Fundamentals of Stoma Care

Joni Brinker, MSN/MHA, RN, WCC
Clinical Nurse Educator
Optum Hospice Pharmacy Services

Disclosure

- I have no relevant financial relationships with manufacturers of any commercial products and/or providers of commercial services discussed in this presentation.
- This discussion will include the use of medications for off-label indications.

forward

LeadingAge Ohio

Objectives

- Review the key areas of ostomy assessment, including the stoma, mucocutaneous junction, peristomal plane, and holistic patient.
- Examine the process of appliance selection for individuals with and without peristomal skin complications.

forward

LeadingAge Ohio

Ostomates

- 725,000 to 1 million individuals in the U.S. living with an ostomy
  - Any age
  - Resume normal activities after recovery
- Common indications
  - Congenital anomalies
  - Obstruction
  - Inflammatory bowel disease
  - Malignancy
  - Trauma

United Ostomy Associations of America, Inc. 2021a
UpToDate. 2020

forward

LeadingAge Ohio

Terminology

- Ostomy: surgical procedure used to create an alternative exit for urine or stool
  - Temporary or permanent
  - Continent or incontinent
- Stoma: portion of the bowel or urinary tract exposed to the abdominal wall during an ostomy procedure
  - Created when a portion of the bowel or ureter is brought through the abdominal muscles and surgically attached to the abdominal wall

United Ostomy Associations of America, Inc. 2021b

forward

LeadingAge Ohio

Ostomy Types: Colostomy

- An opening from the large intestine to the abdominal wall; stool bypasses the rectum
- Indicated for
  - Colon or rectal cancer
  - Chronic inflammatory bowel diseases
  - Diverticular disease
  - Radiation damage
  - Trauma

United Ostomy Associations of America, Inc. 2021b
Berti-Hearn L, Elliott B. 2019

forward

LeadingAge Ohio

Ostomy Types: Colostomy

Type of Colostomy	Abdominal Location	Effluent Characteristics
Ascending	Right side (middle or upper portion)	Liquid or semi-solid
Transverse	Center, upper portion	Semi-solid
Descending, Sigmoid	Lower left quadrant	Formed, solid Normal stool

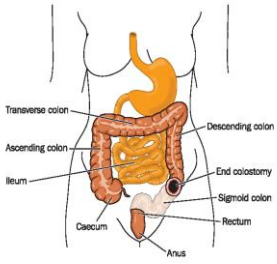


Image: United Ostomy Associations of America, Inc. 2021b
Willcutts K, Scarano K, Eddins CW. 2005

forward

LeadingAge Ohio

Ostomy Types: Ileostomy

- An opening from the small intestine to the abdominal wall; stool bypasses the large intestine and rectum
- Right lower quadrant
- Continuous liquid or paste-like stool

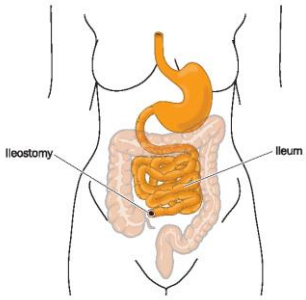


Image: United Ostomy Associations of America, Inc. 2021b
Willcutts K, Scarano K, Eddins CW. 2005

forward

LeadingAge Ohio

Ostomy Types: Urostomy

- An opening from the urinary tract to the abdominal wall, allowing urine to bypass the bladder and urethra
- Ileal conduit: incontinent diversion; urine flows from ureters through a segment of bowel and exits the body through a cutaneous stoma; pouch is worn
- Continent cutaneous diversion (Indiana pouch): a reservoir is created using a portion of the bowel; urine collects in the pouch and is emptied by inserting a catheter into the cutaneous stoma

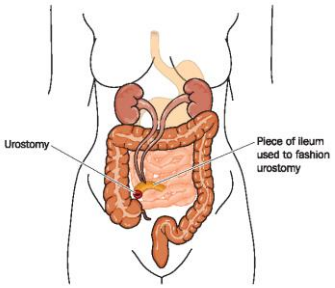
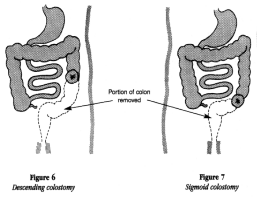


Image: United Ostomy Associations of America, Inc. 2021b
Willcutts K, Scarano K, Eddins CW. 2005

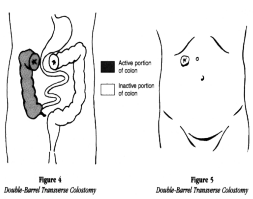
forward

LeadingAge Ohio

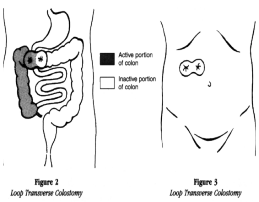
Stoma Types



End Stoma



Double-Barrel Stoma



Loop Stoma

Images: American Cancer Society. 2021
Berti-Hearn L, Elliott B. 2019

forward

LeadingAge Ohio

Patient Case: Mr. Baker

- Loop ileostomy performed after a diagnosis of rectal cancer
- Four months after hospital discharge, patient experienced ostomy appliance leakage causing red and inflamed peristomal skin with areas of partial thickness tissue loss

forward

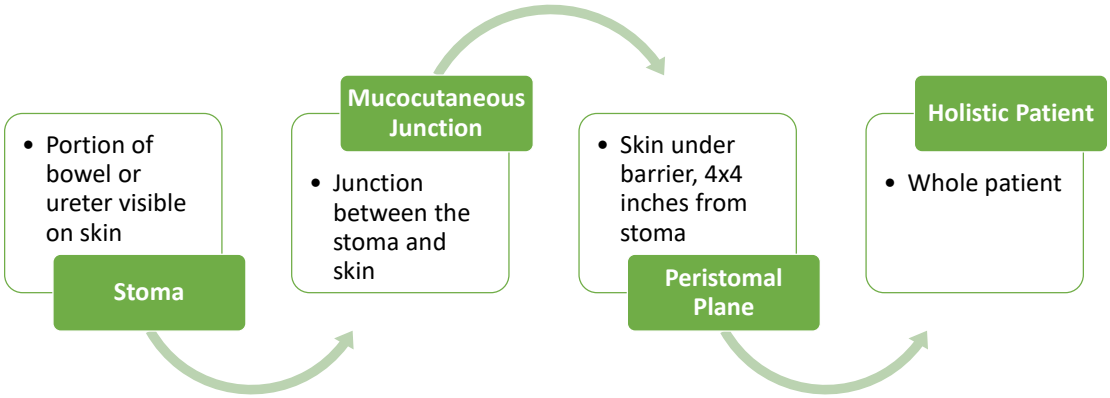
LeadingAge Ohio

Assessment

forward

LeadingAge Ohio

Assessment



Hooper J. 2016

forward

LeadingAge Ohio

Assessment: Stoma

Assessment Area	Documentation
Location	• Abdominal quadrant; problematic areas (e.g., skin fold, beltline)
Type of Diversion	• Colostomy, ileostomy, urostomy • Continent or incontinent
Stoma Construction	• Size • Temporary or permanent • End stoma, loop stoma, or double-barrel stoma
Lumens	• Location (central, side, level with skin) and quantity
Mucosa Characteristics	• Color and shape (round, oval, irregular) • Overall appearance (moist, smooth, textured)
Effluent Characteristics	• Amount and consistency (liquid, paste-like, semi-solid, formed)

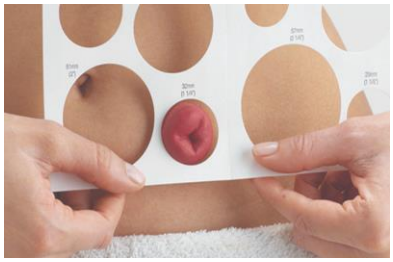
Hooper J. 2016

forward

LeadingAge Ohio

Measuring Stoma Size

- Measuring Technique
  - Round stomas: use a measuring card; select hole that fits closest around without touching
  - Irregular stomas: make a tracing
  - Oval stomas: tracing or oval stoma guide
- Frequency
  - Before each application if <6-8 weeks postop
  - Otherwise, measure periodically or with any change in weight (weight loss or gain) or complaints of leakage



Hooper J. 2016
Hollister. 2021a
Image: Hollister.2021a

forward

LeadingAge Ohio

Ideal Stoma

- Resembles a rosebud: round, moist, and beefy red
- Protrudes 2 – 3 cm from the skin
- Located on a flat portion of the abdomen, away from problematic areas, such as the beltline or skin folds
- Lumen centrally located
- Adequate area of the peristomal plane to place the skin barrier
- Easily visible to the patient, ideally on the lower abdominal quadrants

Importance of Stoma Color

- Pale pink: anemia
- Dark red, purple: bruising
- Purple, blue, brown: poor blood supply
- Black: necrosis from poor blood supply

Hooper J. 2016

forward

LeadingAge Ohio

Assessment: Peristomal Skin

Assessment Area	Documentation
Mucocutaneous Junction	• Mucocutaneous separation (detached from surrounding skin) • Ideal characteristics: attached to surrounding skin, free from breakdown
Peristomal Plane	• Skin integrity: intact, denuded, ulcerated • Turgor: edematous, indurated, firm, weak • Color: flesh-toned, red • Describe tissue types if skin is non-intact

Hooper J. 2016

forward

LeadingAge Ohio

Assessment: Holistic Patient

- Diet
- Frequency of appliance changes
- Unmanaged symptoms
  - Pain, odor, leakage, constipation, diarrhea
- Education opportunities for patient and/or caregivers

Hooper J. 2016

forward

LeadingAge Ohio

Appliances and Accessories

forward

LeadingAge Ohio

Ostomy Appliances

- The fecal or urinary collection system
- Includes
  - Skin barrier: protects skin from stoma output and secures pouch
  - Pouch: collect effluent

Skin Barrier

Pouch

Images: Hollister. 2021b, Convatec. 2021
Berti-Hearn L, Elliott B. 2019

forward

LeadingAge Ohio

Ostomy Appliance Systems

One-Piece System	Two-Piece System
• Skin barrier and pouch are a single unit • Flexible • Use when stoma is in a skin fold or when the patient has limited finger dexterity	• Skin barrier and pouch are separate units • Rigid (mechanical coupling) or flexible (adhesive coupling) • Use when pouch change only is preferred

Berti-Hearn L, Elliott B. 2019
Kent D. 2008

forward

LeadingAge Ohio

Skin Barriers: Two Important Features

Contour

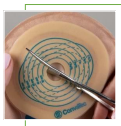
Preparation

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Convatec. 2021

forward

LeadingAge Ohio

Skin Barriers: Contour



Flat

- The adhesive surface in contact with the skin is flat

Convex

- The adhesive surface in contact with the skin is curved

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Images: Convatec. 2021

forward

LeadingAge Ohio

Skin Barriers: Selecting Contour

- Choose a *flat* skin barrier if…
  - The stoma is above the level of the skin
  - A deep abdominal crease is present in the peristomal plane (use adhesive coupling or a one-piece pouching system not mechanical coupling)
  - A peristomal hernia is present
- Choose a *convex* skin barrier if…
  - The stoma is below the level of the skin
  - The stoma is level with the skin and stool is loose or semi-solid
  - A slight abdominal crease is present in the peristomal plane

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Convatec. 2021

forward

LeadingAge Ohio

Skin Barriers: Convexity Firmness

- Soft Convexity
  - Flexible outward curve
  - Use if the stoma is flush with the skin or if convexity is indicated and the abdomen is firm or peristomal skin is not intact
- Firm Convexity
  - Rigid outward curve
  - Use if the stoma is below the level of the skin or if peristomal skin is uneven

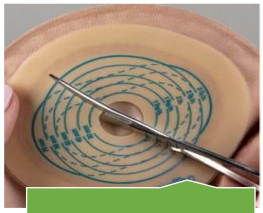
Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Images: Convatec. 2021

forward

LeadingAge Ohio

Skin Barriers: Preparation

Pre-Cut



Cut-to-Fit

Moldable

Accordion

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Images: Convatec. 2021

forward

LeadingAge Ohio

Skin Barriers: Preparation

- Standard Wear Barrier
  - Gentle adherence and quick absorption of moisture (e.g., perspiration)
  - However, if exposed to moisture for long periods of time, this skin barrier will begin to breakdown → use with semi-solid or solid stool
  - If patient has a bout of diarrhea, change barrier more often
- Extended Wear Barrier
  - Stronger adherence and non-absorptive
  - Because they do not absorb moisture, they are less likely to breakdown when exposed to moisture → use for loose stools or liquid effluent

Coloplast. 2020

forward

LeadingAge Ohio

Pouches: Two Important Features

Closure

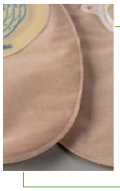
Transparency

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Convatec. 2021

forward

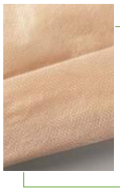
LeadingAge Ohio

Pouches: Closure



Closed

- Not drainable or reusable



Drainable

- Closes using a clamp or Velcro closure system

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Images: Convatec. 2021

forward

LeadingAge Ohio

Pouches: Transparency

- Transparent pouches
  - Clear to allow visualization of the stoma effluent
  - Easy to determine when pouch should be emptied but may be embarrassing to some since stool is visible
- Opaque pouches
  - Not transparent
  - Difficult to determine when pouch should be emptied but will hide the appearance of stool

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Convatec. 2021

forward

LeadingAge Ohio

Accessories

- Caulking
- Peristomal Skin Protectants
- Deodorizers
- Irrigation Supplies
- Adhesives and Securing Devices

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Coloplast. 2020
Images: Convatec. 2021

forward

LeadingAge Ohio

Accessories: Caulking

Paste

Barrier Rings

Barrier Strips

- Use as caulking to fill uneven areas to create a flat peristomal plane and prevent leakage
  - Skin folds or around the stoma
- NOT an adhesive or glue
- Too much paste may interfere with barrier adhesion and cause leakage

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Image: Express Medical Supply. 2021, Hollister. 2021a, LoCost Medical Supply. 2020

forward

LeadingAge Ohio

Accessories: Peristomal Skin Protectants

- Liquid barrier film: protects skin from medical adhesive related skin injury and stoma effluent
  - Avoid use with extended wear skin barriers as this may decrease wear time
- Stoma powder: absorbs moisture around the stoma to improve barrier adhesion
  - Apply to moist, irritated peristomal skin
  - Discontinue use when skin heals and is no longer moist to touch

Berti-Hearn L, Elliott B. 2019
Kent D. 2008

forward

LeadingAge Ohio

Accessories: Deodorizers

- Lubricated deodorants
  - Reduce malodor
  - Add every time the pouch is emptied
  - Lubrication makes emptying the pouch easier

Berti-Hearn L, Elliott B. 2019
Kent D. 2008

forward

LeadingAge Ohio

Accessories: Irrigation Supplies

- Irrigation: used to stimulate peristalsis and facilitate a bowel movement
  - Only appropriate for distal colostomies (descending or sigmoid)
  - Performed daily, at the same time each day

Cone Irrigation Sets

Jones H. 2021
Page H. 2021
Hollister. 2021b

forward

LeadingAge Ohio

Accessories: Adhesives and Securement

Barrier Extenders
- Placed at the edge of the barrier to prevent lifting and rolling

Ostomy Belts
- Secure the pouch

Ostomy Adhesive/Cement
- Used to improve adhesion of the skin barrier - avoid use

Berti-Hearn L, Elliott B. 2019
Kent D. 2008
Images: Holister. 2021c, Holister. 2021d, Medical Supply Depot. 2021

forward

LeadingAge Ohio

Stoma Care

forward

LeadingAge Ohio

Appliance Application

1. Gently remove existing skin barrier.
2. Wash skin with warm water (soap is not needed) and allow to dry completely.
3. Measure stoma. Frequent measurement is needed as physical changes at the end of life may cause the stoma to change shape or size.
4. Cut skin barrier to fit the size and shape of stoma. Do NOT leave more than ⅛ inch of peristomal skin exposed.
5. If indicated, apply accessory products, such as barrier paste, stoma powder, or liquid barrier film.
6. Apply skin barrier and pouch.
7. Change at an appropriate interval or with any symptoms of leakage or peristomal irritation.

Berti-Hearn L, Elliott B. 2019
Kent D. 2008

forward

LeadingAge Ohio

General Care Guidelines

Application and Removal	Emptying
• After applying the skin barrier, apply pressure for one minute to improve adhesion • Change immediately with any leakage or complaints of skin irritation • Remove atraumatically: use a towel or washcloth moistened with warm water to push down on the skin while lifting up the barrier	• Empty when ⅓ to ½ full • Change a drainable pouch system every 3 – 7 days • For patients with formed stool using closed systems, change with each bowel movement, usually 1 – 2 times daily • Change pouching system immediately with any leakage or complaints of skin irritation

Berti-Hearn L, Elliott B. 2019
Kent D. 2008

forward

LeadingAge Ohio

Showering, Bathing, and Swimming

- Showering and Bathing
  - May be done with or without the appliance in place
  - Apply barrier extenders if needed to reinforce skin barrier edges
- Swimming
  - Use a closed pouch
  - Apply barrier extenders if needed to reinforce skin barrier edges

Berti-Hearn L, Elliott B. 2019
Kent D. 2008

forward

LeadingAge Ohio

Medication Considerations

- Enteric coated or time-released formulations
  - Ileostomy may affect absorption of these medications
- Laxatives
  - May cause excess fluid loss and dehydration in patients with ileostomies

Berti-Hearn L, Elliott B. 2019

forward

LeadingAge Ohio

Dietary Considerations

- Colostomy: regular diet
  - Eat at regular intervals to reduce risk of watery stools or gas
- Encourage a daily fluid intake of 48 to 64 ounces
  - Increase water intake if caffeinated beverages are consumed
- Introduce new foods slowly to assess for effect on consistency of ostomy effluent or the production of gas or odor
- Avoid foods that may increase risk for stoma complications and complaints, such as gas and loose stools

Berti-Hearn L, Elliott B. 2019
Willcutts K, Scarano K, Eddins CW. 2005

forward

LeadingAge Ohio

Dietary Considerations

Complication	Dietary Considerations
Blockage	• Avoid celery, coleslaw, corn, dried fruit, meat casings, mushrooms, nuts, peas, pineapple, popcorn, salad greens, seeds
Gas/Malodor	• Cause gas/malodor: asparagus, apples, beans, beer, Brussels sprouts, broccoli, cabbage, carbonated beverages, cauliflower, hard boiled eggs, fish, milk/dairy products, onions, fried and spicy foods, artificial sweeteners and sorbitol • Relieve gas/malodor: yogurt, buttermilk, cranberry juice, parsley
Change in Stool Consistency	• Cause loose stools: alcoholic beverages, apple juice, baked beans, chocolate, coffee, dairy, grape juice, green leafy vegetables, licorice, prune juice, spicy foods, tomatoes • Thicken stool: applesauce, bananas, cheese, cooked rice, mashed potatoes, creamy peanut butter, soda crackers, tapioca, tea

Berti-Hearn L, Elliott B. 2019
Willcutts K, Scarano K, Eddins CW. 2005

forward

LeadingAge Ohio

Common Stoma Complaints

forward

LeadingAge Ohio

Leakage

- Leading factor for peristomal skin complications
- Appropriate stoma care is necessary to prevent leakage
  - Use an appropriately sized skin barrier – cut to fit leaving only ⅛ inch gap between skin barrier and stoma
  - Use barrier paste, rings, or strips to fill uneven areas of the peristomal plane
  - Use a convex skin barrier if stoma is flush with skin or retracted or if peristomal plane is uneven
  - Empty the pouch when ⅓ to ½ full of effluent or gas; use ostomy filters/vents if ballooning is problematic
  - Use lubricants if pancaking is problematic

Berti-Hearn L, Elliott B. 2019
LeBlanc K, Whiteley I, McNichol L, et al. 2019

forward

LeadingAge Ohio

Fixing the Leak

- Assess patient in all positions while wearing the appliance to identify source of leakage
- Review effectiveness of prevention strategies
- Review the use of accessories as these may be used incorrectly leading to poor pouch adherence
- If not already doing so, use an extended wear barrier for loose or semi-solid stool
- Change pouching system as soon as leakage occurs – do not reinforce with tape

Berti-Hearn L, Elliott B. 2019

forward

LeadingAge Ohio

Gas and Ballooning

- Gas exits the stoma and fills the ostomy pouch
- Prevent and/or manage
  - Use a pouch with a filter or vent
    - Cover filter when showering, bathing, or swimming
    - Change pouch if filter comes in contact with pouch contents
  - Avoid chewing gum
  - Eat slowly and chew food thoroughly
  - Avoid food and drinks known to cause gas: beer or carbonated beverages, artificial sweeteners and sorbitol, beans, cabbage, Brussels sprouts, broccoli, cauliflower
  - Consider adding a gas-relieving product, such as Beano® or Gas-X®

Berti-Hearn L, Elliott B. 2019
Willcutts K, Scarano K, Eddins CW. 2005

forward

LeadingAge Ohio

Malodor

- Pouching systems are odor-proof – if odor is noted when the system is closed, assess for leakage
- Other strategies to address malodor
  - Clean pouch closure system thoroughly after emptying
  - Avoid food and drinks known to cause gas
  - Add feces/gas deodorizers
    - Chlorophyll tablets
    - Bismuth subgallate (Devrom®)
  - Use a lubricating deodorant

Berti-Hearn L, Elliott B. 2019
Willcutts K, Scarano K, Eddins CW. 2005

forward

LeadingAge Ohio

High-Output Stoma

- Produces more than 2000 mL of effluent per day resulting in
  - Frequent appliance changes and leakage; symptoms of dehydration, electrolyte disturbances, and malnutrition may be present
- Potential causes include
  - Less than 200 cm of small bowel and no colon
  - Sepsis, infection (e.g., *c. difficile*), Crohn's disease, radiation/chemotherapy
  - Medication withdrawal (e.g., corticosteroids, opioids)
  - Administration of metformin or prokinetics (e.g., metoclopramide, erythromycin, laxatives)

Willcutts K, Scarano K, Eddins CW. 2005
Gondal B, Trivedi MC. 2013

forward

LeadingAge Ohio

Management of the High-Output Stoma

- Correct dehydration and electrolyte imbalances
- Correct underlying cause, if able
- Reduce output
  - Non-pharmacological intervention: add foods that thicken stool
  - Pharmacological interventions: proton pump inhibitors, loperamide (Imodium®), diphenoxylate-atropine (Lomotil®), somatostatin/octreotide
    - If refractory, trial use of clonidine 0.1 - 0.3 mg up to three times daily

Willcutts K, Scarano K, Eddins CW. 2005
Gondal B, Trivedi MC. 2013

forward

LeadingAge Ohio

Peristomal Skin Complications

forward

LeadingAge Ohio

Medical Device-Related Pressure Injury

- Partial to full thickness tissue damage to the peristomal skin due to
  - Convex or ill-fitting pouching system
  - Ill-fitting ostomy belt – either too tight or poorly positioned
- Provide the appropriate stage
  - Categorized as Stage 1 – 4, unstageable or deep tissue pressure injury
  - Most are Stage 1 or 2, but other stages are possible

Gefen A, Alves P, Ciprandi G, et al. 2020

forward

LeadingAge Ohio

Medical Device-Related Pressure Injury

- Initiate prevention strategies for any patient with a history of peristomal hernia or for those using a convex skin barrier or ostomy belt
  - Examine fit of pouching system - assess patient in all positions
  - Position ostomy belt at 3 and 9 o'clock
  - Use convexity only if needed
  - Avoid convexity if parastomal hernia is present

Berti-Hearn L, Elliott B. 2019
Gefen A, Alves P, Ciprandi G, et al. 2020

forward

LeadingAge Ohio

Medical Device-Related Pressure Injury

- For any patient with a peristomal pressure injury
  - Identify and remove cause
  - Provide localized wound care:
    - Partial thickness tissue loss: apply a hydrocolloid or use the crusting technique to improve pouch adherence
    - Full thickness tissue loss: apply calcium alginate or a gelling fiber dressing (Hydrofiber®) to fill cavities; a hydrocolloid can be applied to shallow areas

Berti-Hearn L, Elliott B. 2019
Gefen A, Alves P, Ciprandi G, et al. 2020

forward

LeadingAge Ohio

Medical Adhesive-Related Skin Injury

- Peristomal Medical Adhesive-Related Skin Injury (PMARSI): an alteration in skin integrity caused by medical adhesive
  - Erythema
  - Skin stripping, skin tears
  - Erosions (loss of the epithelium)
  - Blisters (bullae or vesicles)
- Skin stripping and allergic dermatitis are most common

Brinker J, Protus BM, Kimbrel JM. 2018
LeBlanc K, Whiteley I, McNichol L, et al. 2019

forward

LeadingAge Ohio

PMARSI: Skin Stripping

Prevention	Management
• Remove skin barrier slowly and gently in the direction of hair growth using two hands • Clean skin with mild soap and water; do not scrub, pick or rub peristomal skin • Refrain from using ostomy cement • Use a two-piece pouching systems if frequent pouch changes are requested • Use silicone-based adhesives if possible	• Blisters: apply liquid barrier film • Partial thickness tissue loss: apply a hydrocolloid or use the crusting technique to improve pouch adherence • Full thickness tissue loss: apply calcium alginate or a gelling fiber dressing (Hydrofiber®) to fill cavities; a hydrocolloid can be applied to shallow areas

Brinker J, Protus BM, Kimbrel JM. 2018
LeBlanc K, Whiteley I, McNichol L, et al. 2019

forward

LeadingAge Ohio

PMARSI: Allergic Contact Dermatitis

Prevention: conduct a patch test

1. Apply skin barrier to healthy skin away from stoma
2. Remove after 48 hours and assess skin
   - Positive: erythema in the shape of the skin barrier

Management: remove offending agent

- Inventory current products, including cleansers and pouch deodorizers; conduct a patch test for each product on an unaffected area of the body
- Add a topical or systemic corticosteroid if needed

Brinker J, Protus BM, Kimbrel JM. 2018
LeBlanc K, Whiteley I, McNichol L, et al. 2019

forward

LeadingAge Ohio

Peristomal Moisture-Associated Dermatitis

- Red and inflamed skin with or without partial thickness tissue loss secondary to prolonged or repeated exposure to stoma effluent
- Interventions
  - Identify and address cause of leakage
  - Use the crusting technique to improve pouch adhesion over moist or denuded areas

Brinker J, Protus BM, Kimbrel JM. 2018
LeBlanc K, Whiteley I, McNichol L, et al. 2019

forward

LeadingAge Ohio

Crusting Technique

1. Apply a light dusting of stoma powder to peristomal skin. Remove any excess. If fungal rash is present, use antifungal powder in place of stoma powder.
2. Pat area with liquid barrier film. Allow to dry.
3. Repeat steps two more times.
4. Apply pouching system.

Brinker J, Protus BM, Kimbrel JM. 2018.

forward

LeadingAge Ohio

Peristomal Skin Infections: Folliculitis

- Inflammation or infection of the hair follicles as evidenced by erythema, papules and pustules; pain or pruritus may be present
- Causes include poor shaving practices and traumatic removal of the skin barrier

Prevention

- Shave hair in the direction of hair growth use an electric razor; limit frequency to weekly; shave hair above the level of the skin
- Use adhesive remover to prevent trauma

Management

- Infection: cleanse skin with antimicrobial soap and consider use of antibiotic or silver powder.
- Use the crusting technique to improve pouch adherence – use antibiotic or silver powder in place of stoma powder

Brinker J, Protus BM, Kimbrel JM. 2018
LeBlanc K, Whiteley I, McNichol L, et al. 2019

forward

LeadingAge Ohio

Peristomal Skin Infections: Candidiasis

- Overgrowth of *Candida albicans* secondary to the warm, moist environment created by the pouching system
  - Sources of moisture include perspiration, pouch leakage, and long wear times
  - Predisposing comorbidities/factors, such as the use of corticosteroids or antibiotics; history of diabetes mellitus or immunosuppression
- Characterized by a bright red rash with papules or pustules
  - Burning or itching sensation may accompany the rash

Berti-Hearn L, Elliott B. 2019
Brinker J, Protus BM, Kimbrel JM. 2018
LeBlanc K, Whiteley I, McNichol L, et al. 2019

forward

LeadingAge Ohio

Peristomal Skin Infections: Candidiasis

Prevention	Management

• Address the cause: perspiration, leakage
  • Perspiration: apply stoma powder prior to applying skin barrier
  • Leakage: review prevention and management strategies
	• Topically: apply antifungal powder, may use crusting technique to improved pouch adherence; change appliance with each application of powder
	• Systemically: consider if severe or multiple areas of the body are involved

Berti-Hearn L, Elliott B. 2019
Brinker J, Protus BM, Kimbrel JM. 2018
LeBlanc K, Whiteley I, McNichol L, et al. 2019

forward

LeadingAge Ohio

Patient Case: Mr. Baker

- Loop ileostomy performed after a diagnosis of rectal cancer
- Four months after hospital discharge, patient experienced ostomy appliance leakage causing red and inflamed peristomal skin with areas of partial thickness tissue loss

forward

LeadingAge Ohio

Patient Case: Mr. Baker

- Assessment concerns
  - Areas of red and inflamed intact skin as well as non-intact skin
  - Uneven peristomal skin
- Current appliance
  - Cut-to-fit flat skin barrier, standard wear
  - Drainable pouch
  - Ostomy paste around opening

Eakin. 2021

forward

LeadingAge Ohio

Patient Case: Mr. Baker

- Plan of care: resolve peristomal moisture-associated dermatitis
  - Measure stoma size to ensure fit is appropriate
  - Apply a barrier ring to peristomal skin immediately surrounding stoma
  - Use crusting technique to other areas of red and inflamed peristomal skin
  - Apply soft convex skin barrier, extended wear with stoma paste to fill gaps
  - Use a drainable pouch, empty when, at most, ½ full

Eakin. 2021

forward

LeadingAge Ohio

Key Points

- Use the anatomy of the stoma to organize assessment – assess and document the appearance of the stoma, mucocutaneous junction, peristomal plane and holistic patient
- Peristomal skin should be clean, dry and intact. Any discoloration or alteration in skin integrity warrants further investigation and intervention.
- Ostomy pouching systems and accessories are designed to reduce common complaints and prevent peristomal skin damage, but these are effective only when used correctly.

forward

LeadingAge Ohio

Thank you!

Joni Brinker, MSN/MHA, RN, WCC
Clinical Nurse Educator
joni.brinker@optum.com

forward

LeadingAge Ohio

References

- United Ostomy Associations of America, Inc. 2021a. Living with an ostomy: FAQs. Available at: https://www.ostomy.org/living-with-an-ostomy/
- UpToDate. June 9, 2020. Ileostomy and colostomy care and complications. Available at: https://www.uptodate.com/contents/ileostomy-or-colostomy-care-and-complications
- United Ostomy Associations of America, Inc. 2021b. What is an ostomy? Available at: https://www.ostomy.org/what-is-an-ostomy/
- Berti-Hearn L, Elliott B. Colostomy care: a guide for home care clinicians. *Home Healthcare Now*. 2019;37(2):68-78.
- Willcutts K, Scarano K, Eddins CW. Ostomies and fistulas: a collaborative approach. Practical Gastroenterology. 2005; 63-79.
- American Cancer Society. 2021. Types of colostomies and pouching systems. Available at: https://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery/ostomies/colostomy/types-of-colostomies.html
- Hooper J. Stoma assessment. Wound Care Education Institute. 2016. Available at: http://www.shieldhealthcare.com/community/wp-content/uploads/2016/10/StomaAssessmentHandout.pdf
- Hollister. 2021a. Stoma measuring guides. Available at: https://www.hollister.com/en/ostomycare/ostomy-clinical-education/patient-education/stoma-measuring-guides#
- Hollister. 2021b. New image convex flexwear skin barrier. Available at: https://www.hollister.com/en/products/ostomy-care-products/two-piece-pouching-systems/skin-barriers/convex-skin-barriers/new-image-convex-flexwear-skin-barrier
- Convatec. 2021. Choosing the ostomy system that's right for you. Available at: https://www.convatec.com/ostomy/ostomy-product-information/choosing-the-ostomy-system-thats-right-for-you/
- Kent D. Changing an ostomy pouching system. *Nursing*. 2008;38(12): 50-54.
- Coloplast. 2020. Ostomy pouching systems. Available at: https://www.coloplast.us/Global/US/Ostomy/Professional/Wellness%20Articles/Pouching%20Systems.pdf
- Express Medical Supply. 2021. Eakin Cohesive Paste. Available at: https://www.exmed.net/introducing-eakin-cohesive-paste
- Hollister. 2021a. Adapt Barrier Rings. Available at: https://www.hollister.com/en/products/ostomy-care-products/ostomy-accessories/barrier-rings-and-strips/adapt-barrier-rings
- LoCost Medical Supply. 2020. Hollister Adapt Barrier Strips. Available at: https://www.locostmedicalsupply.com/hollister-adapt-barrier-strips.html?gclid=EAIaIQobChMI4ffW1ejg8QIVpmpvBB2nCg6VEAQYAyABEgJJY_D_BwE
- Jones H. Colostomy irrigation (part 1): impact on quality of life. *Gastrointestinal Nursing*. 2021;19(3): https://doi.org/10.12968/gasn.2021.19.3.24
- Page H. Colostomy irrigation (part 2): contraindications, barriers to uptake, adherence and nursing education. *Gastrointestinal Nursing*. 2021. 19(5): https://doi.org/10.12968/gasn.2021.19.5.22
- Hollister. 2021b. Cone Irrigator Kit. Available at: https://www.hollister.com/en/products/ostomy-care-products/ostomy-accessories/irrigation/cone-irrigator-kit
- Hollister. 2021c. Adapt Barrier Extenders. Available at: https://www.hollister.com/en/products/ostomy-care-products/ostomy-accessories/barrier-rings-and-strips/adapt-skin-barrier-extenders
- Hollister. 2021d. Adapt Ostomy Belt. Available at: https://www.hollister.com/en/products/ostomy-care-products/ostomy-accessories/ostomy-belts/adapt-ostomy-belt
- Medical Supply Depot. 2021. Ostomy bonding cement. Available at: https://www.medicalsupplydepot.com/Ostomy-Supplies-1/Bonding-Adhesive/Liquid-Bonding-Cement.html
- LeBlanc K, Whiteley I, McNichol L, et al. Peristomal medical adhesive-related skin injury. *J Wound Ostomy Continence Nurs*. 2019; 46(2)125-136.
- Gondal B, Trivedi MC. An overview of ostomies and the high-output ostomy. *Hosp Med Clin 2*. 2013: e542-e551.
- Gefen A, Alves P, Ciprandi G, et al. Device-related pressure ulcers: SECURE prevention. *Journal of Wound Care*. 2020; 29(Sup2a): https://doi.org/10.12968/jowc.2020.29.Sup2a.S1
- Brinker J, Protus BM, Kimbrel JM. 2018. Wound Care at End of Life. 2nd ed. Montgomery: Optum Hospice Pharmacy Services.
- Eakin. 2021. Choose eakin cohesive seals when treating moisture associated skin damage. Available at: https://www.eakin.eu/stoma-case-studies/treating-moisture-associated-skin-damage/