

Urinary diversion care



Urinary diversion care

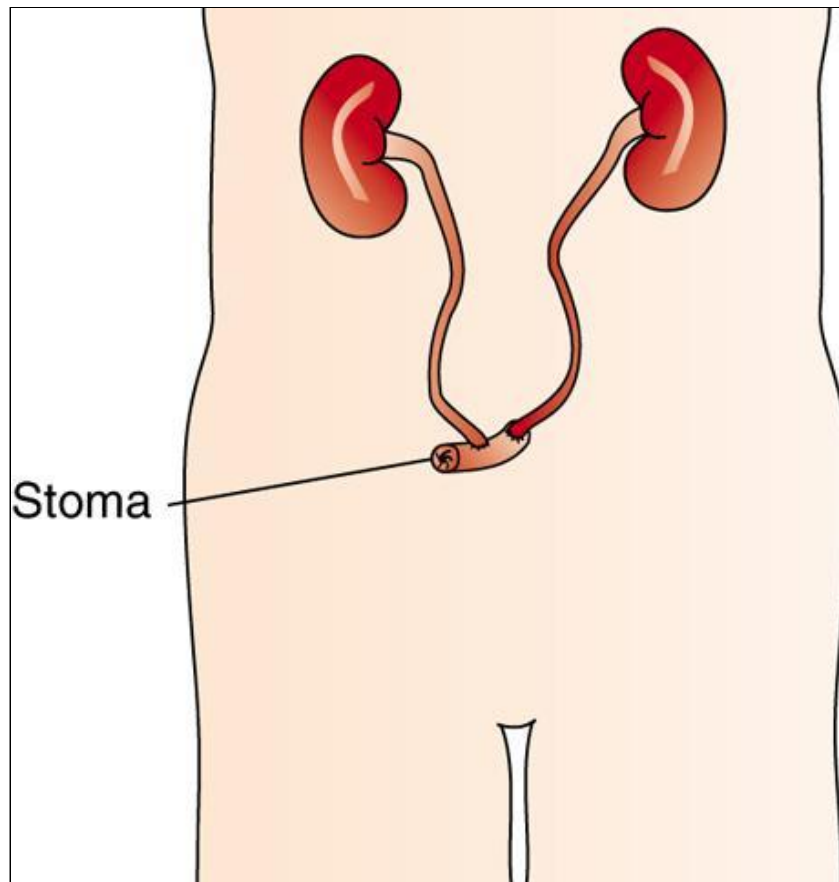
Revised: December 15, 2025

■ Introduction

A urinary diversion provides an alternative route for urine flow when a disorder impedes normal drainage, such as when a patient has an invasive bladder tumor.^[1] A permanent urinary diversion is indicated for any condition that requires a total cystectomy. For a condition that requires temporary urinary drainage or diversion, the practitioner typically inserts a suprapubic or urethral catheter to temporarily divert the urine flow, and the catheter remains in place until the incision heals. Urinary diversion may also be indicated for patients with neurogenic bladder, a congenital anomaly, a traumatic injury to the lower urinary tract, ureteral strictures, pelvic malignancy, or severe chronic urinary tract infection that causes severe ureteral and renal damage.^[1]

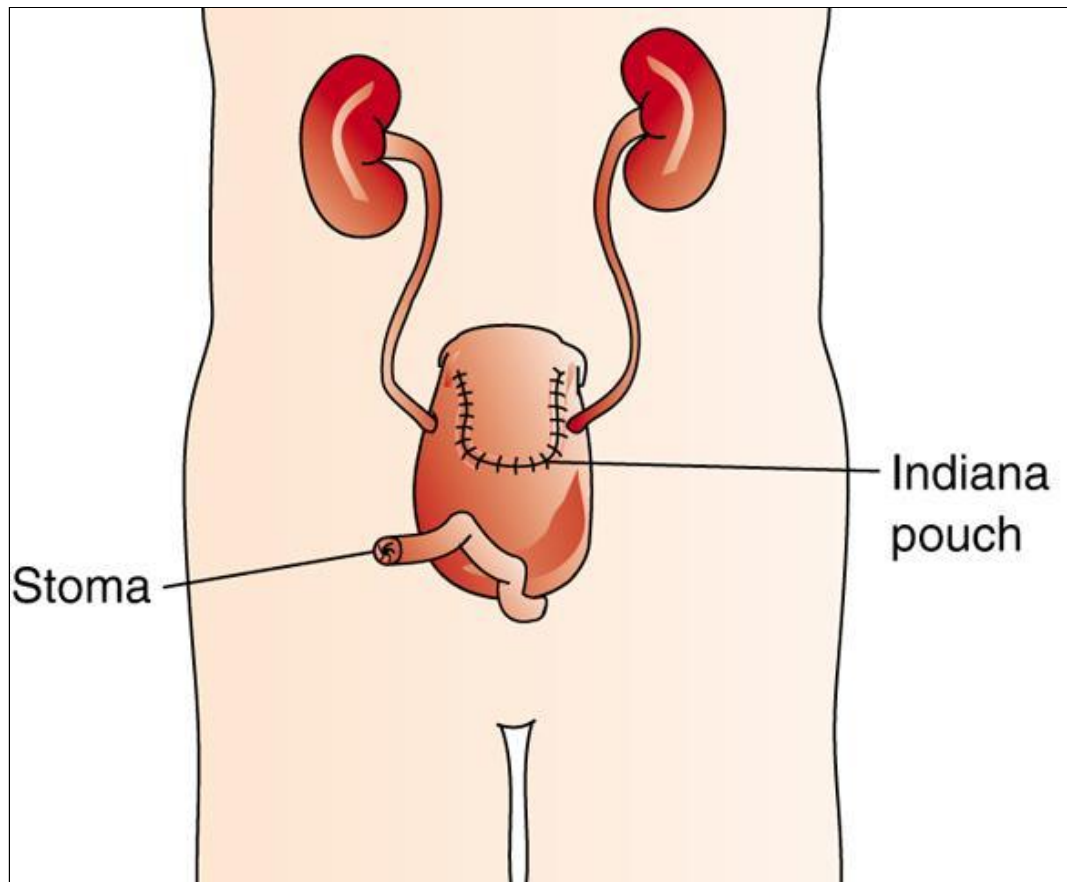
The two types of permanent urinary diversions with stomas are the ileal conduit and the continent urinary diversion.^[1] (See [Types of permanent urinary diversion](#).) These procedures usually require the patient to wear a urine-collection appliance and care for the newly created stoma. Evaluation by a wound, ostomy, continence nurse facilitates site selection and postoperative stoma care.

TYPES OF PERMANENT URINARY DIVERSION
The two types of permanent urinary diversion are the ileal conduit and the continent urinary diversion (Indiana pouch), both described below. Other types of catheterizable continent pouches include the Kock, Mainz, and Florida pouches.^[1] Another type of continent urinary diversion, the orthotopic neobladder, hooks back to the urethra, making a stoma unnecessary. Ileal conduit When creating an ileal conduit, the surgeon excises a segment of the ileum and then sutures closed the two ends of the ileum that result from excision of the segment. Then the surgeon dissects the ureters from the bladder and anastomoses them to the ileal segment. The surgeon then closes one end of the ileal segment with sutures and brings the opposite end through the abdominal wall, forming a stoma (as shown below).



Continent urinary diversion

When forming a continent urinary diversion (Indiana pouch), the surgeon introduces the ureters into a segment of the ileum and cecum (as shown below). The patient drains urine periodically by inserting a catheter into the stoma.



Equipment

- Absorbent, lint-free material for wicking (rolled gauze pad or tampon)
- Fluid-impermeable pad
- Gauze pads
- Gloves
- Graduated cylinder
- Pouching system (one-piece or two-piece, disposable or reusable, with a spout for ease of emptying) (See [Urinary diversion pouching systems.](#))
- Stoma measuring guide
- Warm water
- Washcloth
- Optional: disposable hair clippers, electric razor, marker or pen, mild soap (oil-, perfume-, and deodorant-free), ostomy barrier powder, other personal protective equipment, safety razor, scissors, shaving foam (with no moisturizers or perfumes)²



EQUIPMENT

URINARY DIVERSION POUCHING SYSTEMS

Disposable pouching system

Two types of disposable pouching systems exist: a one-piece, disposable system with a spout closure and a two-piece, disposable pouch with a skin barrier.

In the one-piece system, the transparent or opaque, odor-proof plastic pouch comes with an attached adhesive backing. Some pouches have microporous tape edges or belt tabs. The spout enables easy draining.

The two-piece, drainable, disposable pouch with a separate skin barrier permits more frequent pouch changes. Also made of transparent or opaque, odor-proof plastic, this style comes with belt tabs and usually snaps to the skin barrier with a flange mechanism. Newer two-piece pouches have adhesive coupling; the pouch sticks to the wafer, allowing greater flexibility and comfort.

Reusable pouching system

Typically manufactured from sturdy, opaque, hypoallergenic plastic, a reusable pouch comes with a separate, custom-made faceplate and O-ring. The device has a 1- to 3-month life span, depending on how frequently the patient empties it. Reusable equipment may benefit a patient who needs a firm faceplate, has a sensitivity to adhesive, or wishes to minimize costs.

■ Preparation of Equipment

Inspect all equipment and supplies. If a product is expired, is defective, or has compromised integrity, remove it from patient use, label it as expired or defective, and report the expiration or defect as directed by your facility.

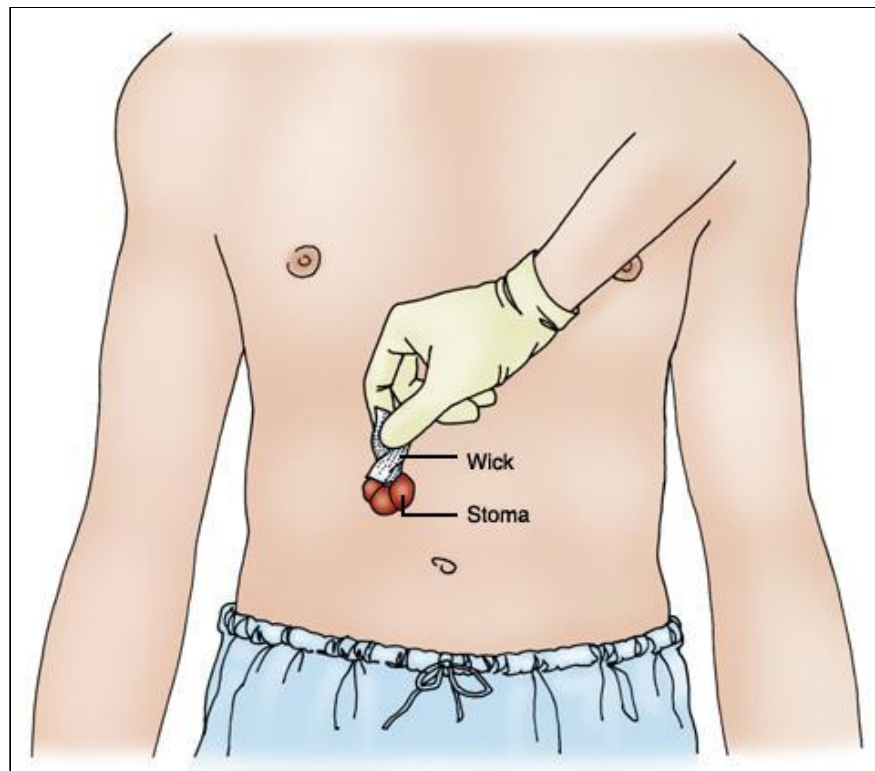
■ Implementation

- Gather and prepare the necessary equipment and supplies.
- Perform hand hygiene.^{[3][4][5][6][7][8]}
- Confirm the patient's identity using at least two patient identifiers.^[9]
- Provide privacy.^{[10][11][12][13]}
- Explain the procedure to the patient and family (if appropriate) according to their individual communication and learning needs *to increase their understanding, allay their fears, and enhance cooperation.*^[14] Offer constant reinforcement and reassurance *to counteract negative reactions that stoma care may elicit. The patient or a family member will eventually need to perform the procedure.*
- Raise the bed to waist level before providing care *to prevent caregiver back strain.*^[15]
- Perform hand hygiene.^{[3][4][5][6][7][8]}
- Position the patient in a low Fowler position *so that the patient's abdomen is flat. This position eliminates skinfolds that can cause the appliance to slip or irritate the skin and allows the patient to observe or participate.*
- Perform hand hygiene.^{[3][4][5][6][7][8]}
- Put on gloves and, as needed, other personal protective equipment *to comply with standard precautions.*^{[16][17][18]}
- Place a fluid-impermeable pad under the patient's side, near the stoma.
- Open the drain valve of the appliance you're replacing and empty the urine from the pouch into a graduated cylinder.
- Remove the appliance by loosening and lifting the edges of the pouch while pushing the skin back from the pouch, starting at the top of the pouch and working down to the bottom.^[2]
- If the appliance is disposable, discard it in an appropriate receptacle.^[18] If it's reusable, follow the manufacturer's cleaning instructions.
- *To prevent a constant flow of urine onto the skin while you're changing the appliance, wick urine with an absorbent, lint-free material.*^[1] (See [Wicking urine from a stoma.](#))

WICKING URINE FROM A STOMA

While changing a urinary diversion appliance, urine may constantly flow onto the patient's skin. To prevent this, wick urine from the stoma by doing the following:

Wick urine from the stoma using an absorbent, lint-free material (as shown below).



- Using warm water and a washcloth, carefully wash around the stoma.^[2] Note that you don't need to use soap to clean around the stoma. However, if the patient prefers that you use soap, use a mild one without oils, perfumes, or deodorants.^[2] Rinse the soap off the skin around the stoma thoroughly *because soap residue can cause skin irritation and prevent adherence of the skin barrier.*^[2]
- Dry the peristomal area thoroughly with a gauze pad *because moisture keeps the appliance from sticking.*^[2]

♦ **Clinical alert:** Don't use alcohol or other harsh chemicals to clean the skin around the stoma, *because they can irritate the skin.* Don't apply any powders or creams to the skin around the stoma, unless recommended by the wound, ostomy, continence nurse or practitioner, *because they can prevent the pouching system from adhering properly.*^[2] ♦

- If necessary, remove hair from the area by using clippers or shaving with an electric razor or a safety razor and then apply an ostomy skin barrier powder or mild soap and water. Always shave in the direction of hair growth and away from the stoma *to limit skin irritation and avoid injury to the stoma.* If you're using shaving foam, avoid moisturizers or perfumed foam *because they can irritate the skin and prevent the pouching system from adhering properly.* Rinse the skin thoroughly with water after shaving.^[2]
- Inspect the stoma *for proper healing and for signs of complications.* Check the color and appearance of the suture line and examine any moisture or drainage. Inspect the peristomal skin for redness, irritation, and intactness.
- If skin problems arise, consult a wound, ostomy, continence nurse, as necessary.
- For a pouch with an attached skin barrier (one-piece system), measure the stoma with the measuring guide. Select an opening size that matches the stoma.
- For an adhesive-backed pouch with a separate skin barrier (two-piece system), measure the stoma with the measuring guide and select the opening that matches the stoma. Trace the selected size opening onto the paper backing of the skin barrier's adhesive side. Cut out the opening using scissors. (If the pouch has precut openings, which can be handy for a round stoma, select an opening that's no more than 1/8" [3.2 mm] larger than the stoma. If the pouch comes without an opening, cut the hole 1/8" [3.2 mm] wider than the measured tracing.) Note that you can fit many pouching systems up to the stoma

edge without the risk of trauma to the stoma. The cut-to-fit system works best for an irregularly shaped stoma.

- Remove the material used for wicking urine and place it in an appropriate receptacle.^[18]
- When you're using a one-piece system, center it over the stoma, adhesive side down. Then gently press it to the skin.
- When you're using a two-piece system with a wafer, apply the wafer and then gently press the pouch opening onto the ring until it snaps into place.
- When you're using a two-piece system with an adhesive coupling device, line up the adhesive portion of the pouch with the "landing zone" of the wafer. Press together for adhesion. You can attach the pouches used in a two-piece system to the wafer before application if the patient is still experiencing incisional discomfort.
- Return the bed to the lowest position *to prevent falls and maintain the patient's safety*.^[19]
- Discard used supplies in appropriate receptacles.^[18]
- Remove and discard your gloves and, if worn, other personal protective equipment.^[18]
- Perform hand hygiene.^{[3] [4] [5] [6] [7] [8]}
- Put on gloves and, as needed, other personal protective equipment *to comply with standard precautions*.^[18]
- Clean and disinfect other reusable equipment according to the manufacturer's instructions *to prevent the spread of infection*.^{[20] [21]}
- Remove and discard your gloves and other personal protective equipment, if worn.^[18]
- Perform hand hygiene.^{[3] [4] [5] [6] [7] [8]}
- Document the procedure.^{[22] [23] [24] [25]}

■ Special Considerations

- If the patient has a continent urinary diversion, make sure that you know how to meet any special needs. (See [Caring for a patient with a continent urinary diversion](#).)



PATIENT TEACHING

CARING FOR A PATIENT WITH A CONTINENT URINARY DIVERSION

With a continent urinary diversion (an alternative to the traditional ileal conduit), a pouch created from the ascending colon and terminal ileum serves as a new bladder, which empties through a stoma. *To drain urine continuously*, the practitioner inserts several drains into this reconstructed bladder and leaves them in place for 3 to 6 weeks until the new stoma heals. The patient is discharged from the facility with the drains in place and must return to have them removed and to learn to catheterize the stoma.

First hospitalization care

- Immediately after surgery, monitor intake and output from each drain.^[1] Be alert for decreased output, *which may indicate that urine flow is obstructed*.
- Watch for common postoperative complications, such as infection and bleeding. Also watch for signs of urine leakage, which include increased abdominal distention and urine appearing around the drains or midline incision.
- Irrigate the drains, as ordered.
- Perform hand hygiene.^{[3] [4] [5] [6] [7] [8]}
- Put on gloves.^{[16] [17] [18]}
- Clean the area around the drains daily, first with an antiseptic swab and then with sterile water. Apply a dry, sterile dressing to the area. Use precut 4" × 4" (10- × 10-cm) drain dressings around each drain *to absorb leakage*.
- *To increase the patient's mobility and comfort*, connect the drains to a leg bag.

Second hospitalization or outpatient care

- After the practitioner removes the drains, teach the patient how to catheterize the stoma. (See the "[Intermittent \[straight\] urostomy catheter insertion](#)" procedure.)

Patient teaching

- Explain that the stoma commonly is edematous and swollen initially after surgery and that its size gradually decreases over 6 to 8 weeks.
- Teach the patient how to care for the drains and their insertion sites during the 3 to 6 weeks at home before their removal. Explain how to attach the drains to a leg bag. Also teach the patient how to recognize the signs and symptoms of infection and obstruction.
- After the practitioner removes the drains, teach the patient how to empty the pouch and establish a schedule. Initially, the patient should catheterize the stoma and empty the pouch every 2 to 3 hours. Later, the patient should catheterize every 4 hours while awake and irrigate the pouch each morning and evening if ordered. Instruct the patient to empty the pouch whenever a sensation of fullness occurs.
- A new, sterile single-use urinary catheter should be used every time that intermittent catheterization is performed.^[26]
- Provide a telephone number to call for assistance with acute problems or questions.
- Provide information on what to do when problems such as odor, urinary tract infection, and leakage occur.
- Explain that mucus is normal, but discuss what to do if a more-than-normal amount of mucus occurs.
- Explain that the stoma can bleed easily on contact.
- Discuss how the patient should manage the stoma while performing activities of daily living, such as bathing, dressing, traveling, working, engaging in hobbies, and engaging in sexual activity.^[27]

■ Patient Teaching

The patient or a family member can learn to care for a urinary diversion stoma at home. However, you must give special consideration to the patient's emotional adjustment to the stoma before you can expect the patient to maintain it properly. *To encourage a positive attitude*, help the patient get used to the idea of caring for the stoma and the appliance as though they're natural extensions of the patient. When teaching how to perform the procedure, give written instructions and provide positive reinforcement after the patient completes each step.^[1] Suggest that the patient perform the procedure in the morning when urine flows most slowly.

Arrange for a visiting nurse or a wound, ostomy, continence nurse to assist the patient at home. Tell the patient about ostomy support groups, the United Ostomy Associations of America, and the American Cancer Society. Members of these organizations routinely visit health care facilities to explain ostomy care and the types of appliances available and to help patients learn to function normally with a stoma.

Help the patient choose between disposable and reusable appliances by discussing the advantages and disadvantages of each type. Emphasize the importance of correct placement and of a well-fitted appliance *to prevent urine seepage onto the skin*. When positioned correctly, most appliances can remain in place for at least 3 days and up to 7 days if no leakage occurs.^[2] With the improved adhesives and pouches available, belts aren't always necessary.

Because urine flows constantly, it accumulates quickly and can become heavy (even heavier than stool). *To prevent the weight of the urine from loosening the seal around the stoma and separating the appliance from the skin*, tell the patient to empty the pouch through the drain valve when it's one-third to one-half full.^[2] Teach the patient sanitary and dietary measures that can protect the peristomal skin and control the odor that commonly results from alkaline urine, infection, and poor hygiene. Explain that generous fluid intake also helps reduce odor by diluting the urine. Instruct the patient to connect the appliance to a urine-collection container before going to sleep. *The continuous urine flow into the container during the night prevents urine from accumulating and stagnating in the appliance.*

Advise the patient to wash reusable appliances with soap and lukewarm water and then air-dry them thoroughly *to prevent brittleness*.

■ Complications

Complications associated with urinary diversion care may include:

- bleeding (especially likely with an ileal conduit)
- folliculitis
- hyperplastic skin around the stoma
- infection
- mechanical injury
- mucocutaneous separation
- pressure injuries
- reddened or excoriated peristomal skin
- skin stripping injuries.^[28]

■ Documentation

Documentation associated with urinary diversion care includes:

- appearance and color of the stoma
- whether the stoma is inverted, flush with the skin, or protruding
 - amount the stoma protrudes above the skin (the normal range is ½" to ¾" [1.3 to 2 cm])
- appearance and condition of the peristomal skin
 - redness or irritation
 - reports of itching or burning
 - nursing interventions performed
 - consultation with a wound, ostomy, continence nurse
- complications
 - date and time of practitioner notification
 - name of practitioner notified
 - prescribed interventions
 - response to those interventions
- teaching provided to the patient and family (if appropriate)
 - understanding of that teaching
 - return demonstrations to validate understanding
 - follow-up teaching needed.

This procedure has been reviewed by the Academy of Medical-Surgical Nurses.



■ Related Procedures

- [Urostomy care, home care](#)

■ Related UpToDate Patient Teaching Handouts

- [How to care for an ileal conduit](#)
- [Urinary diversion surgery](#)

■ References

([Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions](#))

1. Hinkle, J. L., et al. (2022). *Brunner & Suddarth's textbook of medical-surgical nursing* (15th ed.). Wolters Kluwer.
2. Wound, Ostomy, and Continence Nurses Society® (WOCN®). (2024). *Basic ostomy skin care: A guide for patients and health care workers*. Retrieved October 2025 from <https://www.ostomy.org/wp->

[content/uploads/2021/04/wocn_basic_ostomy_skin_care_2018.pdf](#) (Level VII)

3. The Joint Commission. (2025). Standard NPSG.07.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
4. Centers for Disease Control and Prevention. (2002). Guideline for hand hygiene in health-care settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. *MMWR Recommendations and Reports*, 51(RR-16), 1–45. Retrieved October 2025 from <https://www.cdc.gov/mmwr/pdf/rr/rr5116.pdf> (Level VII)
5. World Health Organization (WHO). (2009). *WHO guidelines on hand hygiene in health care: First global patient safety challenge, clean care is safer care*. Retrieved October 2025 from https://iris.who.int/bitstream/handle/10665/44102/9789241597906_eng.pdf (Level VII)
6. Accreditation Commission for Health Care. (2025). Standard 07.02.05. *Accreditation requirements for acute care hospitals* (Level VII)
7. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Infection prevention and control and antibiotic stewardship programs. 42 C.F.R. § 482.42.
8. DNV GL-Healthcare USA, Inc. (2024). IC.1.SR.3f. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)
9. The Joint Commission. (2025). Standard NPSG.01.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
10. The Joint Commission. (2025). Standard RI.01.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
11. DNV GL-Healthcare USA, Inc. (2024). PR.2.SR.5. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)
12. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Patient's rights. 42 C.F.R. § 482.13(c)(1).
13. Accreditation Commission for Health Care. (2025). Standard 15.01.07. *Accreditation requirements for acute care hospitals*. (Level VII)
14. The Joint Commission. (2025). Standard PC.02.01.21. *Comprehensive accreditation manual for hospitals*. (Level VII)
15. Waters, T. R., et al. (2009). *Safe patient handling training for schools of nursing*. Retrieved October 2025 from <https://www.cdc.gov/niosh/docs/2009-127/pdfs/2009-127.pdf> (Level VII)
16. Siegel, J. D., et al. (2007, revised 2024). *2007 guideline for isolation precautions: Preventing transmission of infectious agents in healthcare settings*. Retrieved October 2025 from <https://www.cdc.gov/infection-control/media/pdfs/Guideline-Isolation-H.pdf> (Level VII)
17. Accreditation Commission for Health Care. (2025). Standard 07.02.04. *Accreditation requirements for acute care hospitals*. (Level VII)
18. Occupational Safety and Health Administration. (2019). *Bloodborne pathogens, standard number 1910.1030*. Retrieved October 2025 from <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030> (Level VII)
19. Ganz, D. A., et al. (2013). *Preventing falls in hospitals: A toolkit for improving quality of care* (AHRQ Publication No. 13-0015-EF). Agency for Healthcare Research and Quality. Retrieved October 2025 from <https://www.ahrq.gov/sites/default/files/publications/files/fallpxtoolkit.pdf> (Level VII)
20. Accreditation Commission for Health Care. (2025). Standard 07.04.01. *Accreditation requirements for acute care hospitals*. (Level VII)
21. Rutala, W. A., et al. (2008, revised 2024). *Guideline for disinfection and sterilization in healthcare facilities, 2008*. Retrieved October 2025 from <https://www.cdc.gov/infection-control/media/pdfs/Guideline-Disinfection-H.pdf> (Level I)
22. The Joint Commission. (2025). Standard RC.01.03.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
23. Accreditation Commission for Health Care. (2025). Standard 10.00.03. *Accreditation requirements for acute care hospitals*. (Level VII)
24. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Medical record services. 42 C.F.R. § 482.24(b).
25. DNV GL-Healthcare USA, Inc. (2024). MR.2.SR.1. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)
26. Beauchemin, L., et al. (2018). Best practices for clean intermittent catheterization. *Nursing*, 48(9), 49–54. Retrieved October 2025

from https://journals.lww.com/nursing/Citation/2018/09000/Best_practices_for_clean_intermittent.14.aspx
[Abstract](#) | [Complete Reference](#)

27. National Institute of Diabetes and Digestive and Kidney Diseases. (2020). *Urinary diversion*. Retrieved October 2025 from <https://www.niddk.nih.gov/health-information/urologic-diseases/urinary-diversion>

28. Szymanski, K. M., et al. (2010). External stoma and peristomal complications following radical cystectomy and ileal conduit diversion: A systematic review. *Ostomy Wound Management*, 56(1), 28–35. Retrieved October 2025 from <https://www.o-wm.com/article/external-stoma-and-peristomal-complications-following-radical-cystectomy-and-ileal-conduit> (Level I)

■ **Additional References**

- Burgess-Stocks, J., et al. (2022). Ostomy and continent diversion patient bill of rights research validation of standards of care. *Journal of Wound, Ostomy and Continence Nursing*, 49(3), 251–260. Retrieved October 2025 from <https://doi.org/10.1097/WON.0000000000000876> (Level VII)
- Chesnut, G. T., et al. (2024). Urinary diversions and neobladders. *StatPearls*. Retrieved October 2025 from <https://www.ncbi.nlm.nih.gov/books/NBK560483/>
- Shariat, S. F., et al. (2024). Urinary diversion and reconstruction following cystectomy. In: *UpToDate*, Lerner, S. P., & Richie, J. P. (Eds.).
[UpToDate Full Text](#)

Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions

The following leveling system is adapted from *Evidence-Based practice in nursing & healthcare: A guide to best practice*, Fifth edition, by Bernadette Mazurek Melnyk and Ellen Fineout-Overholt (2023).

Level I	Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs)
Level II	Evidence from well-designed single RCTs (experimental)
Level III	Evidence from well-designed nonrandomized controlled trials (quasi-experimental), systematic reviews of a complete body of evidence, and intervention studies using mixed methods
Level IV	Evidence from well-designed case-control and cohort studies (observational)
Level V	Evidence from systematic reviews of qualitative and descriptive studies
Level VI	Evidence from single descriptive and qualitative studies, evidence-based practice implementation, and quality improvement projects
Level VII	Evidence from expert opinion, expert committee reports, and literature reviews

Data from Gyatt, G., & Rennie D. (2002). *Users' guides to the medical literature*. American Medical Association; Harris, R. P., et al. (2001). *Current methods of the U.S. Preventative Services Task Force: A review of the process*. *American Journal of Preventative Medicine*, 20, 21-35.