

(Facility Name and Address)

**(1E) Urine Specimen Collection
in the Long-Term Care Setting**

Introduction: The reported prevalence of asymptomatic bacteriuria is higher than that of symptomatic urinary tract infections. Therefore, the quality of urine specimens sent for culture and sensitivity testing must be assured. The quality and accuracy of results relies directly on the manner in which the specimens are obtained, stored, and processed. Without these guidelines in place, the integrity of specimens and quality of specimen results cannot be guaranteed to Physician providers.

Purpose: To formalize guidelines in urine collection, storage, and transportation in order to maximize specimen quality for culturing.

Scope of Practice: Nursing staff (RNs, LPNs, Aides, etc.), Infection Preventionist, Ancillary staff (Dietary, Physical Therapy, etc.), and Physicians (including Physician Extenders)

Related Policy/Guidelines: Surveillance of Urinary Tract Infections in the Long-Term Care Setting, Indwelling Urinary Catheter Use (also, reference your internal policies here)

Policy and Procedure:

I. Definitions:

A. Urine Culture

Procedures/Protocols for Urine Specimen Collection:

The single most important aspect of urine collection for laboratory culturing is the quality and sterility of the specimen. In order to ensure the integrity of urine cultures in this setting, specimens should never be obtained by the resident alone (clean catch specimens) or by staff who have not demonstrated competency in skills check-offs (in and out catheterization, indwelling catheter sampling, and changing an indwelling urinary catheter). Inappropriate specimen collection puts residents at risk of receiving inappropriate antimicrobial therapy based on less than optimal laboratory results. **ADDENDUM A** is a decision tree outlining the collection modality best used based on individual resident circumstance. While this table is not all-inclusive, it provides an outline of the decision making process that should occur during urine specimen collection.

Clean Catch Urine Sampling is a method for collecting urinary specimens when residents are able to follow instructions, have some manual and physical dexterity, and can control their urinary flow. An essential component for this sampling method is adequate cleansing with no contamination before the specimen is collected. The other essential component is the resident's ability to collect a midstream sample, stopping and starting his/her flow in order to collect a proper specimen. In this setting, to avoid contamination of the specimen and ensure potential treatments are based on reliable results, staff must witness specimen collection and assist as needed based on the essential

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skills for clean catch sampling. **ADDENDUM B** is a skills check-off ensuring competency of staff who are involved in assisting residents obtain these specimens.

In and Out Urinary Catherization Sampling is the most reliable and preferred method for collecting urine specimens for culturing when residents do not have indwelling urinary catheters. The essential components for this sampling method ensure that specimens are collected aseptically and that bacteria are not introduced. **ADDENDUM C** is a skills competency check-off for in and out urinary catheterization sampling.

Indwelling Urinary Catheter Sampling can be used when residents have indwelling catheters in place, but only if the catheter is <14 days old. In the instance that a catheter is >14 days, the device should be replaced and the specimen should be collected from the new catheter. This ensures that the specimen does not contain biofilm products from an older catheter that lead to false laboratory results. The benefit is two fold: 1) in some instances the catheter change may be the only treatment needed, thus avoiding exposure to antimicrobials; and 2) if pathogens are identified, the Provider is able to prescribe treatment based on accurate results. **ADDENDUM D** is a skills competency check-off for indwelling urinary catheter sampling.

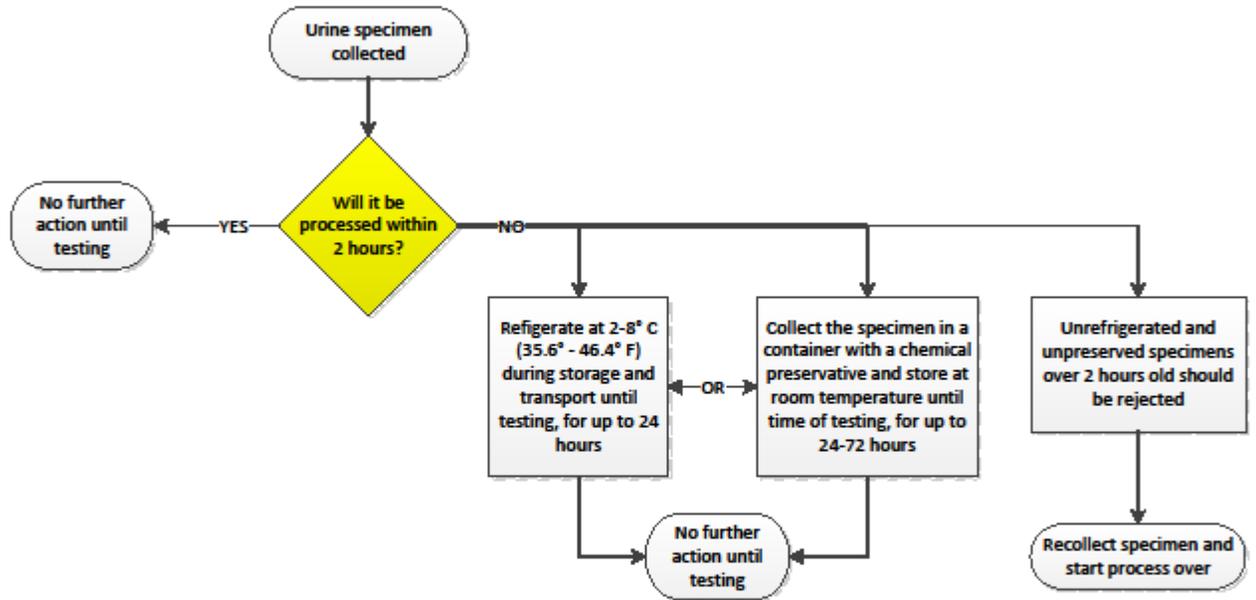
II. Storage and Transportation of Specimens:

The Clinical and Laboratory Standards Institute (CLSI) Guidelines recommend that urine specimens are cultured within two hours of collection. If the specimen cannot be cultured within two hours of collection, there are two options for maintaining the specimen integrity. The urine specimen can be placed in a temperature monitored laboratory specimen refrigerator until it can be cultured. It should be held at 2-8° C (35.6°-46.4° F) both during storage and transport and must be processed within 24 hours. If refrigeration is not possible and delay is expected, the urine specimen can be collected in a container with a chemical preservative, most commonly buffered boric acid.

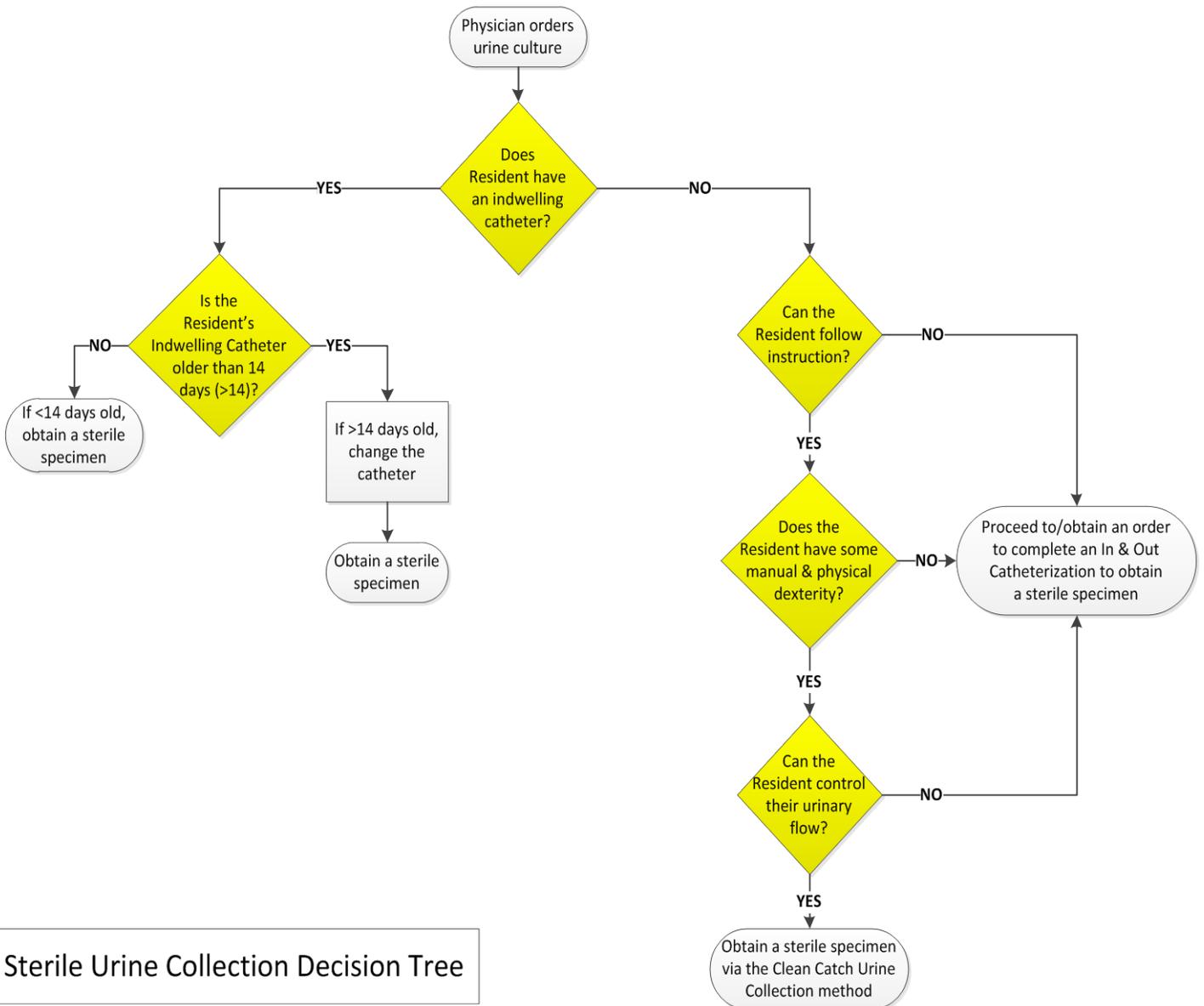
Example: *Vacutainer Urine Culture Transport Tube Use for urine culture only. This gray-top Vacutainer transport will maintain bacterial colony counts during transport to the lab for a period of 48 hours per the manufacturer guidelines.*

Preserved urine specimens can be stored at room temperature until time of testing. Typically, preserved specimens must be processed within the range of 24-72 hours, but specific times should be obtained from the manufacturer. Overgrowth of bacteria can occur readily with mishandled specimens, which will cause a false positive or unreliable culture result. Unrefrigerated and unpreserved specimens more than two hours old should be discarded and recollected.

Urine Specimen Storage & Transportation



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Sterile Urine Collection Decision Tree

INSTRUCTIONS FOR STERILE URINE CATHETER COLLECTION
CLEAN CATCH CATHETER SAMPLING

FOR FEMALES

1. Select the appropriate collection kit based on urine test to be collected per your facility's policy.
2. To ensure integrity of the specimen, every resident will be assisted in collection of a clean catch urine specimen. Only sterile specimen cups can be used. Speciman urine collection hats are not sterile and cannot be used to obtain laboratory specimens.
3. Explain procedure to resident. If resident is able, they can perform most of procedure with staff supervision.
4. Resident and staff should perform hand hygiene. Both may use waterless alcohol hand sanitizer. Staff should don gloves.
5. Separate the labia. Wipe the inner labial folds front to back in a single motion with the first towelette. Keep the labia separated.
6. Continue holding labia apart. Staff should hold the cup and instruct the resident to begin urinating. As the urine begins to flow, allow a small amount to fall into the toilet bowl. This clears the urethra of contaminants. Do not touch the inside of the cup.
7. After the urine stream is well-established, urinate into the cup. Once an adequate amount of urine has filled the cup, around a half cup, remove the cup from the urine stream.
8. Pass the remaining urine into the toilet.
9. Staff will replace the lid on the cup.
10. Specimens should be labeled and packaged according to your facility's policy.

INSTRUCTIONS FOR STERILE URINE CATHETER COLLECTION
CLEAN CATCH CATHETER SAMPLING

FOR MALES

1. Select the appropriate collection kit based on urine test to be collected per your facility's policy.
2. To ensure integrity of the specimen, every resident will be assisted in collection of a clean catch urine specimen.
3. Explain procedure to resident. If resident is able, they can perform most of procedure with staff supervision.
4. Resident and staff should perform hand hygiene. Both may use waterless alcohol hand sanitizer. Staff should don gloves.
5. If uncircumcised, retract foreskin. Wipe the end of the penis with towelette provided.
6. Staff should hold the cup and instruct the resident to begin urinating. As the urine begins to flow, allow a small amount to fall into the toilet bowl. This clears the urethra of contaminants. Do not touch the inside of the cup.
7. After the urine stream is well-established, urinate into the cup. Once an adequate amount of urine has filled the cup, around a half cup, remove the cup from the urine stream.
8. Pass the remaining urine into the toilet.
9. Staff will replace the lid on the cup.
10. Specimens should be labeled and packaged according to your facility's policy.

INSTRUCTIONS FOR STERILE URINE CATHETER COLLECTION
IN AND OUT CATHETER SAMPLING

1. Select the appropriate collection kit based on urine test to be collected per your facility's policy.
2. Explain procedure to resident.
3. Perform hand hygiene and don gloves.
4. Cleanse the urinary meatus with towelettes provided in the kits:
 - a. Females – Separate the labia. Wipe the inner labial folds front to back in a single motion with the first towelette. Keep the labia separated.
 - b. Males – If uncircumcised, retract the foreskin. Wipe the head of the penis in a single motion with the first towelette. Repeat with the second towelette.
5. Lubricate the catheter and direct it towards the cleansed area.
6. Discard the initial 15-30 ml of urine from the mouth of the catheter. Collect a mid or low flow urine sample into the vacutainer or the sterile collection cup.
7. Fingers should be kept away from the rim and inner surfaces of the urine container.
8. Replace the lid on the cup.
9. Specimens should be labeled and packaged according to your facility's policy.

INSTRUCTIONS FOR STERILE URINE CATHETER COLLECTION
INDWELLING CATHETER SAMPLING

1. Select the appropriate collection kit based on urine test to be collected per your facility's policy.
2. Explain procedure to resident.
3. Perform hand hygiene and don gloves.
4. Pinch, do not clamp, the tubing below the aspiration port to create a temporary reservoir of urine.
5. Elevate the tubing slightly to allow the urine to pool at the aspiration port. Never collect urine directly from the urine collection bag.
6. Swab the large end of the Indwelling Catheter at the planned puncture site with 70% isopropyl alcohol.
7. By using either the vacutainer or syringe method, insert the needle into the port and withdraw the urine. Allow the vacutainer tubes to fill to capacity. If using a syringe, use a 20-22 gauge needle to withdraw the urine.
8. Do not puncture the silicone catheter or the collection bag.
9. Resume the flow of the urine.
10. Specimens should be labeled and packaged according to your facility's policy.

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