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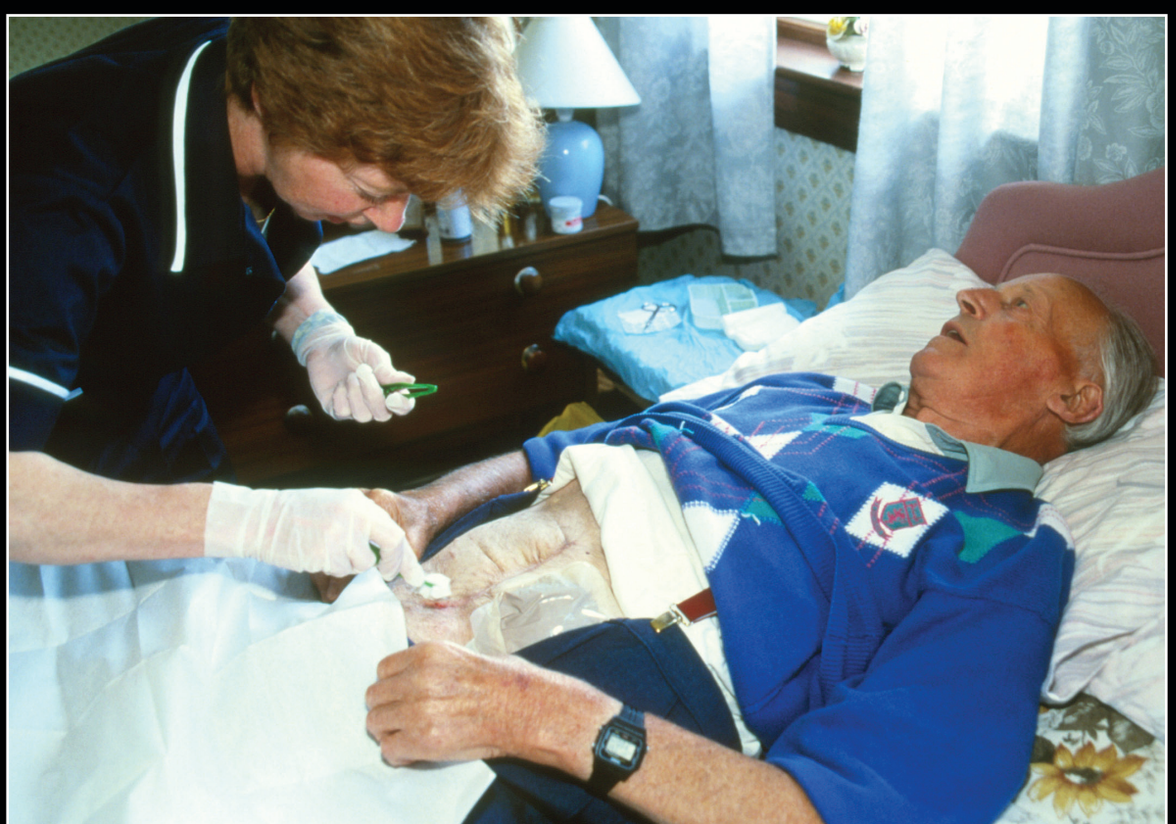
Fecal Ostomies

Practical Management for the Home Health Clinician



OSTOMY CREATION IS A COMMON SURGICAL PROCEDURE that affects more than 120,000 individuals annually in the United States. Ostomy patients require lifelong specialized support and care directed toward improving their health status, promoting self-care, and facilitating long-term adjustment. Home health clinicians are responsible for the assessment and management of the complex needs of the ostomy patient and must be able to identify and appropriately intervene when complications arise. This article will provide the home health clinician with an overview of fecal ostomy care and management, and review the role of the clinician in the management of the patient.

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Research has shown that there are over 800,000 individuals with an ostomy in North America and an additional 120,000 individuals who undergo fecal diversion annually in the United States (Pittman et al., 2008). Overwhelming evidence suggests that 43% to 70% of patients will experience complications that are associated with increased healthcare costs, poor resource utilization, and diminished quality of life (Ratliff, 2010). With the average length of stay for an uncomplicated fecal diversion in the acute care setting reduced from 14 days to 4.5 days, home health clinicians must be able to effectively assess the postoperative patient, provide appropriate nursing interventions and product recommendations, and promote patient self-care through patient education (Colwell et al., 2004). Skilled care for a patient with a fecal diversion is reasonable and necessary to perform observation and assessment, provide complex management strategies, and teach and train the patient and caregiver in self-care tasks. This article will provide the home health clinician with an overview of ostomy care and management and review the role of the clinician in the management of the patient.

Pathophysiology and Reasons for a Fecal Ostomy

The gastrointestinal (GI) tract is composed of multiple, complex organs that (1) promote GI motility, (2) secrete digestive enzymes, (3) digest and absorb nutrients, (4) prepare unabsorbed particles for elimination, and (5) assist in fluid and electrolyte balance (Colwell et al., 2004). While all of the organs function cohesively, the small and large intestines are involved with fecal diversions. The small intestine consists of the (1) duodenum, (2) jejunum, and (3) ileum and functions primarily in digestion and absorption of vitamins, minerals, nutrients, fluids, electrolytes, and some medications. This is clinically relevant because the ileostomy patient may be at risk for impaired nutrition, poor medication absorption, dehydration, and electrolyte imbalances that must be considered during medication reconciliation (Colwell et al., 2004). The large intestine includes the ascending colon, transverse colon, descending colon, sigmoid colon, rectum, and anal canal and is responsible for the transport, storage, and elimination of fecal material. The main function of the colon is to reabsorb fluid that is evident in the formed stools evacuated from a sigmoid colostomy.

Surgical Intervention

Fecal diversions result in an ostomy with a bowel stoma. A stoma is the end of a ureter or bowel segment that has been brought through the abdominal wall. An ostomy is a surgical opening made into the body for the purpose of draining body fluids and wastes. Fecal diversions are determined by the amount and/or location of the bowel involved. Diversions are performed proximal to the diseased bowel. A colostomy is a diversion of the colon, whereas an ileostomy is a diversion of the ileum or small intestine (Colwell et al., 2004). A colostomy will have a larger stoma when compared with an ileostomy because the portion of the bowel used during creation is larger. Likewise, colostomies are usually located in the left lower abdominal quadrant, whereas an ileostomy is placed in the right lower quadrant (Colwell et al., 2004). Ileostomies are created when the patient's colon is incapable of processing wastes and are less common than colostomies. Furthermore, location and type of ostomy will influence stomal output, consistency, and appliance selection. Ostomies may be constructed for the management of gastrointestinal malignancies, inflammatory bowel disease such as Crohn disease or ulcerative colitis, inherited disorders such as familial polyposis, or trauma. Fecal diversions may be temporary to allow for healing of surgical anastomosis or bowel rest or permanent such as in the case of rectal cancer with abdominal-perineal resection (Husain & Cataldo, 2008). Fecal diversions are often temporary and able to undergo revision within 9 months of initial placement (Colwell et al., 2004). Continent fecal diversions may be an alternative for some patients; however, this article will only address the care and management of incontinent fecal diversions.

Assessment

Early complications that occur in the immediate postoperative period influence care and impact the quality of life of the patient. Proficient assessment skills, early recognition of signs and symptoms, and prompt intervention are essential to the care of the patient. Likewise, product selection is dependent upon a thorough clinical assessment, which includes:

- stoma characteristics
- stoma location
- stoma construction

- stoma function
- peristomal skin integrity
- peristomal plane characteristics
- patient preferences

Stomal Characteristics and Location

Documentation of stomal characteristics should include the (1) appearance of the mucosa, (2) protrusion, (3) anatomic location, (4) size and shape, (5) and lumen, all of which influence product selection (Colwell et al., 2004). During the postoperative period, a stoma should have a red, moist, shiny appearance. Any deviation would warrant an immediate physician consultation. Protrusion of the stoma should be assessed and documented in the clinical record as flush, budded, or long. Flush stomas open below skin level and increase the risk of peristomal skin irritation due to inadequate appliance seal (Butler, 2009). Long stomas can be offensive to the patient and are at an increased risk for trauma during appliance application. In addition, the anatomical position is important in the assessment of the ostomy and will provide information regarding the amount, consistency, and frequency of the output. These data are used to select the type of skin barrier and pouching system. Ileostomies will produce high-volume liquid output, whereas colostomies tend to function one to two times daily with a soft formed consistency. Colostomy patients may be able to regulate stool through the use of irrigation if their bowel patterns stabilize and they have a sigmoid colostomy (Colwell et al., 2004). Also of importance is the size and shape of the stoma, which will influence the type of skin barrier that is used. Stomas can range from oval to round, which is influenced by peristalsis. Round stomas benefit from precut wafers, whereas oval stomas often require cut-to-fit or moldable wafers. The location of the lumen will determine the direction of the effluent. A lumen at skin level may cause problems with leakage and pouch seal, whereas a straight lumen will allow stool to evacuate into the appliance.

Stoma Construction

The ostomy appliance is chosen based upon stoma construction. An end stoma is created by a division of the bowel in which the proximal bowel is brought through the abdomen, everted, and sutured in place (Colwell et al. 2004). The distal bowel may be removed or left in place (Hartmann's pouch). End colostomies are often permanent diversions, but may be used on a temporary basis when the goal is to protect the distal anastomosis. A loop stoma is created by bringing the bowel through the abdomen, supporting the bowel with a rod, and making a transverse incision in the everted bowel (Colwell et al., 2004). Loop ostomies are temporary diversions. A double-barrel stoma is created when the intestine is resected and both ends of the bowel are brought through the abdominal wall. The proximal bowel will evacuate stool and the distal bowel; the mucous fistula will evacuate mucus. The distal bowel is nonfunctioning other than the periodic release of mucus and can be managed with a dry dressing while the proximal bowel is pouched (WOCN, 2005).

Stoma Function

Effluent, or output, should be assessed for amount, consistency, and appearance (Butler, 2009). The function of the stoma is dependent upon the location of the stoma. For example, ileostomy patients will have high-functioning stomas with loose effluent due to the inability to reabsorb fluid that is achieved in the large intestine. The colostomy patient will have a stoma that functions more closely to that of a patient who does not require diversion. Likewise, the amount of effluent for both ileostomies and colostomies can be influenced by oral intake, medications, and activity. A patient with a frequent large volume output will need a drainable pouch and extended wear barrier instead of a closed-end pouch. Flatus is a concern for both ileostomy and colostomy patients. Flatus in patients with ileostomies results from ingested air, and activities that increase this risk such as gum chewing or drinking from a straw should be avoided. Dietary patterns such as increased consumption of asparagus, cabbage, dairy, and carbonated beverages often result in excess flatus in colostomy patients and should be used in moderation.

Peristomal Skin Integrity

The peristomal skin should be intact (Ratliff, 2010). If an alteration in skin integrity is observed, then an assessment of the clinical features should elicit the contributing factors. Common peristomal skin complications such as contact dermatitis, folliculitis, fungal infections, hyperplasia, or

mechanical injury can impact the selection of the wafer and skin care products (WOCN, 2005).

Peristomal Plane Characteristics

The peristomal plane is the surface area surrounding the stoma, which lies under the skin barrier and extends 4 inches around the stoma (Colwell et al., 2004). The plane should be assessed for the presence of skin folds, incisions, or creases, which could disrupt the pouching system. The texture of the skin should be assessed because an excessively firm or soft abdomen will affect appliance selection.

Patient Preferences

The clinician should consider the patient's preferences when selecting an ostomy appliance. Most patients will need a standard cut-to-fit wafer with transparent two-piece system during the initial postoperative period to allow for swelling and frequent stomal assessment (Butler, 2009). Moreover, the clinician should assess the dexterity, vision, hearing, and cognitive abilities of the patient and consider any deficits when making product selections (Colwell et al., 2004). Other considerations such as the patient's cultural aspects, occupation, and insurance can also influence product selection. Often patients use a "trial and error" approach to facilitate the selection of products that best meet their needs. Certified Wound, Ostomy, and Continence Nurses (CWOCN) are a great resource for product recommendations for home health patients.

Complications

Existing research identifies common complications experienced in the postoperative period, primarily in the first 2 years after surgery (Husain & Cataldo, 2008). However, prevalence rates vary as a result of lacking, validated and reliable studies due to inadequate tracking and reporting. Pittman et al. (2008) conducted a cross-sectional study and, in doing so, identified complications as early or late. Early complications occur during the first 6 to 10 weeks during which the patient is transitioning through a period of physiologic adjustment to the ostomy (Husain & Cataldo, 2008). Early complications often require immediate correction, whereas later complications may be treated conservatively. Late complications, complications that occur after the adjustment period, were found to occur during the first 6 months in 93% of patients (Husain & Cataldo, 2008). Complications can be further identified as peristomal complications (involving the skin around the stoma) or stomal complications.

Peristomal Complications

Colwell and Beitz (2007) reported that between 18% to 55% of patients experience some skin irritation postoperatively. Contact dermatitis is a reaction or inflammation of the skin caused by prolonged chemical contact or exposure to an allergen (WOCN, 2007). Although more common in ileostomy patients due to enzymatic stools, colostomy patients do experience dermatitis. Irritant dermatitis, represented in Figure 1, will produce a well-defined, erythematic rash with edema and loss of the epidermal layer, whereas allergic dermatitis often corresponds to the shape of the contact surface (WOCN, 2007). Peristomal allergic contact dermatitis refers to a hypersensitivity and inflammatory reaction with exposure to chemical irritants (Colwell et al., 2004). Other complications described in the literature that occur less frequently include folliculitis (inflammation of a hair follicle presenting as isolated pustules, papules, pruritus, and erythema at the hair follicle), fungal infections (a rash with an area of solid discoloration, extrafollicular papules or pustules, maceration, and satellite lesions caused by an overgrowth of skin flora), and mechanical injury.

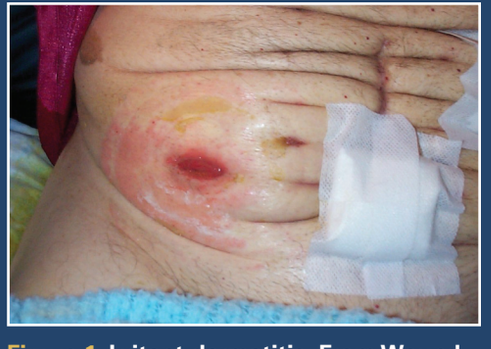

Figure 1. Irritant dermatitis. From Wound, Ostomy, Continence Nurses Society [WOCN]. (n.d.) Irritant dermatitis. *WOCN Image Library*. Retrieved from http://images.wocn.org/photos/18/fullsize.jpg. Reprinted with permission.

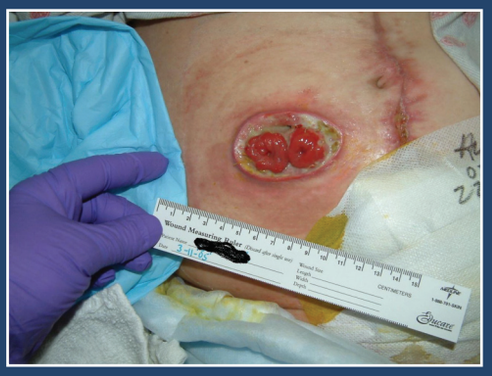

Figure 2. Mucocutaneous separation. From Wound, Ostomy, Continence Nurses Society [WOCN]. (n.d.) Mucocutaneous separation. *WOCN Image Library*. Retrieved from http://images.wocn.org/photos/25/fullsize.jpg. Reprinted with permission.

Stomal Complications

Stomal complications are more difficult to manage than peristomal complications and may require additional surgery or intervention. The effects of stomal complications can range from inconvenient to life-threatening and must be promptly identified and corrected. The literature lists the seven most common stomal complications as:

1. Hernia
2. Laceration
3. Mucocutaneous separation
4. Necrosis
5. Prolapse
6. Retraction
7. Stenosis

Hernia

A parastomal hernia is a protrusion of the intestine through the weakened abdominal muscles around the stoma (WOCN, 2010). They are more common in colostomies and usually appear within the first 2 years after surgery. Research has identified contributing factors with an emphasis placed on obesity and poor placement while other factors such as a large fascial opening, poor muscle tone, and infection increase the risk of herniation (WOCN, 2005). If left untreated, patients can experience bowel incarceration, inadequate seal, bowel obstruction, perforation, and irritation. A parastomal hernia presents as a noticeable partial or circumferential bulge around the stoma, which may reduce when the patient is supine, and increase in size with movement (WOCN, 2005).

Laceration

Visible bleeding is frequently caused by local trauma and lacerations. A laceration may occur as a result of improper pouching or mechanical trauma. Factors contributing to the development of a laceration could include misalignment of the pouching system, poor fitting of the appliance, parastomal hernia, or prolapse (WOCN, 2005). With a laceration, the stoma mucosa presents with a yellow or white linear discoloration with or without bleeding. Many lacerations heal spontaneously without additional complications.

Mucocutaneous Separation

A mucocutaneous separation occurs when the stoma separates from the skin at the mucocutaneous junction. Mucocutaneous separations, as seen in Figure 2, can be shallow or deep with an obvious separation between the stoma and the skin. Induration at the junction may precede a separation. Separations are seen in patients with compromised wound healing, such as patients with abdominal radiation, diabetes, infection, malnutrition, and long-term, high-dose corticosteroid use (WOCN, 2005). Literature does report that excessive tension on the suture line can result in spontaneous separation (WOCN, 2007). If left untreated, the separation can result in infection, peritonitis, and/or stomal stenosis.

Stoma Necrosis

Necrosis occurs when blood flow to a stoma is interrupted (WOCN, 2005). Contributing factors include (1) excessive edema, (2) embolus, (3) obesity, (4) extensive stripping or tension on the mesentery, (5) hypovolemia, or (6) tight sutures (Butler, 2009; WOCN, 2010). A necrotic stoma may appear dark red, dusky blue, purple, brown, or black with a hard and dry mucosa. Necrosis can involve the superficial tissue or extend beyond the fascia level and is more likely to occur within the first 5 postoperative days (Butler, 2009).

Prolapse

A prolapse is a complication that occurs when the length of the stoma extends due to a telescoping of the bowel through the stoma (Butler,

2009; Husain & Cataldo, 2008). It is more common with loop colostomies, but can occur in end stomas. Patients at risk for stomal prolapse include patients with (1) a large abdominal wall opening, (2) inadequate fixation of the bowel to the abdominal wall during surgery, (3) increased abdominal pressure, (4) lack of fascial support, (5) obesity, (6) pregnancy, and (7) weak muscle tone (Colwell & Fischera, 2005; WOCN, 2010). A prolapsed stoma appears edematous with a noticeable increase in size and length and is clearly represented in Figure 3.

Retraction

Retraction can occur as an early or late complication, but is mostly seen after the acute creation (Husain & Cataldo, 2008). Retraction occurs when the stoma falls below the level of the skin. It may involve the entire stoma or it may be limited to the junction. It has been linked to (1) Crohn disease, (2) infections, (3) necrosis, (4) premature removal of supporting device, (5) poorly placed stoma, (6) and tension due to adhesions, excessive weight gain, or thickened abdominal wall (WOCN, 2005). Likewise, it is commonly seen in patients with a mucocutaneous separation. Patients often experience skin irritation, stomal stenosis, and leakage when retraction is present. A retraction presents as a concave defect on the abdomen (WOCN, 2005).

Stenosis

Stomal stenosis occurs when the stoma narrows or contracts. Stenosis may occur with stoma retraction, as seen in Figure 4. The reported incidence of stenosis is up to 14% (Husain & Cataldo, 2008). It is associated with (1) hyperplasia, (2) adhesions, (3) inadequate excision of the skin, (4) inadequate suturing, (5) sepsis, (6) prior irradiation of the bowel, (7) recurrent disease, (8) necrosis, and (9) retraction (WOCN, 2005). Patients experience impaired effluent flow and are at risk for stoma obstruction. Partial or complete stoma obstruction will require surgical intervention. Signs of fecal stoma obstruction include (1) abdominal cramping, (2) diarrhea, (3) excessive flatus, (4) explosive stool, and (5) ribbon-like stool consistency.

Management

Management of peristomal and stomal complications is dependent upon the underlying etiology.

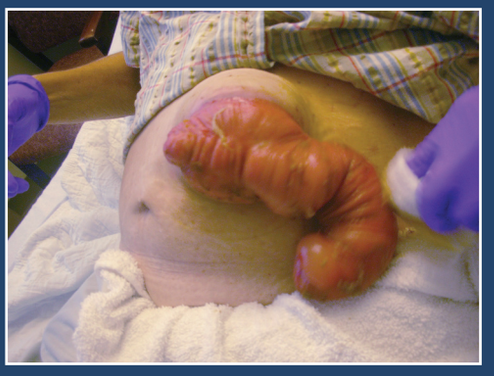

Figure 3. Prolapsed stoma. From Wound, Ostomy, Continence Nurses Society [WOCN]. (n.d.). Prolapsed stoma. *WOCN Image Library*. Retrieved from http://images.wocn.org/photos/17/fullsize.jpg. Reprinted with permission.

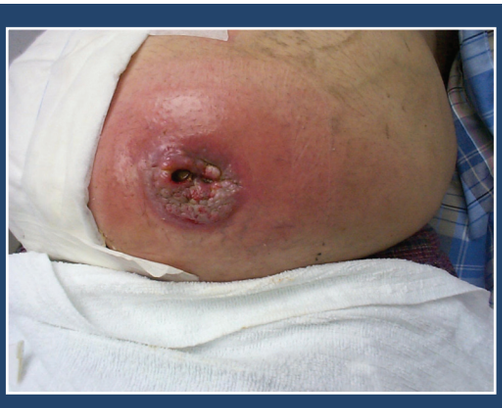

Figure 4. Retraction-stenosed stoma. From Wound, Ostomy, Continence Nurses Society [WOCN]. (n.d.). Retraction-stenosed stoma. *WOCN Image Library*. Retrieved from http://images.wocn.org/photos/5/fullsize.jpg. Reprinted with permission.

Appropriate product selection aids in the prevention of complications. Adequate skin care is necessary to prevent peristomal complications, while prompt intervention and product adjustment is needed for stomal complications. Table 1 provides an overview of the assessment and management of complications.

Skin Care

As mentioned previously, peristomal irritant contact dermatitis is the most common complication experienced by the patient. The skin damage

Skilled care for a patient with a fecal diversion is reasonable and necessary to perform observation and assessment, provide complex management strategies, and teach and train the patient and caregiver in self-care tasks.

results from an inadequate pouch-to-skin seal, which allows for prolonged skin contact with effluent. Treatment, and prevention, of skin irritation begins with appropriate size, product selection, and skin protection. The ideal skin barrier should provide a secure, predictable wear time, which prevents the stool from leaking under the barrier (Ratliff, 2010). A patient who has a flush or retracted stoma, or one that is located within a crease or a skin fold, may need a convex skin barrier that provides tension to the stoma to facilitate protrusion. To protect the skin under the barrier, a skin sealant can be used. Skin sealants are available as wipes, sticks, or sprays and create a barrier between the epidermal layer and the wafer. Follow manufacturers' recommendations regarding the use of skin sealant under skin barriers.

For broken skin, additional interventions are necessary. Impaired skin should be treated to decrease the inflammatory response and promote wound healing. Steroid preparations such as Kenalog cream may be necessary for some patients; however, its use should be limited (Colwell et al., 2004). Other patients may benefit from skin barrier powder, which can be used in combination with a skin sealant.

Stomal Complications

Hernia. In the presence of a hernia, modification of the pouching system is needed. Most patients benefit from a two-piece system with a floating flange or a flexible system (WOCN, 2005). However, one-piece systems may be indicated for larger hernias. Convexity may be used with caution. The patient with a hernia should discontinue colostomy irrigations if they are not using a "cone" tip irrigation set due to the risk of gastrointestinal perforation. Asymptomatic hernias with low complication risks do not necessitate repair (Butler, 2009). However, hernias with acute or intermittent incarceration, strangulation, obstruction, pain, or pouching difficulty may require surgical repair. Hernia support belts and binders may be used to provide support to the parastomal hernia, decrease protrusion, and maintain a secure seal in patients who do not require surgical intervention. In the event that surgical repair is necessary, a local repair or translocation procedure is available (Husain & Cataldo, 2008).

Laceration. Treatment for stoma lacerations primarily consists of pouch system adjustment. Because trauma is the contributing factor, caution must be used to ensure that the stoma is not in contact with flanges or firm edges. Minor bleeding can be controlled with direct pressure or cold application, whereas uncontrolled bleeding may require hemostatic measures (Husain & Cataldo, 2008).

Mucocutaneous Separation. A mucocutaneous separation occurs during the early postoperative period. Treatment is aimed at managing the open defect. Routine wound care is provided to the separation, which is filled to absorb drainage, alleviate dead space, and promote wound healing (WOCN, 2005). Product selection may vary depending upon the amount of drainage and depth of the defect. Products commonly used with minimal exudate include skin barrier paste and powder, whereas exudating defects may require additional absorption with a calcium alginate or hydrofiber wound dressing. The pouching system is applied over the filled defect and the frequency of the appliance change will be dependent upon the patient's wound care needs. Two-piece systems allow for prompt access to the separation and may reduce the need for an appliance change with each treatment (WOCN, 2005).

Necrosis. Two-piece transparent pouches should be used in the presence of stoma necrosis to facilitate assessment. Superficial necrosis will slough and the stoma opening will contract. This will require frequent resizing of the pouching system to ensure adequate protection. Patients

Table 1. Overview of the Assessment and Management of Fecal Stoma Complications

Complication	Description	Appearance	Management
Contact dermatitis	Allergic reaction to any portion of the appliance.	Erythema with or without vesicles that corresponds to the shape of the contact surface.	Keep the pouching system simple with limited use of products to eliminate allergens and change the current appliance choice; may consider steroid cream for short-term management.
Irritant dermatitis	Caused when the effluent is in contact with the skin usually from a leaking appliance.	Well-defined, erythematic rash with edema and loss of the epidermal layer	Size stoma and cut wafer to fit the stoma, change the appliance per schedule and any time a burning or irritation is felt on the skin under the wafer.
Hernia	Protrusion of the intestine through the weakened abdominal wall	Partial or circumferential bulge around the stoma	Two-piece system with a floating flange; flexible system; one-piece systems may be indicated for larger hernias.
Laceration	A cut on the surface of the stoma as a result of improper pouching or mechanical trauma	Visible bleeding from the stoma; yellow or white linear discoloration of the stoma mucosa	Pouch system adjustment to prevent trauma
Mucocutaneous separation	Separations of the stoma from the skin at the level of the mucocutaneous junction	Shallow to deep separation between the stoma and the skin	Wound care for absorption, frequent appliance changes while healing; use one-piece flat wafer.
Stoma necrosis	Tissue death of the stoma as a result of interrupted or impaired perfusion	Dark red, dusky blue, brown, or black stoma with a hard, dry mucosa	Transparent appliance needed for frequent assessment. Frequent pouch resizing as tissue sloughs. Flat or convex wafer two-piece appliance. Refer to surgeon for possible surgical intervention.
Prolapse	Length of the stoma extends due to a telescoping of the bowel through the stoma	Edematous stoma with a noticeable increase in size and length	Flat wafer on one-piece appliance; may need larger pouch to prevent trauma. Consider use of a support binder or hernia support belt.
Retraction	Stoma falls below the level of the skin; common with mucocutaneous separation	Concave defect on the abdomen	Convex wafer, one-piece or two-piece appliance. Encourage weight management. Consider revision in severe cases.
Stenosis	Narrowing or contraction of the stoma	Narrow stoma lumen with impaired effluent flow	Consider low-residue diet with increased fluid intake. Consider stool softeners or mild laxative with colostomies; may need surgical intervention.

Note. Data from Colwell, J., Goldberg, M., & Carmel, J. (2004). *Fecal and urinary diversions: Management principles.* St. Louis, MO: Mosby. Copyright 2004 by Mosby, Inc.

should be taught to expect color changing, odor, and tissue sloughing. Patients should be referred to their surgeon to determine the extent of necrosis because necrosis that extends beyond the fascia level will require surgical intervention (Butler, 2009).

Prolapse. Uncomplicated prolapse can be treated in the home setting. Gentle continuous pressure can be provided to the distal portion of the stoma, which can manually reduce the prolapse. Likewise, patients can be encouraged to wear a support binder or hernia belt, which will provide added support (WOCN, 2005). Hernia belts should be applied while the prolapse is reduced, which is accomplished while the patient is in a supine position.

Retraction. Depending upon the level of the retraction, convexity may be used to reduce leakage. Stoma revision may be necessary in patients with recurrent skin breakdown and poor appliance seal. A comprehensive medical workup should be conducted prior to surgical revision to determine recurrent disease, malignancy, or ischemia (Husain & Cataldo, 2008). In addition, the clinician should encourage weight management because weight gain is a documented, benign cause of stoma retraction (Haugen et al., 2006; Salvadalena, 2008). Products with convexity, skin barrier rings, strips, paste, or rigid faceplates may provide additional support to patients with stoma retractions. In the event that a complete mucocutaneous separation accompanied by a stoma retraction occurs, the surgeon should be consulted immediately and the patient be prepared for emergent surgery (WOCN, 2005).

Stenosis. Mild stenosis may be managed through dietary or pharmacologic methods. Low-residue dietary modifications and increased fluid intake can provide relief and promote stool evacuation in most patients. Others may require stool softeners or mild laxatives to promote stool evacuation (WOCN, 2005). This applies to colostomy patients rather than ileostomy patients because stool evacuation from ileostomies is a liquid consistency instead of formed stool. Laxatives should not be used in patients with ileostomies due to the risk of serious fluid and electrolyte imbalances. Some research has shown that repeated dilation of the stoma may be of benefit; however, few evidence-based studies support this intervention (Colwell et al., 2004; Husain & Cataldo, 2008). Surgical intervention is reserved for severe stoma stenosis and the procedure is dependent upon the location and cause of the stenosis.

Roles of Home Health Clinician

When providing care to the patient, the clinician will provide direct patient care through teaching and training activities, observation and assessment, stoma site assessment and complication management, coordination of healthcare needs with other healthcare providers, and promotion of patient self-care skills. Needs will be assessed during the comprehensive assessment and supported through documentation in the Outcome Assessment and Information Data Set (OASIS-C) collected on the patient.

Patient Care

Clinicians provide skilled care to the patient that often includes observation and assessment, skin management, and appliance change until the patient, or caregiver, has been taught and is able to take on self-care responsibilities. Learned self-care ability is dependent upon the motivation levels of the patient, cognitive levels, and support systems. Ostomy patients experience anxiety, denial, poor self-esteem, and altered adjustment after surgical intervention, so the clinician must address these issues while providing care to the patient (Haugen et al., 2006). Patients who undergo an emergency procedure are not prepared mentally for the alteration in body image and often adjust slower than a patient that had preoperative counseling (Colwell et al., 2004). The clinician must acknowledge and address the emotional issues of the patient that will influence the treatment plan. Likewise, it is the responsibility of the clinician to select products based upon the patient's needs and should understand which products will meet their needs instead of using "one size fits all" approach to ostomy care. If your organization does not employ a specialist, consider contacting a CWOCN for consultation.

Patient Education

Education was defined by Shultz (2008) as "an experience that results in a change of behavior in some desired direction." Patient education is paramount in transitioning the patient from a nurse-provided care model into a self-sufficient care model and becomes extremely important in the home health setting due to the decreased

length of hospital stays and limited teaching opportunities. Patient education should include a comprehensive overview of (1) self-care, (2) dietary requirements, (3) skin care, (4) signs and symptoms of complications, (5) sexuality and altered body image, (6) odor management, (7) product availability and ordering information, (8) technique for colostomy irrigations, and (9) use of an emergency kit (which contains all necessary self-care items) when away from the home (Colwell et al., 2004). By teaching the patient the correct technique for appliance application and symptoms of skin dysfunction, the clinician can prevent potential problems and improve the patient's quality of life. In addition, when providing education, the clinician should involve the learner and encompass the cognitive, affective, and psychomotor domains of learning, which will improve patient satisfaction and enhance patient outcomes (Colwell et al., 2004). Education should include written materials along with verbal coaching and hands-on application. Many of the product manufactures offer comprehensive written and online education, which can be used to augment teaching and training activities. Box 1 lists Internet sites that are available to provide additional ostomy support.

Table 2. Ostomy Application Techniques

How to Apply an Ostomy Appliance:
1. Gather supplies needed for self-care such as warm soap and water, gloves, new ostomy appliance, measuring guide, skin sealant, ostomy scissors, and additional accessories.
2. Remove the soiled appliance system by pushing down on the skin and gently removing the wafer from the abdominal wall.
3. Save the tail closure if using a drainable system without Velcro closure.
4. Discard the soiled appliance in the garbage receptacle.
5. Cleanse the area around the stoma with warm soap and water. Rinse and dry well to remove soap residue, which can interfere with appliance seal.
6. Measure the stoma using the measuring guide supplied in the box of wafers/pouches.
7. Cut the new wafer approximately 1/8 inch larger than the stoma. Skip this step for precut wafers. If using a cut-to-fit wafer, gently smooth the wafer edges with a gloved finger.
8. Apply skin sealant to the skin surrounding the stoma. Let the sealant dry before applying the ostomy appliance. If the skin is irritated, consider using an ostomy powder in combination with the skin sealant. If fungal infection is suspected, consider using an antifungal powder in combination with a skin sealant.
9. Apply the appliance to the skin. The patient may lie down or stand to facilitate application.
10. Apply direct, even pressure to the wafer for approximately 30 seconds. This will allow the wafer to mold to the patient's skin and improve pouch seal.
11. Apply the pouch to the wafer and seal the flange (plastic circle) together using gentle pressure.
12. Close the bottom of the pouch by using a clasp closure or the Velcro closure tab located on the bottom of the pouch.
13. Wash your hands and dispose of all soiled materials.

Note. Data from Colwell, J., Goldberg, M., & Carmel, J. (2004). *Fecal and urinary diversions: Management principles.* St. Louis, MO: Mosby. Copyright 2004 by Mosby, Inc.

Patient Application Technique

Measurement and Wafer Preparation. Patients should be taught during the initial postoperative period the process for changing the pouch; however, when first admitted to the agency, the patient often lacks the knowledge and confidence to perform this skill independently. Nurses should first demonstrate how to measure the stoma using a measuring guide in order to prevent leaking. The wafer should be 1/8-inch larger than the stoma opening (Shultz, 2008). For a precut wafer, the size of the wafer should be selected to accommodate necessary sizing guidelines. If using a cut-to-fit wafer, the patient should be instructed to center the hole of the measuring guide onto the wafer and trace the hole onto the

Box 1.

Internet Sites for Additional Ostomy Support and Product Information:

- **http://www.hollister.com**
- **http://www.convatec.com**
- **http://www.coloplast.com**
- **http://www.nuhope.com**
- **http://www.ostomy.org**

Patient Case Scenario

MABEL SMITH IS A 65-YEAR-OLD FEMALE who presented to the hospital after an acute onset of abdominal pain, constipation, vomiting, and bloating. Upon examination she was observed to have a large bowel obstruction and underwent an emergency colon resection with colostomy. After a short stay in the acute care setting, and 1 month in a rehabilitation facility, the patient was discharged home with home care services. During the assessment, the admission nurse noted that the patient had a flush stoma located in the left lower quadrant of her abdomen. Peristomal skin was denuded from persistent pouch leaking and the patient had developed a partial mucocutaneous separation that further impaired pouch seal. To complicate pouching, the patient had a midline nonhealing abdominal incision with retention sutures located in the pouching plane and poor hand dexterity. In addition, the patient had chronic comorbidities including autoimmune disease and diabetes and was on daily corticosteroids to manage rheumatoid arthritis. How would the home healthcare clinician document and report the significant findings? What complications should the clinician assess for based upon the patient's history? What products could be used to improve appliance seal, restore skin integrity, and promote self-care for this patient?

center of the wafer using a permanent marker (Shultz, 2008). The wafer can then be cut using ostomy scissors.

Application. After the patient can demonstrate how to measure and cut the wafer, the clinician should teach the patient how to apply a new appliance. The clinician can accommodate training for the use of a one-piece or two-piece appliance during demonstration. There are a large variety of products available in both one-piece and two-piece systems that are designed to meet the patient's need. Contact can be made with the ostomy manufacturers who can provide the clinician with product recommendations, application guides, and product comparisons.

Accessories. The nurse should identify and educate the patient on the use of accessories needed to improve appliance seal and decrease complications. Ostomy belts or binders are indicated for patients who have flush or retracted stomas or patients with parastomal hernias. Patients should be instructed on the correct application of such support devices. Likewise, the clinician should demonstrate the use of skin barrier products including paste, rings, or strips when seal is impaired by stoma location and retraction. Additional application steps can be located in table 2.

OASIS-C

With the implementation of OASIS-C in January 2010, there has been some confusion regarding ostomy and integumentary data collection elements. All ostomies, including bowel ostomies, and a bowel ostomy being allowed to close on its own, are not considered surgical wounds for OASIS-C data collection and should not be reported in M1340 (Surgical Wound). However, a wound resulting from an ostomy "take down" procedure is considered a surgical wound and reported in M1340 because the "ostomy" is no longer present post procedure (CMS, 2011). Bowel ostomies are also excluded from M1350 (Skin Lesion or Open Wound). Nonbowel ostomies and peristomal skin problems, that is, contact dermatitis (a skin lesion), and so on, are included in M1350 when receiving clinical intervention by the agency (CMS, 2011). Bowel ostomies are reported in M1620 (Bowel Incontinence Frequency) and M1630 (Ostomy for Bowel Elimination).

Summary

The support and education provided by the home health clinician, in conjunction with the CWOCN, surgeon, and family, can allow patients to live a full, active life. Home health clinicians often serve as the primary educator for ostomy

patients and must possess the assessment, knowledge, and communication skills necessary to identify and manage complications. Likewise, accurate, thorough assessments lead to the appropriate selection of products, reduce unnecessary costs, improve the quality of care provided by the agency, and increase overall patient satisfaction. ■

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REFERENCES

Butler, D. L. (2009). Early postoperative complications following ostomy surgery: A review. *Journal of Wound, Ostomy, Continence Nursing, 36*(5), 513-519.

Centers for Medicare and Medicaid Services [CMS]. (2011). *OASIS-C guidance manual*. Retrieved from http://www.cms.gov/HomeHealthQualityInits/14_HHQIOASISUserManual.asp

Colwell, J. C., & Beitz, J. (2007). Survey of wound ostomy and continence (WOC) nurse clinicians on stomal and peristomal complications: A content validation study. *Journal of Wound, Ostomy, Continence Nursing, 34*(1), 57-69.

Colwell, J. C., & Fichera, A. (2005). Care of the obese patient with an ostomy. *Journal of Wound, Ostomy, Continence Nursing, 32*(6), 378-383.

Colwell, J., Goldberg, M., & Carmel, J. (2004). *Fecal and urinary diversions: Management principles*. St. Louis, MO: Mosby.

Haugen, V., Bliss, D. Z., & Savik, K. (2006). Perioperative factors that affect long-term adjustment to an incontinent ostomy. *Journal of Wound, Ostomy, Continence Nursing, 33*(5), 525-535.

Husain, S. G., & Cataldo, T. E. (2008). Late stomal complications. *Clinics in Colon and Rectal Surgery, 21*(1), 21-40.

Pittman, J., Rawl, S. M., Schmidt, C. M., Grant, M., Ko, C. Y., Wendel, C., Krouse, R. S. (2008). Demographic and clinical factors related to ostomy complications and quality of life in veterans with an ostomy. *Journal of Wound, Ostomy, Continence Nursing, 35*(5), 493-503.

Ratliff, C. R. (2010). Early peristomal skin complications reported by WOC nurses. *Journal of Wound, Ostomy, Continence Nursing, 37*(5), 505-510.

Salvadalena, G. (2008). Incidence of complications of the stoma and peristomal skin among individuals with colostomy, ileostomy, and urostomy: A systematic review. *Journal of Wound, Ostomy, Continence Nursing, 35*(6), 596-607.

Shultz, J. M. (2002). Preparing the patient for colostomy care: A lesson well learned. *Ostomy Wound Management, 48*(10), 22-25.

Wound, Ostomy, Continence Nurses Society [WOCN]. (n.d.). Retraction-stenosed stoma. *WOCN Image Library.* Retrieved from http://images.wocn.org/photos/5/fullsize.jpg

Wound, Ostomy, Continence Nurses Society [WOCN]. (n.d.). Prolapsed stoma. *WOCN Image Library.* Retrieved from http://images.wocn.org/photos/17/fullsize.jpg

Wound, Ostomy, Continence Nurses Society [WOCN]. (n.d.). Mucocutaneous separation. *WOCN Image Library.* Retrieved from http://images.wocn.org/photos/25/fullsize.jpg

Wound, Ostomy, Continence Nurses Society [WOCN]. (n.d.). Irritant dermatitis. *WOCN Image Library.* Retrieved from http://images.wocn.org/photos/18/fullsize.jpg

Wound, Ostomy, Continence Nurses Society [WOCN]. (2005). *Stoma complications: Best practice for clinicians.* Retrieved November 1, 2010 from www.wocn.org

Wound, Ostomy, Continence Nurses Society [WOCN]. (2007). *Peristomal skin complications: Best practice for clinicians.* Retrieved from www.wocn.org

Wound, Ostomy, Continence Nurses Society [WOCN]. (2010). *Management of the patient with a fecal ostomy: Best practice guidelines for clinicians.* Mt. Laurel, NJ: Author.