

Module 25 OSTOMY CARE

Unit 1 Types of Ostomies

OBJECTIVES

Upon completion of this unit, you should be able to

- Define essential terms related to ostomies.
- Identify various types of bowel and bladder diversions.
- Describe the type of effluent seen in the various ostomies, and implications for nursing care.

COMMENTS:

An ostomy, or stoma, is a temporary or permanent opening on the abdominal wall for drainage of feces or urine. A person who has an ostomy uses a plastic pouch (appliance) to cover the stoma and collect the stool (effluent) or urine.

Bowel diversion ostomies

Bowel diversion ostomies, or enterostomies, are often necessary for the patient with colorectal cancer, ulcerative colitis, Crohn's disease, diverticulitis, or polyposis. Ostomies may be permanent or temporary.

The permanent colostomy is usually **single-barreled** with one stoma opening on the abdominal surface. This is also known as an **end colostomy**. The diseased portion of colon is resected and the open (proximal) portion of the healthy colon is cuffed back on itself, thus exposing the mucous membrane. The resulting stoma is then sutured to the skin and should protrude approximately three-quarters of an inch.

The patient with colorectal cancer may require a permanent bowel diversion. On the other hand, the patient with inflammatory bowel disease (ulcerative colitis or Crohn's disease), may only need a temporary ostomy which allows the bowel a period of rest for healing purposes. If the bowel heals, the stoma is closed and bowel continuity is restored.

A temporary bowel diversion is typically either a **loop** or **double-barreled** ostomy. With the **loop ostomy**, a plastic rod is placed underneath the bowel loop that is brought to the outer abdominal wall. The rod is then sutured to the skin to prevent the bowel from slipping back into the abdomen. The loop ostomy is usually opened in the first days after surgery by the surgeon, using electric cautery.

The **double-barreled** ostomy has two stomas, one for the proximal bowel and the other for the distal portion of the bowel. The proximal stoma expels the stool, while the distal stoma usually only secretes mucous. (Colostomy irrigation is done through the proximal stoma to remove feces from the bowel.)

With bowel diversion ostomies, the location of the stoma determines the character and consistency of the stool that is passed. An **ileostomy** is an ostomy in the small intestine, whereby the entire large bowel is bypassed. Consequently, the stools are liquid, flow almost constantly, and contain corrosive digestive enzymes. The colostomy of the **ascending colon** has the same fecal characteristics as the ileostomy. The colostomy of the **transverse colon** usually results in a more solid, formed stool. The **sigmoid colostomy** emits stool that is usually formed and is eliminated at regular intervals like stool that is normally expelled through the rectum.

Ostomy management

Ostomy management depends to a great extent on the type and frequency of stool that is emitted. For the patient with an ileostomy, a bag or pouch must be worn constantly. A regular defecation schedule is not possible because usually the stool is continuously oozing. The bag must be emptied throughout the day. Skin care is essential to prevent exposure to the irritating effects of the stool, consequent breakdown of the peristomal skin.

A transverse colostomy may be difficult to manage as well, because the regularity of bowel movements is unpredictable. The person needs to wear a pouch at all times, although the stools may occur only three or four times daily.

The sigmoid colostomy, because of its anatomical location, can be managed more easily, and the bowel movement can be regulated and controlled. Routine irrigation of the colostomy allows the person to empty the bowel regularly and eliminates the need to wear a pouch. Some persons choose to wear a regular pouch or a “mini-pouch” for a feeling of security.

A new development in ostomy surgery is the creation of a continent ileostomy or Koch pouch. This is an intra-abdominal reservoir, made from the terminal ileum, which stores the effluent until drained by the patient. Because the pouch is continent, no external appliance needs to be worn. The patient learns to insert a catheter into the pouch periodically to empty the contents. This type of ostomy is especially good for a younger person opposed to the concept of a conventional ileostomy and ileostomy appliance.

Urinary ostomies

For the patient with a diseased or dysfunctional bladder, a stoma may be needed for urinary diversion. A **ureterostomy**, or urinary diversion, is a stoma on the outer abdominal wall for drainage of urine. Urinary diversion ostomies are often needed for

patients with bladder cancer, when the bladder has been surgically removed. Persons with birth defects or spinal cord injury may require urinary diversion.

The ureterostomy is created by bringing the end of one or both ureters to the abdominal surface. Transureterostomy may be done, where the ureters are connected together, and only one is brought out through the abdominal wall. This eliminates the need for two collection devices.

Another type of ureterostomy is the **ileal conduit**, where the ureters are implanted into the ileum (small bowel). This serves as an outlet for continuous drainage of urine. The colon (large bowel) can also be used for a conduit.

The person with a ureterostomy must wear a pouch at all times because there is no regulation of urine flow. Maintaining skin integrity is a major aspect of care for these persons.

Unit 1
Self-Test

MATCHING: Match the ostomy in Column A with the description in Column B

<u>Column A</u>	<u>Column B</u>
_____ 1. ileostomy	a. ureters are brought to the abdominal surface
_____ 2. ileal conduit	b. effluent is liquid and highly corrosive
_____ 3. sigmoid colostomy	c. stool can be regulated with irrigations
_____ 4. transverse colostomy	d. ureters are implanted into small bowel
_____ 5. ureterostomy	e. three or four BM's per day

Unit 2 Nursing Care of the Ostomy Patient

OBJECTIVES

Upon completion of this unit, you should be able to

- Identify the psychosocial implications of an ostomy.
- Describe peristomal skin care.
- Explain nutritional considerations for the person with an ostomy.
- Define colostomy irrigation.
- List aspects of care essential to discharge teaching.

COMMENTS

A person who has a stoma may require nursing assistance in several major areas:

- psychosocial factors
- stoma and skin care
- nutrition and bowel regulation
- the return to optimal health and well-being

Psychosocial factors

The person who has an ostomy often experiences a grief reaction toward the loss of a body part. There are significant changes in body image, especially if the ostomy is to be permanent. An ostomy may be perceived as a form of mutilation.

There may be concerns about self-concept, social acceptance, sexual activity, family responsibilities, and activities of daily living. Even though the ostomy pouch is concealed under clothing, the person often feels self-conscious.

Personal reaction to the sight and odor of fecal secretions greatly influences the individual's response to the ostomy. Foul-smelling odors, leakage of stool or urine, and the inability to regulate these processes give the person a sense of powerlessness and loss of self-esteem.

The nurse must be sensitive to both the physical and psychosocial needs of the ostomy patient in order to promote acceptance of the ostomy. As the patient develops an acceptance of the ostomy, he will be increasingly able to assume responsibility for the necessary care.

It is important to include the family and/or significant others in the care of the ostomy patient, as they are a major source of emotional support.

Skin and stoma care

The normal stoma is red, because it is highly vascular, and moist with a smooth surface like the inside of the mouth. The exposed surface is the innermost or mucosal layer of the gastrointestinal tract, which has no sensory nerve fibers. Although the stoma looks painful, it rarely is the cause of any discomfort to the patient.

Periostomal skin is normally intact and without erythema. Healthy skin resists bacterial invasions, but under certain conditions the normal resident flora, such as *Staphylococcus aureus* or *Candida albicans*, can become opportunistic and cause lesions.

Fecal material is irritating to the periostomal skin of the patient with a colostomy or ileostomy, especially ileal effluent which contains digestive enzymes. The periostomal skin should be assessed for irritation each time the appliance is changed. Any irritations or skin breakdowns need to be treated immediately. The skin is kept clean by washing off the effluent and drying the area thoroughly. To prevent the skin from coming into direct contact with any effluent, barrier is applied over the skin around the stoma. Fitting an appliance (bag) around the stoma should prevent any leakage. It is essential that the skin be dry before applying the appliance because the pouch will not adhere to moist skin and will cause effluent leakage on the skin and subsequent breakdown.

Nutrition

The diet for the ostomy patient is individualized and depends on various factors, including his/her previous dietary habits and general health status. The colostomy patient should be able to tolerate most foods and fluids, and should strive to eat a well-balanced diet. The nurse should encourage the patient not to restrict the diet, but rather to use discretion. Odor and gas-forming foods do not necessarily need to be restricted since today's ostomy appliances, when properly fitted, can accommodate the odor and filter the gas.

The patient with an ileostomy may encounter additional diet-related problems. Cellulose may accumulate and cause blockage near the stoma. Encouraging the patient to chew certain high fiber foods, or to avoid them if necessary, may prevent the occurrence of obstruction. Fluid and electrolyte imbalance may occur since ileostomy patients tend to lose excessive water and sodium through the ileal effluent. Patients need to be taught to respond to thirst and to recognize signs of fluid and electrolyte imbalance by ingesting a diet high in fluids, sodium, and potassium.

Bowel regulation

Some bowel regulation may be achieved by dietary means, but a more common method of regulation is the colostomy irrigation. The purpose of the irrigation is to stimulate the bowel at specific intervals; it is done for the patient's convenience. Irrigating is not suitable for all ostomy patients, but is commonly used for descending and sigmoid

colostomies. It is similar to an enema in that it distends the bowel sufficiently to stimulate peristalsis and promotes evacuation.

A colostomy does not permanently interfere with bowel peristalsis so it does not have to be irrigated to function. Some ostomy patients prefer an alternate method of colostomy care: the continual use of a drainable pouch emptied and changed as needed.

Patient teaching and discharge instruction

Educating the patient and/or family about ostomy care is usually the responsibility of the nurse. Many institutions employ enterostomal therapists, who are experts in ostomy care, and may provide much of the necessary teaching.

The patient should not be forced to learn to care for his/her ostomy, but rather, the nurse should be alert for cues that the patient is ready for learning. Teaching at the appropriate time can contribute to a smooth adjustment.

Prior to discharge from the hospital, the patient and/or a family member should be able to:

- identify all necessary equipment and supplies and where these can be obtained.
- perform skin and stoma care.
- change the ostomy appliance.
- state signs of complications and when to seek medical attention.
- discuss the importance of nutrition.
- identify ostomy groups, enterostomal therapists, home health agencies, suppliers.

The patient and family may benefit from contact with other ostomates. The United Ostomy Association has local chapters in many communities. The patient should be given the names and addresses of resources such as these.

Unit 2
Self-Test

1. The first step toward recovery for the ostomy patient is

2. A communication technique that is useful for the nurse in facilitating the patient's adjustment to his/her ostomy is

3. Identify at least two resources available for the ostomy patient.
 - a.
 - b.

4. Typical reactions to an ostomy may include a _____
reaction to a loss _____
and an alteration in _____.

5. The stoma rarely is painful because

6. _____ effluent is the most irritating to the peristomal skin because it contains _____.

7. Two methods of colostomy care are:
 - a.
 - b.

8. Fluid and electrolyte imbalance may occur in ileostomy patients because

Unit 3

Techniques of Ostomy Care

OBJECTIVES

Upon completion of this unit, you should be able to

- Describe the technique for changing an ostomy appliance.
- Discuss the procedure for colostomy irrigation.

COMMENTS:

An ostomy appliance or pouch is first applied to the stoma soon after surgery. The pouch serves to collect the effluent or urine and to protect the skin from the irritating drainage. A pouch or appliance should fit comfortably and create a seal around the stoma.

Pouching a “fresh” or newly created ostomy differs from pouching one that has been in place for weeks or months. The “fresh” stoma often appears edematous in the early postoperative period. There is usually a surgical incision in close proximity to the stoma. Thus, the pouch must be applied such that there is no constriction of the stoma or traumatization to the suture line. In the first days postoperatively, the pouch may need to be changed frequently due to the volume of drainage.

Once the surgical incision has healed, the ostomy appliance is changed as needed, usually every 4-6 days, and should not be done more than once a day. The appliance or pouch should be emptied when it is one-third to one-half full. The reason for this is that as the level of the effluent rises, the weight of the contents may loosen the faceplate (seal) of the appliance and separate from the skin, causing leakage of effluent and irritation of the peristomal skin.

Changing an ostomy appliance

Assessment. Prior to and during the procedure, the nurse should assess:

- the color of the stoma.
- the stoma for swelling.
- the peristomal skin for irritation and redness.
- the feces for amount, color, consistency, presence of blood or pus.
- the patient’s knowledge and understanding of ostomy care.

Acquire baseline data on the size and kind of stoma, the character of the effluent, and the condition of peristomal skin from the patient’s record to compare with present findings.

Planning. The nurse should assemble the following equipment:

- nonsterile gloves, to protect hands.
- a water-proof bag for the soiled appliance to minimize odor.
- cleaning materials, including tissues, warm water, wash cloth, towel, and in some cases, mild soap.
- gauze pad to cover the stoma.
- a skin barrier, in the form of a spray, disc, or sheet to protect the skin.
- measuring guide (stoma guidestrip) to measure the stoma.
- clamp.
- scissors if the appliance does not have a precut opening.
- adhesive with brush to apply it to the bag if needed.
- a deodorant for a non-odorproof colostomy bag.

Intervention. Changing an ostomy appliance is outlined in the following procedure:

1. Explain the procedure to the patient and/or family member.
2. Communicate acceptance and support of the patient.
3. Provide privacy, preferably in the bathroom, where the patient can learn to care for his/her ostomy as he/she would at home.
4. Assist the patient to a comfortable position, either sitting or lying, and expose only the stoma area.
5. Unfasten the belt and check the method of adhesion.
6. Empty the effluent in the pouch.
7. Remove the appliance, peeling the bag off slowly while holding the patient's skin taut.
8. Cleanse the peristomal skin and stoma with warm water and soap. (Check agency policy on use of soap since soap may be irritating to the skin.)
9. Dry the area thoroughly by patting with a towel. Rationale: Excessive rubbing may abrade the skin.
10. Place a piece of tissue or gauze pad over the stoma. Rationale: Any seepage from the stoma will be absorbed in the tissue or gauze pad.
11. Check the fit of the appliance. Measure the size of the guidestrip. The opening of the faceplate should be approximately 1/16" larger than the stoma. Rationale: Close fit of the barrier (faceplate) prevents contact of skin with effluent.

12. Prepare and apply the skin barrier which may be in the form of a disc or sheet such as Stomahesive, a spray, or liquid such as Skin Prep, or a karaya product. Refer to the manufacturer's instructions for a specific produce.
13. Discard or cleanse the bag. Measure the effluent if ordered.
14. Wash soiled belt with warm water and mild soap, rinse, and dry.
15. Remove and discard gloves; wash hands.
16. Document in patient's record.
 - condition of stoma and peristomal skin
 - patient's response
 - amount, color, and consistency of drainage

Evaluation: Expected outcomes of the procedure include:

- stoma of a healthy color
- normal peristomal skin without signs of redness or irritation
- the appliance fits snugly and allows no leakage
- patient participation is at the appropriate level

Note: In pouching a ureterostomy or ileal conduit, the same principles apply.

Colostomy irrigation

The purpose of colostomy irrigation is to empty the colon; it is used to manage bowel elimination so that the patient has some control over his defecation. Persons who perform colostomy irrigations at home can learn to establish an irrigation schedule so that the bowel is emptied and there is no stomal discharge between irrigations.

To manage bowel elimination, the colostomy irrigation should be done at the same time each day. It may take several weeks after surgery for effective bowel regulation to occur.

Assessment. Prior to performing colostomy irrigation, the nurse should assess:

- the frequency of defecation and the character of stool.
- the time that the patient usually irrigates the colostomy.
- bowel sounds by auscultation.
- abdominal distention by palpation.
- the patient's understanding of the procedure and ability to perform the irrigation.

The nurse should also check the physician's orders about when the irrigations can begin, the solution to be used, which stoma(s) should be irrigated, and whether dilation is necessary.

Planning. The nurse should assemble the following equipment (refer to Figure 1):

- moisture-resistant bag for soiled dressings.
- clean colostomy appliance and/or dressings.
- irrigation equipment including the solution bag, tubing with clamp or regulator, catheter or cone, drainage sleeve with belt.
- lubricant.
- clean gloves to protect hands and/or to dilate stoma.
- bath blanket.
- IV pole to suspend solution bag.
- bedpan if patient is to remain in bed.

Figure 1
Colostomy Irrigation Equipment

Intervention. Irrigating the colostomy is done using the following procedures:

1. Wash hands and don gloves. Explain procedure and purpose to patient. Explain that the procedure will take approximately an hour and should be done at a regular and convenient time.
2. If the patient is ambulatory, assist her/him to the bathroom; if she/he is to remain in bed, assist her/him to side-lying or high-Fowler's position and place bedpan on top of a disposable pad near the stoma.
3. Drape patient to prevent exposure and move linen and gown out of the way to protect from soiling.
4. Fill bag with 500 or 1000ml of body temperature tap water.
5. Hang solution container on IV pole with the bottom of the container level with the patient's shoulder or 12-18 inches above the stoma.
6. Attach colon catheter or cone to the tubing and open the regulator clamp. Run fluid through tubing to expel air.
7. Remove soiled colostomy bag and dispose in a moisture-resistant bag.
8. Center the irrigation sleeve over the stoma and attach snugly with the belt to prevent seepage of irrigating fluid. Place the bottom end in bedpan or toilet.
9. Dilate the stoma (if ordered by the physician):
 - a. Don glove and lubricate smallest finger with water soluble jelly or stoma lubricant.
 - b. Gently insert finger into the stoma using a rotating, massaging motion.
 - c. Using the next two larger fingers, repeat the motion until maximum dilation is achieved. Rationale: Stoma dilation stretches and relaxes the stomal sphincter and allows the nurse to assess the direction of the proximal colon before irrigating.
10. Lubricate the tip of the cone or catheter to ease insertion and prevent injury to the stoma.
11. Using a rotating motion, insert the catheter or cone through the opening in the top of the drainage sleeve and gently insert into the stoma. Insert catheter only about 3 inches—insert a stoma cone until it fits snugly. A stoma cone may be the irrigator of choice because it reduces the risk of perforating the bowel by limiting the depth of insertion. Do not apply force at any time.

12. Open tubing clamp and allow fluid to flow into bowel. For first irrigation, instill 300-500 ml. For routine irrigation, instill 500-1000 ml. over 15 minutes. If cramping occurs, stop or slow the flow until cramps subside. Lowering the solution bag will lessen the force of flow. Rationale: Fluid that is too cold or administered too rapidly may cause cramping. Use the least amount of water necessary to stimulate bowel; more water means a longer irrigation time.
13. After the fluid is instilled, the nurse clamps the catheter and removes the tip, or in some cases, leaves it in place 10-15 minutes. Clamp the bottom of the irrigation sleeve and wait 30 minutes for the solution and feces to be expelled.
14. Massage the abdomen if the patient must remain in bed, or move the patient about for 30 minutes if ambulatory, to facilitate peristalsis and aid complete emptying of irrigating fluid and feces.
15. Empty irrigating sleeve into bedpan or stool.
16. Clean and dry peristomal area thoroughly.
17. Apply colostomy appliance and deodorant as needed. The type of appliance depends on the location of the ostomy and the degree of regulation. A well-regulated descending or sigmoid colostomy may not need an appliance or may need only a closed-end drainage pouch or stoma cap. Any colostomy that is not regulated and an ileostomy will require an open-ended drainable pouch. It can be emptied as needed and may be worn for several days without being changed as long as leakage does not occur around the stoma.
18. Remove gloves and wash hands.
19. Document in patient's record:
 - the volume and character of fecal material that returns after irrigation.
 - the patient's response to the procedure.

Evaluation. Expected outcomes of the procedure include:

- feces completely evacuated through the stoma.
- entire amount of irrigation solution expelled.
- abdomen less distended or without distention.
- bowel sounds normal.
- patient participation is at appropriate level.
- progress toward bowel regulation is achieved.

Bibliography

Perry, A. & Potter, P. (2002). Clinical nursing skills & techniques. (5th ed.). St. Louis: Mosby.

Potter, P. & Perry, A. (2001). Fundamentals of nursing. (5th ed.). St. Louis: Mosby.

Lewis, S., HeitKemper, M. & Dirksen, S. (2004). Medical-surgical nursing: Assessment and management of clinical problems. (6th ed.). St. Louis: Mosby.

Unit 3
Self-Test

1. Name at least five things the nurse must assess before beginning a colostomy irrigation.
 - a.
 - b.
 - c.
 - d.
 - e.

2. What complication is avoided with the use of the irrigating cone?

3. The irrigating solution bag should be at the level of the patient's _____ or _____ inches above the stoma.

4. Stoma dilation accomplishes two things:
 - a.
 - b.

5. Two outcomes the nurse would not want to observe following the irrigation procedure would be:
 - a.
 - b.

Module 25
Answers to Self-Test

- Unit 1
1. b
 2. d
 3. c
 4. e
 5. a
- Unit 2
1. acceptance of ostomy
 2. active listening
 3.
 - a. family members
 - b. other ostomates
 - c. ostomy clubs
 4. grief, of a body part, body image
 5. mucosal layer of GI tract has no sensory nerve fibers
 6. Ileal, high gastric enzyme content
 7.
 - a. irrigating the colostomy
 - b. continual use of a drainable pouch
 8. they have no functioning bowel to reabsorb sodium and water
- Unit 3
1.
 - a. bowel sounds
 - b. abdominal distention
 - c. stoma
 - d. peristomal skin
 - e. feces
 2. trauma to bowel
 3. shoulder 12-18
 4.
 - a. relaxes and stretches sphincter
 - b. determines direction of proximal bowel
 5.
 - a. partial emptying if feces or solution
 - b. abdominal distention