J Wound Ostomy Continence Nurs. 2013;40(3):277-279.
Published by Lippincott Williams & Wilkins

OSTOMY CARE

CE
2.0
ANCC
Contact
Hours

Procedure for Obtaining a Urine Sample From a Urostomy, Ileal Conduit, and Colon Conduit

A Best Practice Guideline for Clinicians

Mary Mahoney ■ Kathryn Baxter ■ Joanna Burgess ■ Carole Bauer ■ Cathy Downey ■ Janet Mantel ■ Jacqueline Perkins ■ Michelle Rice ■ Ginger Salvadalena ■ Vickie Schafer ■ Shirley Sheppard

ABSTRACT

The purpose of this document was to define the correct technique for obtaining a urine sample from a urostomy, ileal, or colon conduit. While healthcare providers do not commonly encounter patients with a urostomy, knowledge of the correct procedure to obtain a urine specimen is essential. Urine samples obtained incorrectly from a urostomy can lead to inaccurate cultures, resulting in an improper diagnosis and treatment, which can endanger the life of a patient. This column presents patient preparation, the procedure to obtain a specimen with and without a catheter, and aftercare of the patient and specimen. This best practice guideline has been developed by a panel of certified ostomy nurses serving on the Wound, Ostomy and Continence Nurses (WOCN) Society's Clinical Practice Ostomy Committee. The guideline has undergone content validation through a consensus-building process by the WOCN Society, which was managed by the Center for Clinical Investigation.

KEY WORDS: urinary tract infection, urine culture, urine sample collection, urine specimen collection, urine specimen handling, urostomy

Introduction

The number of people with a urostomy in America is not clearly known; reports estimate the range from 150,000 to 250,000.[1] One of the most common complications associated with a urostomy are urinary tract infections. Due to the small number of people with a urostomy, clinicians may not be familiar with the correct technique to obtain a urine sample from a stoma to test for a urinary tract infection. Incorrect sampling techniques may lead to inaccurate culture results and then lead to inappropriate diagnosis and treatment. This document provides a quick and easy resource for correct technique with and without the use of a catheter.

Purpose

To obtain an uncontaminated specimen for laboratory analysis[2,3]:

- A clean uncontaminated specimen is necessary for accurate laboratory analysis (urine culture).
- Specimens from the urostomy sample often have bacteria; ensure that the specimen obtained is not contaminated.

■ **Mary Mahoney, BSN, RN, CWON,** Wound and Ostomy Nurse, Iowa Health Home Care, Urbandale.
■ **Kathryn Baxter, RN, FNP, CWOCN,** Nurse Practitioner, St. Luke's Roosevelt Hospital, New York.
■ **Joanna Burgess, BSN, RN, CWOCN,** Wound, Ostomy, and Continence Nurse, WakeMed Health and Hospitals, Cary, North Carolina.
■ **Carole Bauer, MSN, RN, ANP-BC, OCN, CWOCN,** Wound, Ostomy, and Continence Nurse Practitioner, Karmanos Cancer Center, Detroit, Michigan.
■ **Cathy Downey, BSN, RN, CWOCN,** Program Coordinator, University Medical Center, Las Vegas, Nevada.
■ **Janet Mantel, MA, RN-BC, APN, CWOCN,** Advanced Practice Nurse, Englewood Hospital & Medical Center, Englewood, New Jersey.
■ **Jacqueline Perkins, MSN, ARNP, FNP, CWOCN,** Wound/Ostomy Nurse Practitioner, VA Central Iowa Health Care System, Des Moines.
■ **Michelle Rice, MSN, RN, CWOCN,** Ostomy Clinical Nurse Specialist, Duke University Hospital, Durham, North Carolina.
■ **Ginger Salvadalena, PhD, RN, CWOCN,** Senior Clinical Research Scientist, Hollister Incorporated, Libertyville, Illinois.
■ **Vickie Schafer, MSN, RN, CWON, CCRA,** Associate Director, Medical & Scientific Liaison, Medical Affairs North America, Skillman, New Jersey.
■ **Shirley Sheppard, MSN, RN, CWON,** Wound Ostomy Skin Care Nurse, University of Illinois Hospital and Health Sciences System, Chicago.

The authors declare no conflict of interest.

Correspondence: Mary Mahoney, BSN, RN, CWON, Iowa Health Home Care, 11333 Aurora Ave, Urbandale, IA 50322 (MAHONEMF@ihs.org).

DOI: 10.1097/WON.0b013e31828f1a47

- The most accurate method of collecting a urine sample for culture, according to limited sources, is the use of a double lumen sterile catheter inserted directly into the stoma.
- Specimens for culture should *never* be obtained directly from the urostomy pouch or bedside drainage bag.[4]
- Antibiotic therapy—it is recommended to use caution when considering antibiotics to treat urinary infection for patients with a urostomy:
  - "Patients should only commence antibiotic therapy if they are symptomatic."[5]
  - "In the case of ileal conduit or continent urinary diversion, bacteriuria is practically always present, and measurements taken to eradicate the bacterial carriage are fruitless."[6]
  - "The detection of urinary infection in these patients is difficult because the ileal loops are almost always colonized. Asymptomatic bacteriuria in the presence of a ureteroileal conduit should not be treated and prophylactic antibiotics are not recommended. Positive urine cultures associated with physical findings of fever, chills, and flank pain should prompt initiation of appropriate bactericidal antibiotics."[7]

Patient Preparation

- In patients with 1-piece pouch system, the urostomy pouch system is completely removed, the specimen collected, and a new pouch system placed.
- In patients with 2-piece pouch systems, one of the following options may be chosen:
  - The urostomy pouch is removed from the skin barrier flange (wafer), the specimen collected, and the pouch replaced.
  - The urostomy pouch system is completely removed, the specimen collected, and a new pouch system is placed.

Procedure When Catheter Is Available

Supplies

- Cleansing solution. Check institutional policy. Further research is needed on the use of antiseptic solutions versus sterile water or saline for cleaning prior to catheter insertion. Some of the solutions recommended are povidone-iodine, chlorhexidine, soap, and water.[8,9]
- Sterile 4 × 4 gauze.
- If a double catheter is not available, a straight catheter may be used. Faller and Lawrence[2] suggest the use of a 16Fr catheter to allow for mucous drainage.
- Sterile specimen container with lid, label, and laboratory bag.
- Sterile and clean gloves.
- New pouch system.
- Soft paper towels and/or wash cloths for cleaning prior to replacing pouch.

Procedure

1. Explain procedure to patient.
2. Wash hands and use standard precautions.
3. Don clean gloves.
4. Open the supplies, and maintain sterility.
5. Remove pouch and dispose per the institutional policy.
6. Wash hands.
7. Don sterile gloves.
8. Use sterile technique.
9. Cleanse the stoma with cleansing solution, using a circular motion from stoma opening outward.[2]
10. Blot the stoma with sterile gauze.
11. Place the open end of catheter into the specimen container.
12. If using a straight catheter, lubricate the catheter with a water-soluble lubricant. Gently insert the catheter tip no more than 2 to 3 inches (5.0-7.5 cm) into the stoma (never force—if resistance is detected, rotate catheter until it slides).[2,3]
    a. If using a double catheter, lubricate the catheter with a water-soluble lubricant. Gently insert the catheter tip into the stoma and advance the inner catheter approximately 1 to 2 inches (2.5-5.0 cm).[3]
13. Hold catheter in position until urine begins to drip. Collect approximately 5 to 10 mL of urine before removing catheter. Collecting a sufficient amount of urine may take 5 to 15 minutes.
14. Clean and dry the stoma and peristomal skin.
15. Discard supplies according to the institutional policy.

Procedure to Use If a Catheter Is Not Readily Available

Supplies

- Cleansing solution. Check the institutional policy. Further research is needed on the use of antiseptic solutions versus sterile water or saline for cleaning prior to catheter insertion. Some of the solutions recommended are povidone-iodine, chlorhexidine, soap, and water.[8,9]
- Sterile 4 × 4 gauze.
- Sterile specimen container with lid, label, and laboratory specimen bag.
- Sterile and clean gloves.
- Soft paper towels and/or wash cloths for cleaning prior to replacing pouch.
- New pouching system.

Procedure

1. Explain procedure to patient.
2. Wash hands and use standard precautions.
3. Don clean gloves.
4. Open the supplies, and maintain sterility.
5. Remove pouch, and dispose per the institutional policy
6. Wash hands.
7. Don sterile gloves.
8. Use sterile technique.
9. Cleanse the stoma with cleansing solution, using a circular motion from stoma opening outward.[2]
10. Blot the stoma with sterile gauze.
11. Discard the first few drops of urine by allowing urine to drip onto sterile gauze.
12. Hold the sterile specimen cup under the stoma. Collect approximately 5 to 10 mL of urine. Collecting a sufficient amount of urine may take 5 to 15 minutes.
13. Clean and dry the stoma and peristomal skin.
14. Discard supplies according to the institutional policy.

Aftercare

- Place a lid on the specimen container label: note on the label that the specimen is from a urostomy stoma, and put in a laboratory transport bag.
- Apply ostomy pouching system.
- Bring the specimen to lab within 1 hour. In the home care setting, if unable to deliver specimen in 1 hour, refrigerate the specimen and deliver within 24 hours.
- Document in the patient's record:
  - Procedure and observations.
  - Instructions given to the patient/caregiver.

■ ACKNOWLEDGMENT

This document was developed by the WOCN Society's Clinical Practice °Ostomy Committee between August and November 2011.

■ References

1. Turnbull GB. Ostomy statistics: the $64,000 question. *Ostomy Wound Manage*. 2003;49(6):22-23.
2. Faller NA, Lawrence KG. Obtaining a urine specimen from a conduit urostomy. *Am J Nurs*. 1994;94(1):37.
3. Hampton BG, Bryant RA. *Ostomies and Continent Diversions: Nursing Management*. 1st ed. St Louis, MO: Mosby; 1992.
4. Pagana KD, Pagana TJ. *Mosby's Diagnostic and Laboratory Test Reference*. 8th ed. St Louis, MO: Mosby Elsevier; 2007.
5. Spraggon E. The management of ileal conduit urinary diversions. *Continence UK*. 2008;2(1):17-28.
6. Wullt B, Agace W, Mansson W. Bladder, bowel and bugs—bacteriuria in patients with intestinal urinary diversion. *World J Urol*. 2004;22(3):186-195. doi:10.1007/s00345-004-0432-x
7. Schrier RW. *Diseases of the Kidney and Urinary Tract*. 8th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2007.
8. Gould C, Umscheid C, Agarwal R, Kuntz G, Pegues D. Guideline for prevention of catheter-associated urinary tract infections. http://www.cdc.gov/hicpac/cauti/001_cauti.html. Published 2009. Accessed November 9, 2011.
9. Unlu H, Sardan YC, Ulker S. Comparison of sampling methods for urine cultures. *J Nurs Sch*. 2007;39(4):325-329. doi:10.1111/j.1547-5069.2007.00188.x

CE Test Instructions:
- Read the article.
- The test for this CE activity can be taken online at www.NursingCenter.com/CE/JWOCN.
- If you prefer to mail in the test, print the enrollment form and mail it with payment to:Lippincott Williams & Wilkins CE Group 74 Brick Blvd., Bldg. 4, Suite 206 Brick, NJ 08723. You will receive your earned CE certificate in 4 to 6 weeks
- A passing score for this test is 13 correct answers.
- Need CE STAT? Visit www.nursingcenter.com for immediate results, other CE activities and your personalized CE planner tool.
- For questions or rush service options, contact Lippincott Williams & Wilkins: (800) 787-8985

Registration Deadline: June 30, 2015

Provider Accreditation:

LWW, publisher of the *Journal of Wound, Ostomy and Continence Nursing*, will award 2.0 contact hours for this continuing nursing education activity.

LWW is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This activity is also provider approved by the California Board of Registered Nursing, Provider Number CEP 11749 for 2.0 contact hours. Lippincott Williams & Wilkins is also an approved provider of continuing nursing education by the District of Columbia and Florida #50-1223.

Your certificate is valid in all states.

The ANCC's accreditation status of Lippincott Williams & Wilkins Department of Continuing Education refers only to its continuing nursing educational activities and does not imply Commission on Accreditation approval or endorsement of any commercial product.

LWW is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

Disclosure Statement: The authors and CE planners have disclosed that they have no financial relationships related to this article.

Payment and Discounts:
- The registration fee for this test is $21.95.
- If you take two or more tests in any nursing journal published by LWW and send in your CE enrollment forms together, you may deduct $0.95 from the price of each test.
- We offer special discounts for as few as six tests and institutional bulk discounts for multiple tests. Call (800) 787-8985 for more information.

DOI: 10.1097/WON.0b013e3182923e12

For more than 81 additional continuing education articles related to skin/wound care and 28 additional continuing education articles related to infection, go to NursingCenter.com\CE.