DEPARTMENT OF NURSING

Practice Alert

Keeping you up to date on changes and improvements!

Volume 8, Issue 6

June 2016

Rhode Island Hospital/ Hasbro Children's Hospital

A Lifespan Partner

Practice Alerts can be found on the Nursing Web Site

NURSING INFORMATICS

LifeChart Updates

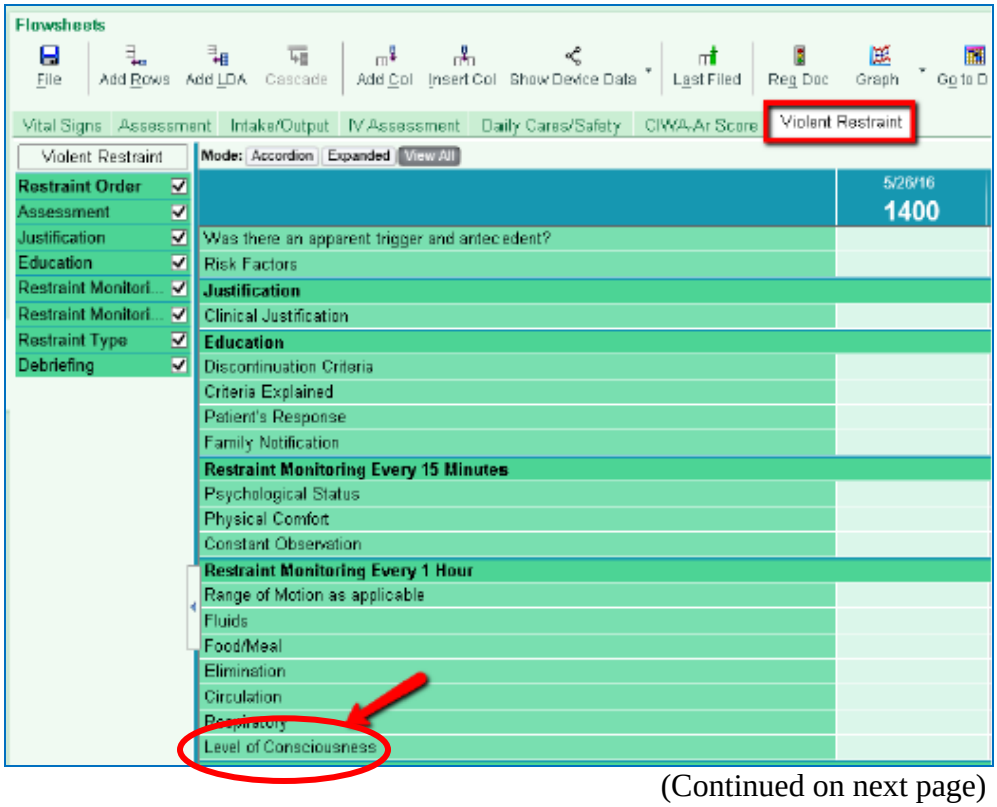
LifeChart was upgraded to the 2015 version as planned in the early hours of Sunday, June 12th. The planned downtime was called at 12:01am for the required downtime steps, followed by initial smoke testing which was completed without issues. The uptime was called at 2:30am, releasing the system to users 30 minutes earlier than planned

The upgrade contains thousands of changes, fixes, and several new features developed by the EPIC Team. All current **LifeChart** users have been assigned a new curriculum in NetLearning based on your role, specialty, and practice area. Please complete the required curriculum ASAP.

New Row on Violent and Non-Violent Restraint Flowsheet

There is now a **"Level of Consciousness"** row in both the Violent Restraint and Non-Violent Restrain Flowsheets.

Violent Restraint Flowsheet



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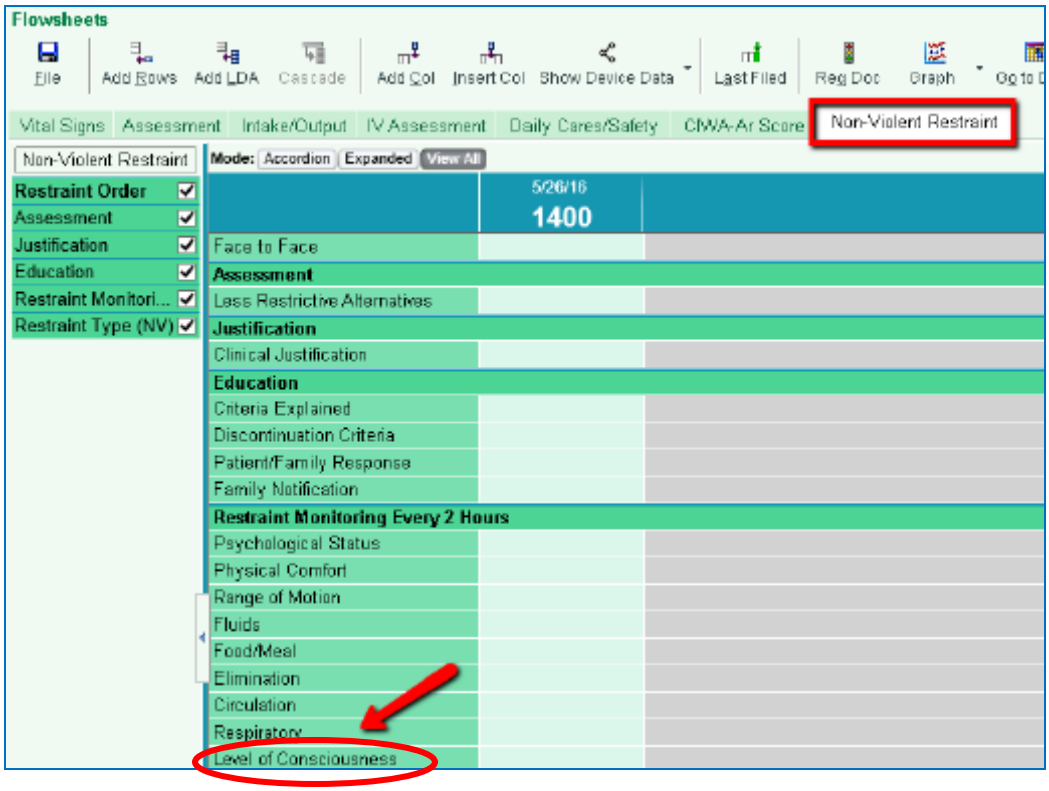
Non-Violent Restraint Flowsheet



SPECIMEN COLLECTION

QuantiFERON –TB Test

QuantiFERON-TB Gold (QFT-G) is a simple blood test that aids in the detection of *Mycobacterium tubacteria* which causes tuberculosis (TB). **QFT-G** is highly specific and sensitive: a positive result is strongly predictive of a true infection. The World Health Organization (2013) acknowledged that to fight TB effectively, the accurate identification of latent TB infections, as well as active TB disease was vital. Tuberculosis continues to infect many people in developed and developing countries, placing healthcare workers at risk.

The **QuantiFERON-TB Gold (QFT-G) Test** is now being ordered in both In-patient and Out-patient areas at Rhode Island Hospital. It is not necessarily replacing PPD testing, however since this test does not require a follow –up like the PPD test does, it is becoming a preferred test. The Center for Disease Control (CDC) States: "The greater specificity of the **Quantiferon test** and the requirement for only one visit are compelling advantages."

The test has also been approved by the U.S. Food and Drug Administration (FDA) for use with adult patients. **Special Instructions** and a distinct **set of three collection tubes** need to be utilized when obtaining this blood test. When the label prints, it will state **Quant – call the Lab.** Please fill the collection tubes to the required amount to avoid a QNS result.

Please review the **special instructions** sent out to Phlebotomist in regards to collecting the QuantiFERON-TB Gold Test.

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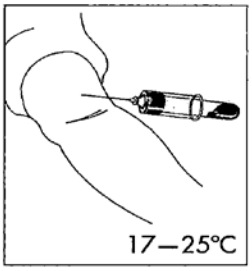
Quick Guide - Blood Collection

QuantiFERON®-TB Gold

Option 2: Incubate at Laboratory



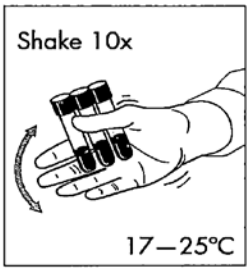
1. Blood collection

Collect 1 ml blood by venipuncture into each QFT® blood collection tube.

Tubes should be at 17–25°C at the time of blood filling.

Tubes fill slowly—hold tube on needle for 2–3 seconds after flow ceases. If blood level is not close to the black mark on the side of the tube label, obtain another sample.

Technical Tip:
Butterfly needles—prime tubing with a 'purge' tube (not supplied) before filling QFT tubes.

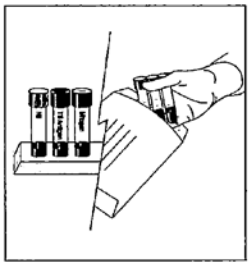


2. Blood collection

Immediately after filling, shake tubes ten (10) times just firmly enough to ensure that the inner surface of the tube is coated in blood (to dissolve antigens on tube walls).

Over-energetic shaking may cause gel disruption and could lead to aberrant results.

Label tubes appropriately.



3. Shipping and incubation - incubate at laboratory

Ship tubes to laboratory at 17–27°C.

Blood must be incubated at 37°C as soon as possible (and within 16 hours of collection).

Re-mix tubes by inverting 10 times immediately prior to incubation.

Technical Tip:
Label tubes as 'Not Incubated'.

WARNING: Standard blood handling precautions apply.

Please see reverse for instructions if incubating tubes at the collection site.

For comprehensive instructions for use, please refer to the QFT Package Insert, available in up to 25 different languages, on www.QuantiFERON.com.

North America ▫ QIAGEN Inc ▫ +1-661-775-7480 ▫ techservice-na@qiagen.com

QIAGEN

www.QuantiFERON.com

Please refer to the Lifespan Laboratory Guide below for additional information. A picture of the **set of three collection tubes** for the QuantiFERON – TB Gold Test has also been provided.

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Lifespan Laboratory Guide for QuantiFERON-TB Gold

Test:	Quantiferon - TB Gold		
LIS order	QUANT	**LifeChart order**	QUANTIFERON TB GOLD
Specimen	3 mL Blood	**Lab**	Clinical Immunology Lab
Container	Special Tubes (3) obtained from Clinical Immunology Lab	**Reference range**	See Report
Turnaround times	R = 3-5 days	**Method**	
Comments	Special Tubes and Handling: Test requires **3 distinct tubes** which are available from the Send out Lab at RIH & Newport Hospital or the Clinical Immunology Lab at TMH. Once the samples are collected, they must be sent to the laboratory **immediately.** Once received in the lab, please follow special handling guidelines.		

QuantiFERON-TB Gold Specimen Collection Tubes

Avoid unnecessary patient **"sticks"** collect each blood sample appropriately, without contamination, and in sufficient amounts. If a sample is determined to be contaminated or insufficient, the blood sample has to be redrawn which will delay the results.

Guidelines to Avoid Blood Sample Contamination

The Nursing Blood Drawing: Venipuncture Policy states veins **above** a running IV **"should not be used, as specimen will be contaminated"** with IV fluid and test results will be invalid. The infusion of fluids can significantly corrupt blood drawn from the same arm, drastically altering results and putting the patient at an extremely high risk should the results prompt the need for treatment, medication or therapies.

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If the only vein available to draw a peripheral blood sample is **below** a running IV, you still risk dilution and possible contamination of the blood sample. This site should only be considered when all other possible sites have been exhausted. **The running IV must be stopped before drawing a sample from a vein below the IV insertion site.** Please allow **"adequate time"** once the IV has been stopped before drawing from this area. Always follow the order of draw and verify the patient's name & date of birth with the printed label, while at the patient's bedside.

PHARMACY

Sigma Spectrum Pumps - Drug Library Update

On **Friday, June 10th** certain updates to the Sigma Spectrum Infusion Pump Library were transmitted hospital wide to the pumps via the wireless drug library upload function. Please be aware that the pumps powered on and in use began to receive updates immediately upon transmission of the upload, but there may be a delay for all pumps to receive the updated libraries.

Summary of Sigma Spectrum Infusion Pump Updates

- **Argartoban—**Update to change the soft upper rate limit to 10 mcg/kg/min (was previously set at 25 mcg/kg/min dosing used in PCI procedures). Change made to align dosing rate limits with most common clinical use of argatroban (for heparin induced thrombocytopenia) hospital-wide. ***Change will impact all care areas with argatroban library included***.

- **Idarucizumab (Praxbind)—**New drug library entry, will deliver 2.5 g/50 mL dose over 10 minutes per package literature. Default dosing rate 300 mL/hr, with soft lower rate limit at 300 mL/hr and upper soft rate limit at 600 mL/hr (corresponding to 5 min infusion if desired). Clinical advisory: "Infuse each vial over no longer than 5 to 10 minutes. Second dose of 2.5 g should be administered no later than 15 minutes after end of first dose. Do not administer any other infusion in the same IV". ***Added to Adult Critical Care/ED care areas***.

- **Cangrelor (Kangreal)—**New drug library. Standard concentration of 200 mcg/mL with a starting dose rate defaulted at 4 mcg/kg/min. Hard upper and lower dose limits to prevent any dose higher or lower than 4 mcg/kg/min. Clinical advisory: "Bolus dose of 30 mcg/KG must be administered immediately prior to starting infusion". ***Added to Adult Critical Care/ED care areas***

- **ESETT Study Infusion--** New library added to support ESETT Study with clinical advisory-- "Confirm infusion rate ordered in LifeChart with the Dose Administration Chart Tool in study box. Infusion to be administered over 10 minutes". Allowed dosing rates range 54-540 mL/hr to correspond with study schema. ***Added to all Adult and Pediatric care areas.***

Please contact Central Pharmacy at 4-8172 if you have any questions related to this update.

Pharmacy Reminder: Eliminating Ratio Expressions

According to USP39-NF34 (The US Pharmacopeia [USP] and The National Formulary [NF]), ***which became official on May 1, 2016,*** ratio expressions on single entity drug products are no longer acceptable. Manufacturers should only display EPINEPHrine 1:1,000 injection as 1 mg/mL, and 1:10,000 must only be displayed as 0.1 mg/mL. The total content per volume in the container will be prominently labeled along with the content per mL. Some manufacturers have been making the change for a while or have already begun conversion but complete inventory turnover will likely take some time. Still, it's not too early to let prescribers know about the changes, and encourage them to begin using only metric dosing. **Product labels currently express the strength both ways. Ratio expressions are a known cause of errors**. (www.ismp.org/sc?id=1718), **and continued prescribing in terms of a ratio expression, after product labels no longer include this, could lead to confusion and calculation errors.** See examples below.

Before

After

TRANSFUSION SERVICES

New Platelet Product

The **Rhode Island Blood Center** will be manufacturing a new product as of **June 16th, 2016.** These are **pathogen reduced platelet concentrates**. This product differs in its preparation process in which **psoralen** is added to the product which is then exposed to UVA photons. This step is intended to destroy residual bacteria which can give rise to transfusion associated sepsis but also destroys viruses and protozoa. We are expected to convert our platelet inventory to 100% pathogen reduced by the end of 2016.

Additionally, this process inactivates donor T lymphocytes which can give rise to a rare but fatal reaction, Graft vs. Host Disease; therefore, **irradiation is not necessary or recommended.** These PR platelets will be **used concurrently with conventional products until complete conversion to PR platelets is achieved.** These PR products appear very similar to conventional platelets except that the plastic container is a little different and that the words **"psoralen inactivated"** will be added in small font to the label.

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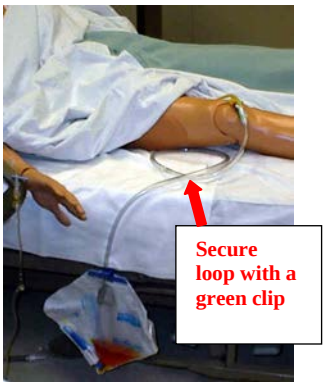
Nurses may notice a slight difference in the actual bags. If the order is for an **irradiated platelet** product, nursing may receive this product rather than the irradiated product. A piece of paper alerting the nursing staff of the change will be placed in the transport bag with these products during the initial transition.

Infection Prevention Corner:

In preparation for the CAUTI Education and Competencies scheduled for the coming months, a number of questions and issues have arisen. The following are the questions and issues and the appropriate answers…

1. **Straight Catheterization**
   a. Do not use a foley catheter to straight cath a patient on the off chance that you may want to leave it in! Use the Straight cath kits.

2. **How can drainage tubing be arranged so that there are no "dependent loops?"**



If the drainage tubing cannot be straightened on the bed, it can be coiled on the bed. The green clips can be used to position the coils. But if your patient is restless and moving a lot, you will need to keep checking to see that the tubing does not fall off the bed and create dependent loops!

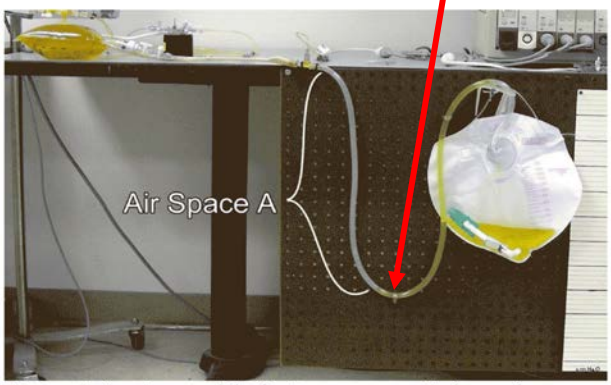


Figure 1: In vitro model of urinary system, Foley catheter, drainage tube and collection bag

The urine in this line will never overcome the pressure of the air in the line and flow into the drainage bag. This is called a "dependent loop." The bladder will expand with urine preventing drainage into the bag as long as there is a dependent loop in the catheter tubing – this is also true of other drainage systems such as chest tubes

3. **Keeping the drainage bag vent dry**

   a. If the foley bag or urimeter is laid flat, the air vent at the top will get wet and you will not get proper drainage. That is one reason why the bag and urimeter should never be placed flat on top of the patient or the bed/stretcher.

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4. **When is it okay to break the tamper-evident seal?**

   a. First of all, you should never attach an already in-use bag to a new catheter. Use a new pre-connected tray.
   b. If the catheter size required for your patient does not come in a pre-connected tray, you will have to use a standard sized tray, disconnect the catheter and attach the catheter of the size you need.
   c. If your patient has an MD order for irrigation, and the patient does not have a 3-way foley, you may aseptically (after cleaning the connection with an alcohol wipe) disconnect the drainage tubing, irrigate and aseptically (after cleaning the connection with an alcohol wipe) reconnect the drainage bag.

5. **Irrigation**

   a. Only irrigate with an MD order
   b. NEVER IRRIGATE THROUGH THE SAMPLE PORT!!!
   c. If your patient has an LIP order for irrigation, and the patient does not have a 3-way foley, you may aseptically (after cleaning the connection with an alcohol wipe) disconnect the drainage tubing, irrigate and aseptically (after cleaning the connection with an alcohol wipe) reconnect the drainage bag. **However, repeated irrigation warrants a 3-way foley…seek input from Urology.**

6. **Can RNs insert Coudé Catheters?**

   a. Only staff that have been trained and have a current competency, documented, can insert a Coudé catheter. If a Coudé is required, contact Urology.

7. **Transportation**
   a. Please ensure that drainage bags are emptied before transporting a patient to prevent reflux of urine or leakage from the system.

8. **Which wipe do I use?**
   a. Catheter care should only be performed with soap and water. If you have a patient who is incontinent of stool, use the comfort cloths to cleanse the buttocks. Soap and water for the periurethral area. If the catheter is grossly contaminated with stool, the catheter should be changed if the patient continues to meet indications for having a catheter. **DO NOT USE THE CHG CLOTHS FOR CATHETER CARE OR USE WIPES THAT CONTAIN DIMETHECONE (Barrier Wipes). THEY ARE NOT COMPATIBLE WITH THE CATHETER MATERIAL.**

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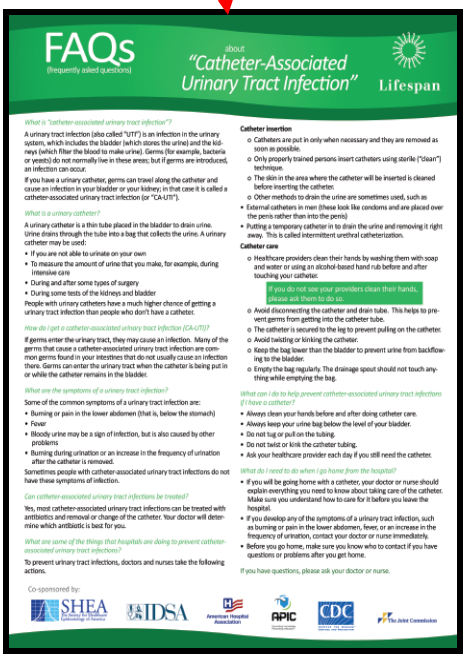
9. Do we have CAUTI patient education materials?

a. Every nursing unit should have a supply of FAQs about Catheter-Associated Urinary Tract Infections with the Lifespan Logo on them. They are available in Spanish and large type by contacting Infection Control @ 4-4773.



FAQs
(frequently asked questions)
about
"Catheter-Associated Urinary Tract Infection"
Lifespan

What is "catheter-associated urinary tract infection"?

A urinary tract infection (also called "UTI") is an infection in the urinary system, which includes the bladder (which stores the urine) and the kidneys (which filter the blood to make urine). Germs (for example, bacteria or yeasts) do not normally live in these areas; but if germs are introduced, an infection can occur.

If you have a urinary catheter, germs can travel along the catheter and cause an infection in your bladder or your kidney; in that case it is called a catheter-associated urinary tract infection (or "CA-UTI").

What is a urinary catheter?

A urinary catheter is a thin tube placed in the bladder to drain urine. Urine drains through the tube into a bag that collects the urine. A urinary catheter may be used:

- If you are not able to urinate on your own
- To measure the amount of urine that you make, for example, during intensive care
- During and after some types of surgery
- During some tests of the kidneys and bladder

People with urinary catheters have a much higher chance of getting a urinary tract infection than people who don't have a catheter.

How do I get a catheter-associated urinary tract infection (CA-UTI)?

If germs enter the urinary tract, they may cause an infection. Many of the germs that cause a catheter-associated urinary tract infection are common germs found in your intestines that do not usually cause an infection there. Germs can enter the urinary tract when the catheter is being put in or while the catheter remains in the bladder.

What are the symptoms of a urinary tract infection?

Some of the common symptoms of a urinary tract infection are:

- Burning or pain in the lower abdomen (that is, below the stomach)
- Fever
- Bloody urine may be a sign of infection, but is also caused by other problems
- Burning during urination or an increase in the frequency of urination after the catheter is removed.

Sometimes people with catheter-associated urinary tract infections do not have these symptoms of infection.

Can catheter-associated urinary tract infections be treated?

Yes, most catheter-associated urinary tract infections can be treated with antibiotics and removal or change of the catheter. Your doctor will determine which antibiotic is best for you.

What are some of the things that hospitals are doing to prevent catheter-associated urinary tract infections?

To prevent urinary tract infections, doctors and nurses take the following actions.

Catheter insertion

- Catheters are put in only when necessary and they are removed as soon as possible.
- Only properly trained persons insert catheters using sterile ("clean") technique.
- The skin in the area where the catheter will be inserted is cleaned before inserting the catheter.
- Other methods to drain the urine are sometimes used, such as
  - External catheters in men (these look like condoms and are placed over the penis rather than into the penis)
  - Putting a temporary catheter in to drain the urine and removing it right away. This is called intermittent urethral catheterization.

Catheter care

- Healthcare providers clean their hands by washing them with soap and water or using an alcohol-based hand rub before and after touching your catheter.

  If you do not see your providers clean their hands, please ask them to do so.

- Avoid disconnecting the catheter and drain tube. This helps to prevent germs from getting into the catheter tube.
- The catheter is secured to the leg to prevent pulling on the catheter.
- Avoid twisting or kinking the catheter.
- Keep the bag lower than the bladder to prevent urine from backflowing to the bladder.
- Empty the bag regularly. The drainage spout should not touch anything while emptying the bag.

What can I do to help prevent catheter-associated urinary tract infections if I have a catheter?

- Always clean your hands before and after doing catheter care.
- Always keep your urine bag below the level of your bladder.
- Do not tug or pull on the tubing.
- Do not twist or kink the catheter tubing.
- Ask your healthcare provider each day if you still need the catheter.

What do I need to do when I go home from the hospital?

- If you will be going home with a catheter, your doctor or nurse should explain everything you need to know about taking care of the catheter. Make sure you understand how to care for it before you leave the hospital.
- If you develop any of the symptoms of a urinary tract infection, such as burning or pain in the lower abdomen, fever, or an increase in the frequency of urination, contact your doctor or nurse immediately.
- Before you go home, make sure you know who to contact if you have questions or problems after you get home.

If you have questions, please ask your doctor or nurse.

Co-sponsored by:

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May 24, 2016
Infection Control