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Subject:	COLLECTION AND TRANSPORT OF URINE FOR CULTURE				
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COLLECTION AND TRANSPORT OF URINE FOR CULTURE

General Considerations

- Never collect urine from a bedpan or urinal.
- Thoroughly clean the urethral opening (and vaginal vestibule in females) prior to collection procedures to ensure that the specimen obtained is not contaminated with colonizing microorganisms in this area.
- Soap rather than disinfectants is recommended for cleaning the urethral area. If disinfectants are introduced into the urine during collection, they may be inhibitory to the growth of microorganisms.
- Transport specimen to laboratory within 2 h of collection. If it cannot be transported within 2 hr of collection, the urine specimen should be refrigerated. (Bacterial counts remain stable for at least 24 h at 4°C.) *Do not freeze.*
- Use sterile cups or tubes to transport urine. Also urine transport kits containing preservative are available.
- Transport suprapubic bladder aspirate (SPA) specimens for anaerobic culture in an anaerobic transport system.
- Always transport urine for viral cultures on wet ice in a sterile container.
- Any urine collection procedure involving catheterization must be done with scrupulous aseptic technique to avoid introducing microorganisms.
- Send the first morning voided urine. Three consecutive first morning urine specimens are recommended for mycobacterial culture.
- Do not submit 24-h urine collections for culture.
- Do not submit foley catheter tips for culture.

Collection Techniques

Clean-catch urine specimens (female)

1. The person obtaining the urine specimen should wash hands with soap and water, rinse, and dry. If the patient is collecting the specimen, she should be given detailed instructions as listed below, including diagrams or a pictorial display.
 - Open the collection cup; set the lid aside.
 - Do not touch the inside or top of the cup or lid with your fingers.
 - Open the towellette.
 - Stand in a squatting position over the toilet.
 - Separate the folds of skin around the urinary opening.
 - Thoroughly clean the area around the urinary opening with the towelette.
 - Urinate the first portion of urine in the toilet.
 - Continue to urinate, bring the collection cup into the stream of urine to collect sample.
 - Fill the cup to about half full. (Please do not overfill the cup with urine.)
 - Urinate remainder of urine into the toilet if needed.
 - Replace the lid on the container.
 - Wash hands and return the sample to the nurse or healthcare

Clean-Catch Urine Specimens (male)

1. The person obtaining the urine should wash hands with soap and water, rinse, and dry. If the patient is collecting the specimen, he should be given detailed instructions as listed below, including diagrams or a pictorial display.
 - Open the collection cup; set the lid aside.
 - Do not touch the inside or lip of the cup or lid with your fingers.
 - Open the towelette.
 - Thoroughly clean the end of the penis with the towelette beginning at the urinary opening and working away from it (the foreskin of an uncircumcised male must be retracted).
 - Urinate the first portion of urine in the toilet.
 - Continue to urinate, bring the collection cup into the stream of urine to collect sample.
 - Fill the cup to about half full. (Please do not overfill the cup with urine.)
 - Urinate remainder of urine into the toilet if needed.
 - Replace the lid on the container.
 - Wash hands and return the sample to the nurse or healthcare worker.

Ileal conduit urine

1. Remove the external urinary appliance, and discard the urine within the appliance.
2. Gently swab and clean the stomal opening with a 70% alcohol pad and then with an iodine solution (1 to 2% tincture of iodine or a 10% solution of providone-iodine [1% free iodine]). Remove excess tincture of iodine with 70% alcohol after procedure to avoid burn.
3. Using sterile technique, insert a double catheter into the stoma. (A double catheter helps to minimize contamination of the specimen with skin flora.)
4. Catheterize the ileal conduit to a depth beyond the fascial level.
5. Collect the urine drained into a sterile container.

Indwelling Catheter Urine

1. Clean the catheter collection port with a 70% alcohol wipe.
2. Using sterile technique, puncture the collection port with a sterile syringe. (*Note: Do not collect urine from collection bag.*)
3. Aspirate the urine, and place it in a sterile container.

Straight Catheter Urine (in/out catheter urine specimens)

In/out catheter urine specimens are useful when clean-catch urines cannot be obtained or when results from clean-catch urine specimens are equivocal and a diagnosis is critical.

1. Prior to catheterization, the patient should force fluids until the bladder is full. (Forcing fluids may reduce organism number).
2. Clean the patient's urethral opening (and in females, the vaginal vestibule) with soap, and carefully rinse the area with water.
3. Using sterile technique, pass a catheter into the bladder.
4. Collect the initial 15 to 30 mLs of urine, and discard it from the mouth of the catheter.
5. Collect a sample from the mid- or later flow of urine in a sterile container.

Reference:

Versalovic, James (Editor in Chief), editors Karen C, Carroll, Guido Funke, James H. Jorgenson, Marie Louise Landry, David W. Warnock, 2011. 10th Edition. Manual of Clinical Microbiology, American Society for Microbiology, Washington, D.C.