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## Section 1

**What is a MSU:** A mid-stream urine sample means you don't collect the first or last part of urine that comes out. This reduces the risk of the sample being contaminated with bacteria from your hands or the skin around the urethra, the tube that carries urine out of the body. The aim is to obtain a sample (specimen) of urine from the middle of your bladder. Urine does not normally have any germs (bacteria) in it (urine should be sterile). If bacteria are found in the sample, it means that the urine is infected. A midstream sample is best, as the first bit of urine that you pass may be contaminated with bacteria from the skin.

*The “gold standard” for the diagnosis of urinary tract infection is culture, which requires 18 -24 hours before a result is available.*

### **What is the purpose of a MSU test?**

- **To confirm the diagnosis of a urine infection.** The usual symptoms of a urine infection are pain when you pass urine and passing urine frequently. However, symptoms are not always typical, particularly in the elderly, so a urine test may be needed.
- **To decide the best antibiotic to use.** Some germs (bacteria) are resistant to some antibiotics. If the test shows that bacteria are in the urine then the bacteria are tested against various antibiotics. This finds which antibiotics will kill the bacteria in the urine.

### **How do I collect a midstream specimen of urine (MSU)?**

- Before doing an MSU, wash your hands and ideally your genitals as well.
- Do not open the sterile bottle until you are ready to take the sample.
- Women - hold open the entrance to the vagina (your labia).
- Men - pull back your foreskin.
- Pass some urine into the toilet. Then, without stopping the flow of urine, catch some urine in a clean (sterile) bottle. (The bottle should be provided by a doctor or nurse.)
- Once you have enough urine in the bottle, finish off passing the rest of your urine into the toilet.
- Avoid touching any part of your genitals with the bottle, as this will increase the risk of contamination. Put the cap back on the container. You do not need to fill the bottle to the top; a small amount will do.

### **MSU pots**

If you only have the yellow top MSU pot without a preservative you only have two hours before the bacteria in the pot will over grow and not be suitable for testing -The sooner the sample is given in to the doctor's surgery, or to the laboratory, the better. Within two hours is best. If possible, collect samples in the morning Mon-Friday so the sample can be taken to the surgery before 11am. However you can ask your GP practice to provide you with the monovette system which consists of the yellow pot and the green topped vacutainer which contains the preservative, put the green topped vacutainer in the port so the urine is transferred to the green bottle for transfer to the GP surgery.



**Step 1.** Collect urine in yellow top pot – No preservative so urine will only live for max 2 hours. If you do not have a green bottle then transfer to the GP surgery immediately.

**Step 2.** The green top bottle contains the boric acid (preservative) to allow urine to be tested without overgrowth of bacteria. Can be refrigerated at 2-8°C overnight, and sent to the laboratory the following day for culture.

**Step 3.** Place the monovette green top into the yellow pot so urine can be transferred without spillage or contamination. Urine is now preserved to allow for transport to the GP surgery then laboratory. Specimen collections to lab from GP usually **Mon-fri 10-2pm**

**Step 4.** Label and send to the GP practice with the UTI check list indicating clinical symptoms allowing GP to complete the form for the laboratory. Only send urine in the presence of 2 or more clinical symptoms.

### Collecting a clean sample using Urine pads

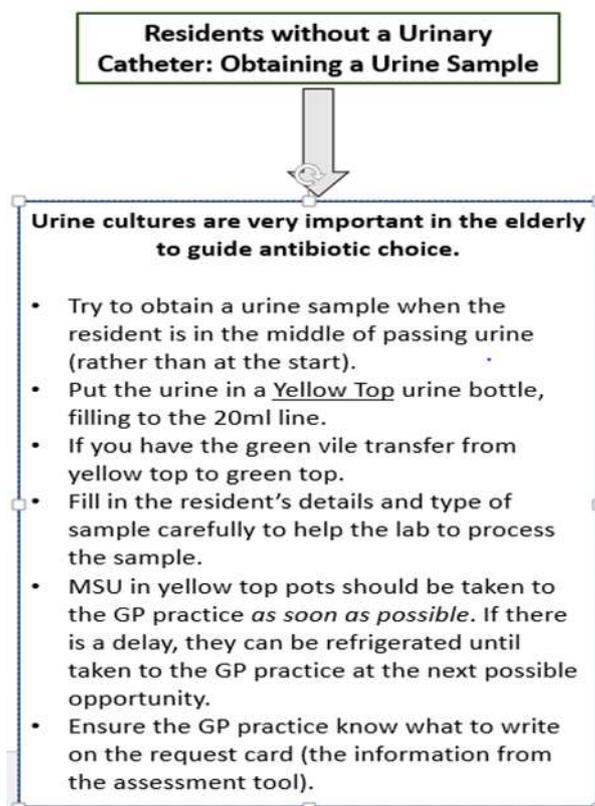
This is an option you may want to consider: The method is to place a special absorbent pad in a continence pad. (Urine collection pack from [www.gompleshealthcare.co.uk](http://www.gompleshealthcare.co.uk) product code 37944 £1.38 Inc. vat. Order online or call 03454502420) This pack contains 2x pads, a urine pot and a 5 ml syringe- Your doctor or nurse will not be able to provide the urine collection pack or advise you how to use it. The NHS cannot pay for this kit.

How to collect the sample ...

- Wash your hands and put on single use non sterile gloves.
- Clean the pubic area with soap and water but do not put any cream or talcum powder on until after the sample has been collected.
- Use cotton wool balls or a disposable wipe and swab and wash from front to back. This will prevent contamination of the specimen from faeces or bacteria normally present on the skin.
- Open the pad out and place inside the clean incontinence pad. Check every 10 minutes or so to see if the pad is wet. As soon as the pad is wet, take it out. **IF THE PAD IS SOILED YOU WILL HAVE TO START AGAIN.**
- Once the pad is wet wash your hands put on gloves and lay the pad down wet side up.
- Tear the cover slightly, then take the syringe and place the tip so it penetrates the wet fibers and pull up the plunger, extracting urine from the pad.
- Hold the tip of the syringe over the open yellow urine bottle and press the plunger down hard to squeeze out the urine. You may have to repeat this a couple of times to make sure that you have covered the bottom of the urine bottle (only 20ml or so is needed). Please use the yellow top MSU pot supplied by your GP practice so it can be used with the green topped vacutainer.

Remember ...

- Wash your hands after collecting your sample. This will stop you contaminating the sample or passing any possible infections to other people.



## Section 2

### **Collecting a Catheter Specimen of Urine (CSU)**

**A catheter specimen of urine (CSU) is collected for bacteriological examination if a patient's symptoms suggest the presence of a urinary tract infection. (2 or more clinical symptoms –use UTI checklist) CSU is not indicated simple for cloudy urine if the patient is otherwise well. The sampling technique used in catheter specimen of urine collection is important.**

**An incorrect sampling technique could introduce infection and cause inaccuracy in results, diagnosis and treatment.**

Taking a CSU must be a non-touch, aseptic technique and must be taken from the sampling port on the drainage bag.

Do not obtain a CSU from a drainage bag/when changing a drainage bag (such as, straight out of catheter and into a specimen bottle or by running the urine straight through a new drainage bag and into a specimen bottle.

Carers in residential homes, nursing homes or domiciliary care agencies should only take CSUs if deemed competent.

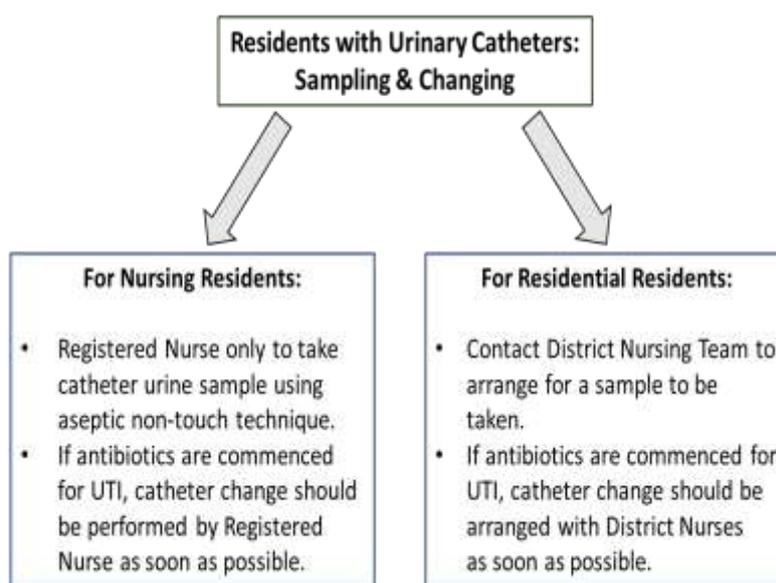
#### **Equipment:**

- Single use plastic apron
- Single use non-sterile gloves
- Sterile 10ml syringe
- X2 70% alcohol swabs suitable for equipment use
- Single patient use disposable clamp

- Specimen containers
- Laboratory request form
- Detergent wipe for equipment

### Procedure:

- Put on a disposable apron
- Decontaminate hands
- If there is no urine in the catheter bag tubing, clamp tubing 2-3 inches below the sampling port using a single patient use, scissor style clamp
- Decontaminate hands
- Apply gloves
- Clean sampling port prior to attaching the syringe with a 70% alcohol wipe suitable for equipment use for 30 seconds contact time then allow to dry.
- Attach a sterile 10ml syringe to the sampling port to aspirate urine
- Clean the sampling port with 70% alcohol wipe after removal of the syringe
- Place urine in yellow top specimen container in view of using the green topped vacutainer before sending to laboratory
- Remove clamp from catheter bag tubing and decontaminate with a detergent wipe
- Remove gloves and apron
- Wash hands with soap and water
- Label specimen
- Complete laboratory request form stating clinical symptoms:



**Remember:** Only collect a sample using clean technique; if the sample contains faeces, stale urine or discharge (contamination) please do not send as the microbiologist will not know if this bacteria has come from the urine and will not be able to target antibiotic to that bacteria.

If you cannot get your sample (yellow pot without preservative) to the GP practice before 11am wait until following day to collect the sample.

Urine samples can be stored in the green containers (with boric acid), preferably refrigerated at 2-8°C overnight, and sent to the laboratory the following day for culture.

Do not collect samples at weekends or when the GP surgery is closed.

Only send a urine sample for culture if patient has two or more clinical symptoms [see UTI checklist \(http://www.southnorfolkccg.nhs.uk/sites/default/files/UTI%20Checklist%20%20v10.pdf\)](http://www.southnorfolkccg.nhs.uk/sites/default/files/UTI%20Checklist%20%20v10.pdf)

## Appendix 1. Patient Instructions

Patient-collected samples:

A) Urines: (See below)



### Urine Container with Collection Device – Instructions for Use



Clean the hands thoroughly before use. Open cap by unscrewing anti-clockwise.



Lay the cap upside down on a firm surface.



**Do Not Touch Internal Surfaces** of the container and cap.



Collect mid-stream urine. Fill container up to 3/4 of the capacity.



Turn the cap tightly in a clockwise direction to seal.

Surname	_____
Forename	_____ M.F.
XMR No.	_____
Spec.	U/D/R
Date	_____ / _____ / _____



Gently shake the sample.



Partially raise the protective label (Do not remove it completely).



**Do not put finger in the sampling hole.**



Insert the tube. Gently apply pressure. Keep the tube in place until flow is complete.



Label the sample tube with the patients' details.



Remove the tube and fully re-stick the protective label. Return both the tube and container to the GP practice.