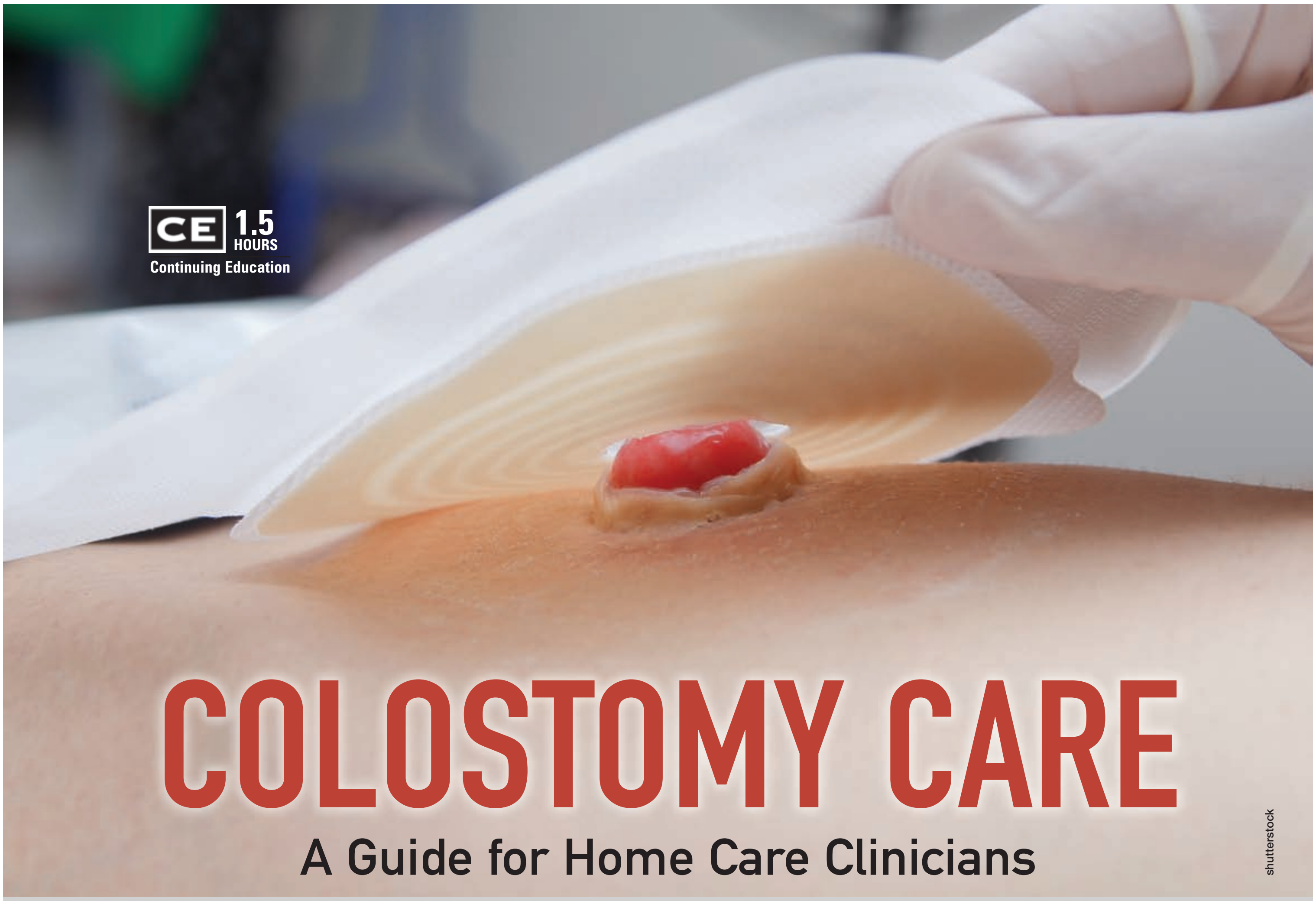
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COLOSTOMY CARE

A Guide for Home Care Clinicians

Surgical creation of a colostomy can have significant physical, emotional, and social effects. Adapting to a new ostomy can be overwhelming and interventions aimed at decreasing barriers to self-care should be a priority for home care patients. Advances in surgical procedures, coupled with decreased length of hospital stays, require home care clinicians to have the skills and knowledge to care for this population through postoperative recovery and the initial phases of learning self-care. This article will focus on the care of patients with a colostomy in the home care setting.

The gastrointestinal tract is comprised of several segments: stomach, small intestine, large intestine, rectum, and anus (Netsch, 2016). It is a complex system with many functions, but the main function is to ensure food is available in a form that allows cells to use it (Johnstone et al., 2014). It consists of four main layers: mucosa, submucosa, muscle, and peritoneum. The mucosa consists of epithelial cells and secretory glands that aid in absorption and secretion. The submucosa is a thick layer of connective tissue that joins the mucosa to the muscle layer. It also contains blood vessels, nerves, and glands. The muscle layer is comprised of two smooth muscle layers, a circular inner sheet and a longitudinal outer sheet. It is innervated by the autonomic nervous system and is responsible for peristalsis (propulsive and mixing movements). Lastly, the peritoneum is a layer of connective tissue that covers over most of the gastrointestinal tract in the abdomen (Johnstone et al.).

The large intestine (colon) is approximately four to five feet in length and is wider in diameter than the small intestine. It connects the end of the ileum to the anal canal. The large intestine consists of several distinct segments: cecum, ascending colon, transverse colon, descending colon,

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sigmoid rectum, and anal canal. Its functions include sodium and water absorption, secretion of mucous to lubricate and aid in defecation, and storage of feces until defecation. Fecal matter is 75% water and 25% solid waste. The average person defecates five to seven times a week. Those who eat a diet rich in fiber will produce more stool in a quicker transit time (Johnstone et al., 2014).

A colostomy is a surgically created opening in the abdomen where a portion of the colon is brought through to allow feces/stool to pass. A colostomy can be temporary or permanent depending on the reason for its creation. A temporary colostomy will allow the affected bowel a chance to rest and heal. Once the bowel has healed, the colostomy will be reversed. A temporary stoma usually remains in place for 3 to 6 months (Stricker et al., 2016). A permanent colostomy is required when the disease affects the lower end of the intestine and/or rectum, or the patient has significant comorbities that would place them at a higher risk if they had reversal surgery. The most common colostomies are the sigmoid colostomy located in the lower left quadrant, a transverse colostomy that is located in the upper right and left quadrants near the midline, and an ascending colostomy located on the right side of the abdomen.

Peristomal skin is exposed to mechanical, chemical, and microbial threats that can cause complications.

Indications for a Colostomy

Colon or rectal cancer, chronic inflammatory bowel diseases, diverticular disease, irradiation damage, and trauma are among the top health issues that lead to the need for a temporary or permanent colostomy (Claessens et al., 2015). Colorectal cancer is the fourth most common cancer and the second most common cause of cancer-related death (Centers for Disease Control and Prevention, 2018). Crohn disease and ulcerative colitis are chronic inflammatory bowel diseases that present according to the location and severity of the disease. Traditional treatments, such as steroids, treat the symptoms of inflammation but not the actual disease (Stein et al., 2016). Crohn disease most commonly affects the end of the small intestine and the beginning of the large intestine, but can occur anywhere in the gastrointestinal tract from the mouth to the anus. The entire thickness of the bowel is affected in Crohn disease and inflammation can extend into the submucosa and eventually result in abscess formation. Symptoms will depend on the area that is affected. Patients may experience frequent bloody stools, abdominal pain, weight loss, and obstructive symptoms.

Ulcerative colitis affects the large bowel only and extends continuously and circumferentially, unlike Crohn, which is patchy and segmental in its inflammation (Stein et al., 2016). Inflammation is superficial and does not extend into the submucosa like Crohn. Symptoms of ulcerative colitis include frequent bloody diarrhea with urgency. A patient with ulcerative colitis may or may not experience abdominal pain, and as the disease increases, may exhibit fever, weight loss, and fatigue. Medical management of ulcerative colitis and Crohn consists of corticosteroids, antidiarrheal medications, and immunosuppressive agents (Wound, Ostomy, and Continence Nurses Society [WOCN], 2010). When medical management is exhausted, surgery is the definitive treatment and may result in an ostomy.

Diverticular disease includes diverticulosis, small sac-like pouching of the intestinal wall, as well as diverticulitis that occurs when these pouches become inflamed. Diverticular disease can present with a spectrum of clinical presentations from totally asymptomatic to symptomatic requiring surgery, resulting in a stoma to divert stool. Radiation enteritis is a complication of radiation therapy for prostate, pelvic, rectal, or gynecological cancers (Beitz, 2016). It can result in acute symptoms of intestinal mucosal injury or inflammation, or chronic symptoms of fibrosis and vascular sclerosis in the bowel. Abdominal trauma, either blunt or penetrating, can lead to an ostomy depending on the site of the injury (Cross et al., 2014). Lastly, intestinal obstruction of the peritoneal cavity such as adhesions, twisting or narrowing of the bowel and hernias are also possible indications for a colostomy.

Anatomy of the Stoma

There are three anatomical stoma construction types: *end*, *loop*, and *double barrel* (Stricker et al., 2016). The *end* stoma is one stoma. After the diseased or traumatized bowel is repaired, the surgeon will bring the proximal bowel through the abdomen, invert it and suture it to form a stoma. The distal portion of bowel is sewn over for surgical reconnection at a later time. The *loop* stoma is one stoma with two openings, a proximal opening that allows stool to pass through and a distal opening that allows small amounts of mucous to pass through (Stricker et al.). During the creation of a *loop* stoma, a bridge is placed under the loop of intestine to support the stoma and prevent retraction. This device can be a plastic device, rod, or catheter-like tubing. A *double barrel* stoma is rarely seen. Two stomas are created resembling end stomas. The proximal stoma allows stool to pass and the distal is a mucous fistula. Depending on the location of the stoma in the large intestine will determine the frequency and consistency of stool.

Stoma Complications

Stoma complications involve both physiological and psychological aspects (Pittman et al., 2014), as well as an economic impact (Maydick, 2014). Studies have shown quality of life of patients living with an ostomy could be improved with effective management of stomal problems (Bare et al., 2017; Pittman et al.). Stomal complications within 30 days following surgery are identified as early complications and those occurring after this 30-day window are considered late complications. Table 1 displays descriptions of various stomal complications that can occur with corresponding treatments.

Peristomal Skin

Normal peristomal skin should be intact and should appear like the rest of the abdominal skin. Peristomal skin will stay healthy if the pouching system adheres well and is changed regularly. Peristomal skin problems are not uncommon, however. In a recent Danish study of patients with permanent stomas, 80% of the participants with skin issues did not perceive they had skin irritation (WOCN, 2010). Therefore, it is important to teach the patient to change their appliance/pouching system on a schedule and not wait for it to leak.

Peristomal Complications

Peristomal skin is exposed to mechanical, chemical, and microbial threats that can cause complications (Salvadalena, 2016). Determining the cause of these peristomal skin conditions is the first step in treatment and management. Once identified, the goal is to promote healing while maintaining an adequate wear time of the pouching system. The most common peristomal skin conditions are due to leakage of stool resulting in irritation, redness,

Table 1. Summary of Stomal Complications and Treatments

Complication	Description	Treatment
Mucocutaneous separation—early	Detachment of the stomal tissue from the peristomal skin	Treat like a wound and fill with a wound product such as hydrofiber or calcium alginate or stoma powder
Stomal necrosis—early	Death of stomal tissue from impaired blood flow	If necrosis is above facial level (superficial), then need to wait and observe If necrosis below skin level, then will need to be debrided
Stomal retraction—early	Stoma tissue is below skin level	Adjust pouching system that can be achieved with a convex skin barrier and/or belt
Stomal stenosis—late	Narrowing or contracting of the stomal tissue at the skin or fascia level	Modify diet to include low-residue foods, stool softeners, and increase fluids
Stomal prolapse—late	Telescoping of intestine through the stoma	Adapt pouching system to accommodate prolapse Apply pouching system when reduced Reduce by using a cold compress or sugar
Peristomal hernia—late	Bulging of the intestine into the parastomal area	Conservative management: Flexible pouching system, hernia support binder, spandex garments

Note. Based on information from Pittman (2016)


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Patients who have had ostomy surgery will need to eat a well-balanced diet that includes calories, protein, vitamins, and minerals and drink six to eight glasses of fluids a day to aid in the postoperative healing.

and maceration. If not treated or addressed, peristomal ulceration and erosion will occur.

Peristomal mechanical skin damage results from medical adhesive related injuries and pressure injuries. Adhesive injuries include blisters, skin tears, or skin stripping after the removal of a medical adhesive product such as tapes, and bonding agents, as well as frequent application and removal of skin barriers (Salvadalena, 2016). Skin stripping occurs when the surface layer of the skin is removed by frequent and rough removal of the skin barrier. Instruct the patient to gently push skin down around stoma as the skin barrier is lifted off the skin. Also, adhesive remover wipes can be used to remove the skin barrier.

Peristomal chemical damage results from effluent containing digestive enzymes, soaps, or adhesives coming in contact with the skin (WOCN, 2010). It is usually a result of a leaking pouching system, excessive wear time, or inadequate pouch seal. It is corrected by reevaluating current skin barrier and ensuring a good seal around the stoma. If the skin is irritated or denuded, it may be treated with a stoma powder and nonsting barrier wipe.

Peristomal fungal/candidiasis is an overgrowth of fungal organisms that can cause inflammation, infection, or skin disease (WOCN, 2010). Patients who have been on antibiotics or on corticosteroid therapy, are immunosuppressed or diabetic, are at risk for this type of complication. Peristomal skin will have a maculopapular rash with satellite lesions, erythema, and possibly itching. Rash is treated by cleansing skin with warm water, drying thoroughly, and dusting with an antifungal powder followed by a nonsting barrier wipe (Salvadalena, 2016). Patients should be instructed to pat dry the pouching system (tape border and pouch), after showering to prevent moisture against skin that can lead to possible fungal overgrowth.

Pouching Options

The initial pouching system will be guided by product availability at the hospital but can be changed as needed. Selection of a pouching system will depend on the characteristics of the abdomen and location of the stoma, as well as the patient's preference and ability. A pouching system should provide predictable and reliable wear time. Wear time is the ability to maintain a seal for a predictable amount of time with no leakage between application and removal of the pouching system (Colwell, 2016). Wear time depends on stomal characteristics and consistency of the stool. If the stoma is flush or retracted, or if it is located in an abdominal crease or fold, wear time could be compromised. A pouching system should be comfortable, secure, and easy to manage no matter what type of system the patient chooses to use. A pouching system that fits and adheres well will keep the stoma and skin healthy.

Ostomy pouching systems are available as one- or two-piece appliances. A two-piece system has a skin barrier (also called a wafer or faceplate) and a pouch. A skin barrier is the part of the system that adheres to the skin and should fit snugly around the stoma so peristomal skin is not exposed (WOCN, 2010). The opening can be cut out or molded to fit around the stoma. The stoma will need to be measured weekly and the opening in the skin barrier adjusted. Once the stoma has matured (about 6 to 8 weeks), precut skin barriers can be ordered. The pouch is the device that collects and contains the output. There are several mechanisms, depending on the manufacturer, to attach a pouch to a skin barrier: a rigid ring that allows the pouch to snap on; a rigid ring that allows the pouch to click and lock on; and an adhesive backing on the pouch that adheres by sticking to the skin barrier wafer.


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The patient or caregiver should be taught how to change the pouching system and then should be able to demonstrate how to remove, cleanse skin, and reapply independently before discharging.

A one-piece system has a skin barrier and pouch manufactured as one unit and when the pouch is removed, the skin barrier is also removed. A one-piece pouch is more flexible and low profile compared with a two-piece system, so it is less conspicuous under clothing. For some patients, it will be simpler to use as it is one less step to apply; however, it can be challenging to line up over the stoma. A one-piece system may be used if the stoma is located in a deep abdominal fold or crease, or if the patient has poor manual dexterity. A patient with a descending colostomy can choose between a two-piece closed pouching system or a one-piece closed pouch. An ascending or transverse colostomy, depending on the output and how often they empty, will most likely need a drainable pouching system whether it is a one piece or two. Insurance will cover 60 closed/disposable pouches a month. A patient can choose either a closed or drainable pouch in order to accommodate their bowel habits. If the patient has two bowel movements a day, a closed pouch is a good option because two pouches a day are allowed. If a patient is emptying more than twice a day, they will need more than two closed pouches a day and will need to use a drainable pouch. Patients can also purchase additional pouches if they prefer one pouch over the other.

Skin barriers, whether a one- or two-piece system, are available with a flat or convex surface. A flat barrier works best for a stoma that is budded or protrudes above skin level. A convex skin barrier is best for a stoma that is flush, retracted, or in a skin fold. Convex skin barriers can be soft and flexible or firm and rigid.

Pouches are odor free and odor should only be present when the patient empties or changes the bag/barrier or if they experience leakage. If a patient states they smell stool, always remove the skin barrier to ensure there is no leakage of stool underneath. A one-piece closed end pouch is removed, disposed of and replaced one to two times a day (WOCN, 2010). A two-piece closed-end pouch is removed twice a day but the skin barrier remains attached to the skin and may be changed one to two times a week. Pouches can be transparent or opaque. After surgery, transparent pouches are used so the output can be visualized. After the patient becomes comfortable with the pouch, a transparent or opaque pouch is their preference. Pouches also come with or without charcoal filters located at the top. These filters allow gas to pass through while deodorizing. If there is liquid output such as with an ileostomy, the filter may clog and become less effective.

There are many accessories that can be used to obtain a secure seal and enhance wear time of the pouching system, as well as manage the stoma characteristics (flat or retracted). Accessories should be used only as needed. Table 2 provides an overview of commonly used accessories that patients may need to improve wear time. Many manufactures will send free samples for the patient to trial but they do not sell directly to patients.

A patient will need to choose a durable medical equipment (DME) supplier to order their supplies. Most large DME suppliers will bill the patient's insurance and accept Medicare and Medicaid (Berti-Hearn & Elliott, 2018). It is very important when ordering supplies to be aware of the patient's insurance. As long as a patient is receiving home healthcare, it is the responsibility of the agency to provide ostomy supplies if the patient has traditional Medicare. Even if the patient is receiving only therapy services through home healthcare and is independent with their ostomy, the patient is to receive their supplies through the agency under Medicare guidelines and consolidated billing. If the patient has managed care, managed Medicare, or private insurance, supplies are ordered through a DME company and the insurance is directly billed. When discharging the patient from home healthcare services, it is important to educate them on ordering their monthly supplies. Include in the discharge instructions, the phone

Table 2. Commonly Used Accessories for Colostomies

Type	Use	Considerations	Tips
Barrier ring	Hydrocolloid washer that can be placed around stoma or on back of skin barrier to enhance seal	May not need if stoma protrudes—barrier ring may not allow stoma output to drain over ring into pouch May also be used instead of stoma paste	Stretch the ring to the size of the opening, place on back of skin barrier or around stoma. Press and mold against back of skin barrier
Barrier strips	Elastic piece of hydrocolloid that is placed on the outer edge of the skin barrier to increase security	May not need if pouching system remains intact for predictable wear time	Can stabilize peristomal skin such as when patient has peristomal hernia Can protect tape borders when patient wants to shower daily and/or swim
Strip paste	Stick of adhesive hydrocolloid that can be used around stoma or to fill increases or folds in peristomal skin	Requires manual dexterity to break and mold into sizes and shapes needed Can be used in place of paste	Pull off small pieces and roll to fit into areas or creases that need to be filled
Stoma powder	Absorbs moisture on denuded peristomal skin	Should not be used routinely but only on compromised peristomal skin Too much powder left on peristomal skin can interfere with adherence	Dust the denuded peristomal skin and then brush off excess before applying skin barrier
Stoma paste	Adhesive hydrocolloid used to enhance the seal by caulking along edge of skin barrier closet to stoma to prevent leakage	Contains alcohol and burns when applied to denuded skin Can be difficult to squeeze out of tube after a few uses	Use as caulk directly around stoma to enhance seal especially if stool is watery Moisten finger before adjusting paste or else it will stick to your finger
Skin barrier wipes	Clear liquid film placed on peristomal skin to provide protection from stool or adhesive stripping	Select skin barriers will not adhere when barrier wipe is used Barrier wipes with alcohol will cause burning when applied to denuded skin	It can facilitate application onto denuded skin Allow barrier wipe to dry before applying skin barrier
Belt	Attached to pouch to apply pressure to pouching system to enhance seal	It can help apply increased convexity when using with convex skin barrier	Should fit snuggly Comes in differing lengths and most are adjustable
Deodorant	Liquid or tablets placed in pouch to eliminate odor when emptying	Liquid deodorant will not harm stoma but may contain dye that can change color of stool	Need to apply after each emptying or when applying a new pouch

Note. Based on information from Colwell (2016).

number to the DME and product numbers to order. Also, the customer service representatives for the manufactures of the ostomy supplies are a good resource and can assist the patient with finding a DME company and ordering their supplies.

Role of the Home Care Clinician

Patients who undergo abdominal surgery have common postoperative risks. Home care clinicians should assess for pain control, surgical incision infection or complications, nutrition and hydration status, and cardiopulmonary status. Patients with new colostomies have specific care considerations. At the initial visit, evaluate your patient's stoma, pouching system, abdominal configuration, peristomal skin integrity, and any physical or psychological limitations the patient may have. Assess what they were taught (usually only how to empty their pouch) prior to leaving the hospital. Determine if a caregiver has been instructed and can assist in the postoperative period. The patient and caregiver need to be taught how to correctly empty the pouch and change the pouching system. They must also be able to recognize any developing skin conditions, manage activities of daily living with an ostomy, order monthly ostomy supplies, and know available resources to manage any problems (Berti-Hearn & Elliott, 2018). Assess for any comorbidities or psychomotor deficits that may hinder the patient's ability to care for their ostomy such as arthritis, poststroke weakness, frailty and fatigue, or visual problems.


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Selection of a pouching system will depend on the characteristics of the abdomen and location of the stoma, as well as the patient's preference and ability.

Post-op Changes in Stoma

The stoma should be assessed each visit for size, shape, and protrusion. Initially, the new stoma will be red, moist, shiny, and edematous. Due to good blood supply it may bleed, especially when cleansing. The stoma will get smaller and less edematous during the first 6 weeks after surgery, then eventually will stop changing (Colwell, 2016). As it matures, the stoma mucosa should be red, moist, and have some texture; it has no nerve endings. Patients may complain of stomal discomfort, but what they may be feeling is the sutures around the stoma that will eventually dissolve or the peristomal skin around the stoma. Stomas are different in size and shape (round or oval) due to location of the bowel. Not all stomas are alike, some stomas may be flush (at skin level) or retracted (below skin level). Ideally, stomas protrude at least 2 cm above the skin level so that stool drains directly into the pouching system (Colwell). If there is not adequate protrusion, the stool may leak under the skin barrier causing peristomal skin issues; in this case a specific convex pouching system may be needed. Adjust the size of the opening in the skin barrier to accommodate stoma changes to prevent peristomal skin damage. Always assess the color of stoma as well as the peristomal skin. A stoma that becomes very pale, purple, or black needs to be reported to the surgeon immediately because these are signs of possible necrosis.

At each visit, assess the type, amount, and frequency of the output. The large intestine is filled with bacteria that causes the release of gases as a result of bacteria fermentation, resulting in flatus/gas. Colostomy output includes feces/stool and flatus/gas. Fecal matter will travel through the large intestine and as it travels, water is absorbed. The longer it takes to travel through, the more water is absorbed and can lead to constipation. If it travels too quickly, diarrhea can occur because less water is absorbed. The type of stool output is dependent on the location of the stoma in the large intestine. For a patient with an ascending colostomy, the stool will be more liquid due to the proximity to the small intestine (Stricker et al., 2016). The transverse intestine is in the middle section of the bowel and the stoma can be located at the midline or in the upper abdomen toward the right or left side. Patients with a transverse colostomy will have stool that is loose or of oatmeal consistency. Lastly, a patient with a descending or sigmoid colostomy generally will have a soft or formed stool, but it can be paste-like or hard depending on food and/or water intake. This stoma is located on the left side of the abdomen, usually in the left lower quadrant.

Psychosocial Status

Assess the emotional and psychological effects the ostomy may be having on the patient. Dealing with not only the reason for the ostomy, but the ostomy itself, can be devastating for some patients. Common problems include fear of leakage, depression, anxiety, and embarrassment caused by noises, gas and odor, and concerns about changes in appearance and need for increased privacy that can lead to feelings of social isolation. Psychosocial barriers to self-care should be assessed and interventions used to help mitigate them (Werth et al., 2014).

Education

Body image changes, as well as physical changes, can be very challenging for patients with a new ostomy and they will require encouragement and support. The ability to care for the stoma and output are the first steps in the patient's rehabilitation (Goldberg, 2016). It will be important to include a family member or caregiver in this process, as well as to support the patient in their acceptance. It is important to teach the patient that the stoma size and shape will change over time and it is necessary for the patient to measure or make a pattern to use when preparing/applying a new skin barrier. A good fitting skin barrier will prevent peristomal complications and the patient should be educated on the normal appearance of the stoma and peristomal skin so they can identify if there are any changes. The patient should also be educated on stomal or peristomal skin complications that would require medical attention.

These would include the inability to maintain a skin barrier seal for a predictable time; rash; ulcer; or denuded skin that does not resolve after one to two pouch changes; separation of stoma from peristomal skin; change in stoma color from red to dark maroon or black; and changes in possible length of stoma such as prolapsed or a bulging hernia (Colwell, 2016).

The patient and caregiver need to be educated on the stoma output and what to expect. Output is largely dependent on the type of ostomy created so a sigmoid colostomy will be softer and more formed compared with an ascending or transverse colostomy. However, in the initial postoperative period through when they first return home, output will be more of a liquid consistency. The patient should also be taught to seek medical attention if no output for more than 2 days, blood in output, prolonged abdominal pain, nausea or vomiting, or abdominal distension (Goldberg, 2016).

Whenever possible, changing the pouching system and emptying the pouch should be performed in the bathroom as this is where these bodily functions are usually managed. Have the patient select a place in the bathroom to organize their supplies. Instruct the patient to always have a second pouching system ready in case they have a leak and need to change emergently. Have everything needed for a change placed together in a purse or backpack. Some patients feel more confident if they carry a change of clothes in their car or trunk. In a study by Werth et al. (2014), 15% of patients reported they felt unprepared for their first leak, despite having had education about it. Role playing can help the patient build confidence and can be done by talking/acting through various scenarios the patient may encounter and then discussing how to proactively handle each situation. Changing before eating or drinking will decrease the chance of the stoma of being overly productive during the change. Table 3 provides some ideas to role-play with your patients.

Instruct the patient to empty when the pouch is 1/3–1/2 full because the fuller the pouch, the more weight exerted on the skin barrier, which may decrease wear time or cause leakage. Instruct the patient to empty the pouch either by sitting on the toilet as far back on the seat as possible to empty between legs into the bowl, sitting on the toilet facing the tank, or sitting on a chair in front of the toilet. Placing toilet tissue in the bowl prior to emptying will prevent splashing. After emptying, the end of the pouch or outlet is cleaned with toilet tissue or a paper towel and then closed. A closed pouch is removed, skin barrier wiped off, and pouch then discarded in a plastic bag. Gas or air is emptied in the same way, or if wearing a two piece system can be released by unsnapping the pouch from the flange and allowing it to escape and then resnapping. The patient or caregiver should be taught how to change the pouching system and then should be able to demonstrate how to remove it, cleanse skin, and reapply independently before discharging (Colwell et al., 2016).

Table 3. Role Play Scenarios and Questions for Patients

Scenario	Questions to Ask
Going back to work	Ask patient what they will do about emptying pouch when they go back to work. Do they have a private bathroom and if not how will they empty if they need to go into a stall? What supplies will they take with them? Some patients like to carry small dispensers of air freshener or perfume with their supplies. Do they have a place at work to store their extra pouching system?
Traveling	If a patient is going to travel, they will need to take supplies with them. Depending on amount of time they will be away, they may need to pack supplies in checked baggage but must always have a few changes in their carry-on luggage.
Going out to dinner or to visit family	Suggest patient carry small deodorant spray or perfume in purse if they are worried about odor when they empty. Instruct to place toilet tissue in bowl before emptying so it will not splatter. Carry a small disposable trash bag with them in case they need to remove pouch and dispose of it.

Patients may shower daily and swim with their pouching system. Water will not harm the stoma or pouching system if left in place. Most pouches with filters will need to be covered. If so, you will find a round or oval sticker in the box of pouches that are to be placed over the filter prior to showering or swimming. Instruct the patient to dry the tape border and pouch with a towel or use a hair dryer on the lowest setting to prevent moisture-associated dermatitis. When swimming, the patient should empty the pouch before going into the water. Most patients protect their barrier by using barrier strips or waterproof tape on the skin barrier edges (Goldberg, 2016). If the patient chooses, the pouching system may be removed while showering. Instruct the patient to wash peristomal skin with warm water and a nonoily soap. Gently remove skin barrier from top down with a push pull technique (push the skin down as you pull at the barrier).

Table 4. Quick Tips to Reinforce Patient Education

Issues	Quick Tips
General	• change pouching system on routine basis and do not wait for it to leak • twice a week is a usual change for most people • best time to change is first thing in morning when there is less output • prepare new pouching system before removing old system • can shower with pouching system on or off • may need to change more frequently during warmer weather due to perspiring or outdoor activities • empty pouch when 1/3–1/2 full • empty before bed and activities • no need to rinse out drainable pouch after emptying • store all supplies in a cool dry place
Skin care	• warm water is sufficient to clean skin with • **avoid** baby wipes that can leave residue on skin • **do not use** lotions, baby powder, alcohol, ointments, or soaps with aloe or moisturizers under the skin barrier • always wash hands before and after emptying • adhesive remover wipes should be used sparingly and must wash off skin with warm water and mild soap after using
Odor	• odor eliminating drops • place air fresheners in bathroom such as plug ins • spray bathroom with air freshener **before** emptying • spray toilet spray such as Poo Pourri © into toilet and leaves an oily film on water that traps odor
Exercise	• begin with walking • obtain physician approval for type of exercise you can do • carry a water bottle with you because can dehydrate quickly • eat after exercising • protect abdomen and stoma with a hernia binder or spandex garments
Intimacy	• empty pouch ahead of time • use a closed pouch • ask physician about use of Imodium or Gas X before being intimate • secure or cover pouching system with a wrap, bandeau, or special lingerie or underwear • online resources: Awestomy, Ostomy secrets, Vanilla Blush, Between You & Me
Travel	• plan ahead • place supplies in carry-on luggage • have skin barriers already pre cut • obtain a travel ID card (can be found on UOAA website)

Nutritional Considerations

Patients with colostomies have few dietary restrictions after the initial postoperative period (Schreiber, 2016). Patients who have had ostomy surgery will need to eat a well-balanced diet that includes calories, protein, vitamins, and minerals and drink six to eight glasses of fluids a day to aid in the postoperative healing. The aim is to return to a diet that is well balanced nutritionally and high in fiber (Cronin, 2012). The colostomy should be functioning prior to leaving the hospital and the patient should expect at least one bowel movement a day once home in the early weeks. As the patient begins to recover, it is not essential for the colostomy to function on a daily basis. Because these patients have had major abdominal surgery, many patients do not have an appetite to eat three regular meals a day so they would benefit from eating six smaller meals. Dietary teaching is a key to rehabilitation and adaptation.

As the stoma may be edematous when the patient returns home, a low-residue, low-fiber diet will allow the stool to pass easily through the stoma. As the edema resolves, encourage the patient to eat a well-balanced diet including fruits and vegetables (Schreiber, 2016). Fiber is essential for a patient with a colostomy because it adds bulk to the stool and aids in its passage through the intestine. Because fiber can cause gas, introduce it gradually, adding small amounts of fruit and vegetables at each meal (Cronin, 2012). If a patient does not take in enough fiber, the stool will be hard or very pasty, making flow into the pouch difficult. Fiber supplement or natural sources such as prune juice or prunes may be needed, and will vary for each patient. To control gas, instruct patients to eat slowly, chew food thoroughly, and avoid straws, chewing gum, smoking, and eating after 7 to 8 p.m. This will give the bowel time to rest and quiet down before bed. Lactose intolerance is also common after abdominal surgery and dairy should be eliminated if the patient complains of gas, abdominal bloating, increase in liquid stool, or diarrhea after eating or drinking any dairy product (Cronin).

Table 4 lists quick tips you can share with patients to reinforce teaching. Upon discharge from home care, patient should be comfortable and confident in applying the pouching system, attaining and maintaining intact peristomal skin, managing ostomy supplies, and have awareness of resources available to them (Berti-Hearn & Elliott, 2018). Patients will have many concerns about leaving their home and going out in public and need to be reassured that no one will know they have a stoma unless they share that information.

Current and Future Research

Research on patients with an ostomy within the last 10 years has focused heavily on quality of life concerns, educational needs of patients, barriers to adapting to an ostomy, and managing complications such as leakage and peristomal issues. Only one study was found that examined staff nurse confidence in skills, knowledge, and barriers to caring for a patient with an ostomy (Cross et al., 2014). The researchers found that experience and specific training translated to higher confidence. With colostomy patients leaving the hospital much sooner than even 5 years ago, more research is needed in home care and other community settings. Understanding the experiences and barriers to care in these settings can help give direction for better continuing education and competency development.

In 2014, the WOCN™ Society sponsored a series of consensus sessions to help identify and standardize clinical outcomes for patients with a new ostomy. "Given the lack of an evidence-based supporting practice in this area" panelists were called upon to determine the minimum discharge criteria for the new ostomy patient in the home care setting (Colwell et al., 2016, p. 269). No published research was found that examined what current practicing nurses use as a basis for determining patient readiness for discharge, which warrants investigation. However, Bare et al. (2017) reported on a quality improvement initiative aimed to validate a standardized algorithm tool used by nurses in 300 agencies within a health system. Based on reported results, there seems to be merit in utilizing a standard tool in containing excess costs for patients with an ostomy as well as improving nurse's confidence in care delivery and patient satisfaction.

Conclusions

Improvements in surgical procedures, coupled with shorter hospital stays, means more patients with a new ostomy may have increased educational needs upon returning home. It is imperative that home care clinicians stay abreast to best practices in managing this patient population postoperatively and prepare them physically and emotionally for discharge to self-care. This is no small task. Using role play is a creative way to help patients build confidence, which can positively influence quality of life and a speedier road to adaptation. It is safe to say that nurses who have confidence in caring for patients with an ostomy make a patient feel more confident too. There are many opportunities for conducting research in this area of nursing, especially in nonacute settings. ⌂

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