the pre-filled sterile water syringe. Deflate the balloon and leave the syringe attached to the catheter.
2. Remove sheath covering catheter.
3. Squeeze the lubricant into the appropriate trough in the tray, then place catheter into trough with lubricant. There is a channel in the tray that allows the catheter to rest securely in place.

**Insertion: Female**

The indwelling urinary catheter is inserted into the female urinary tract by following these steps:

1. Continue to hold the labia apart after cleansing.
2. Using your sterile hand, insert the lubricated catheter into the female patient's urinary meatus. Angle the catheter upward as you advance it. If the catheter will not advance, instruct the patient to inhale and exhale slowly, which may relax the sphincter muscle. DO NOT force the catheter.
3. When urine has begun to flow through the catheter, continue inserting it approximately 1 inch.
4. Inflate the balloon with the pre-filled syringe to anchor the catheter in place.
5. Gently pull the catheter to feel for resistance.

**Note:** Never force a catheter during insertion. If there is continued resistance, discontinue the procedure and notify the physician.

### **Cleanse Patient: Male**

Cleanse the urinary meatus of the male patient by following these steps:

1. Open the packet containing the povidone iodine swabsticks and set the sticks in the tray holder.
2. Hold the penis with your non-dominant hand. Maintain hand position until the catheter is inserted and the balloon is ready to be inflated.
3. Using your dominant hand, cleanse the glans with a swabstick, starting at the urinary meatus and working outward in a circular motion. Repeat with a new swabstick until all three swabs have been used. Dispose of each swabstick away from sterile field after single stroke.

### **Insertion: Male**

Insert the indwelling urinary catheter into the male urinary tract by following these steps:

1. Position the penis perpendicular to the patient's body and apply light upward traction with your non-dominant hand.
2. Introduce the well-lubricated catheter into the urethral meatus using aseptic technique. Ask the patient to bear down to help relax the sphincter.
3. Continue to advance the catheter until urine begins to flow.
4. Once urine flow is established, insert the catheter another 1 to 2 inches to assure that the balloon is out of the urethra and inside the bladder.
5. Inflate the balloon with the pre-filled 10ml syringe to anchor the catheter in place. Gently pull to feel for resistance.

**Note:** Never force a catheter during insertion. If there is continued resistance, discontinue the procedure and notify the physician.

### **Secure Catheter**

The fourth step in the ERASE CAUTI methodology is to SECURE THE CATHETER.

Properly secure the indwelling urinary catheter after insertion to ensure proper drainage and to prevent movement and urethral traction. The Catheter System includes one Securement strap, a safe, simple, and secure method of keeping catheters in place.

1. Remove the adhesive backing from the securement device and place it on the inner thigh of the patient.
2. Pull back the two strips from the top of the device, then secure the tubing with each strip.

3. Then secure the drainage bag to the bed frame, below the level of the bladder to ensure unimpeded urine flow.
  - a. Ensure that the tubing does not have a dependent loop.
  - b. Do not allow the drainage bag to touch the floor.
4. Dispose of all supplies and the tray, and perform hand hygiene.
5. Place the date, time, and signature on the yellow Foley InsetTag and wrap it around drain tubing above area of drainage bag.

### **Educate Patient**

The fifth and final step in the ERASE CAUTI methodology is to **EDUCATE THE PATIENT**. Educating the patient can reduce readmissions<sup>14</sup> and may help to achieve higher patient satisfaction scores.

The package insert included in the indwelling urinary catheterization tray has a detachable patient education tool. Write the physician's or provider's name and number on the tool and give it to the patient.

Make sure the patient is comfortable and begin education. Review and discuss each section of the education tool with patient.

- What is a catheter?
- What should you know about a catheter?
- Can you reduce your chances of getting an infection?
- What is a catheter-associated urinary tract infection (CAUTI)?
- What are some symptoms if you have a urinary tract infection (UTI)?
- What about when you are going home?

Document the catheterization procedure and patient education in the nurse's notes.

<sup>14</sup>Jack BW, Chetty VK, Anthony D, Greenwald JL, Sanchez GM, Johnson AE, et al. A reengineered hospital discharge program to decrease hospitalization. *Annals of Internal Medicine*. 2009; 150(3):178-187.

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5. Place the date, time, and signature on the yellow Foley InsetTag and wrap it around drain tubing above area of drainage bag.

## **Module 3 - Care and Maintenance**

### **Learning Objectives**

After finishing this module, you will be able to:

- Understand the importance of maintaining and caring for an indwelling urinary catheter
- Review proper technique for obtaining a urine sample from a closed-system indwelling urinary catheter
- Understand how to empty the drain bag
- Understand when to discontinue use of an indwelling urinary catheter
- State CDC guidelines for prevention of catheter-associated urinary tract infections (CAUTI)

### **Daily Care**

It is important to maintain a sterile, continuously closed drainage system. If breaks in aseptic technique, system disconnection, or leakage occur, replace the catheter and collection system using aseptic technique and sterile equipment.

The patient and catheter should be monitored regularly to maintain unobstructed urine flow.

- Keep the catheter and collecting tube free from kinking or compression.
- Keep the collecting bag below the level of the bladder at all times.
- Empty the collecting bag regularly using a separate collecting container for each patient, and avoid contact of the drainage spigot with the nonsterile collecting container.

Use Standard Precautions, including the use of gloves and gown as appropriate, during any manipulation of the catheter or collecting system.

Complex urinary drainage systems (utilizing mechanisms for reducing bacterial entry such as antiseptic-release cartridges in the drain port) need not be used routinely to prevent CAUTI.

Do not change indwelling catheters or drainage bags at arbitrary fixed intervals.

Do not use systemic antimicrobials routinely to prevent CAUTI in patients requiring either short- or long-term catheterization.

Do not clean the periurethral area with antiseptics to prevent CAUTI while the catheter is in place. Routine hygiene (such as cleansing of the meatal surface during daily bathing) is appropriate.

Avoid bladder irrigation unless obstruction is anticipated (for example, as might occur with bleeding after prostatic or bladder surgery).

- If obstruction is anticipated, closed continuous irrigation may be used to prevent obstruction.

The bladder need not be irrigated with antimicrobials routinely to prevent CAUTI.

Antiseptic or antimicrobial solutions need not be instilled into urinary drainage bags routinely to prevent CAUTI.

Clamping indwelling catheters prior to removal is unnecessary.

### **Sampling**

When using a catheter with a standard Luer Lock or Luer Slip syringe, follow these steps if a urine sample needs to be obtained:

- If a small volume of fresh urine is needed for examination (in other words, for urinalysis or culture), aspirate the urine from the needleless sampling port with a sterile syringe/cannula adapter after cleansing the port with alcohol.
- Obtain large volumes of urine for special analyses (not culture) aseptically from the drainage bag.

The Silvertouch® Foley catheter has a Luer Lock Sample Port that allows urine sampling with standard Luer Lock or Luer Slip syringe. Follow these steps if a urine sample needs to be obtained:

1. Perform proper hand hygiene.
2. Kink tubing approximately 3 inches below the sample port until urine is present under the access site.
3. Clean surface of the access site with alcohol.
4. Attach a syringe to the sample port and aspirate desired volume of urine.
5. Transfer urine to a specimen container.
6. Place time, date, and initials on the label of the urine specimen container.

### **Emptying Drainage Bag**

The drainage bag should be emptied regularly without letting the drainage spigot touch the collecting container. Use a separate collection container for each patient.

Follow these steps to empty the drainage bag:

1. Perform hand hygiene.
2. Remove drain tube from the holder.
3. Open the valve and empty the urine into a collection container. Do not allow the drain tube to touch the container or anything else.
4. After emptying the bag, close the valve and clean end of the drain tube with alcohol before replacing it in the holder.

### **Discontinuing Use**

Indwelling urinary catheters should be removed:

- When there is no longer any need
- When there are signs and symptoms of urinary tract infection
- If the catheter is not functioning.

Remove the catheter by following these steps:

1. Insert a sterile needleless syringe into the inflation port.
2. Allow the water to flow back into the syringe to deflate the balloon. All 10cc of water should be removed.
3. Do not use vigorous aspiration, since this may cause the inflation lumen to collapse.
4. After the balloon is deflated, remove the catheter and discard it according to hospital policy.

If balloon will not deflate:

- Try injecting 1 to 2ml sterile water – this may clear up a collapsed or clogged inflation lumen
- Guide wire into inflation lumen (usually reserved for ER physician)

### **CDC Prevention Guidelines**

The ERASE CAUTI program has been designed to support the CDC guidelines for the prevention of CAUTI.<sup>2</sup> Please take a moment to review these important prevention guidelines.

Now you are ready to join the RACE to ERASE CAUTI in your healthcare organization!

<sup>2</sup> Gould CV, et al. Guideline for Prevention of Catheter-Associated Urinary Tract Infections 2008.