



# SOAPPS

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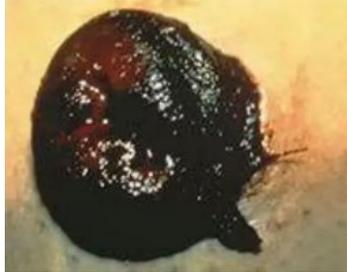
## Practical Tips for Management of Pediatric Ostomy Complications

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*This document is intended to identify some of the most common complications with pediatric ostomies and offer practical tips for best management and divided into three sections: complications with the stoma, complications with the peri-stomal skin, complications with stoma management.*

### 1-Complications with the STOMA:

	Definition	Intervention / Treatment	Image
<b>PROLAPSE</b>	<p>Full-thickness telescoping protrusion of bowel through a stoma</p> <p>Typically, a late complication: more common in colostomies</p> <p><b>Graded 1-4</b> Grade 1 and 2 allow for conservative bedside management. Grade 3 and 4 with severe pain, stoma injury, incarceration and ischemia, require elective or emergent surgical intervention.</p>	<p>Conservative: Grade 1-reducible Grade 2-recurrence after manual reduction</p> <p><b>Prevention</b> Avoid heavy lifting(postoperatively) Maintain healthy weight. Use supportive garments during exercise</p> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>• Provide sufficient space for prolapse to prevent friction of stoma</li> <li>• Sugar application</li> <li>• Peristomal skin protection</li> <li>• Rigid, protective, dome cover over the stoma during activities that have a potential for forceful injuries, such as contact sports or physical labor</li> </ul>	

<b>RETRACTION/ FLUSH STOMA</b>	Stoma lays flat or below skin surface level	<ul style="list-style-type: none"> <li>• Surgical Revision</li> <li>• Peristomal skin protection</li> <li>• Convex barrier</li> <li>• Stomahesive paste</li> <li>• Barrier Strips</li> <li>• Belt</li> <li>• Surgical revision</li> <li>• Call surgeon if constant leakage, inability to have appliance stick, skin breakdown and/or change in stoma output</li> </ul>	
<b>NECROSIS</b>	<p>Necrosis is death of stomal tissue due to impaired blood flow that typically occurs within 24 hours of ostomy surgery resulting in a dark, necrotic stoma.</p> <p>Causes of stomal necrosis include varied factors such as constricting sutures, excessive mesenteric tension, emboli, hypotension/hypovolemia, excessive edema, or pressure from a skin barrier/wafer that is too tight.</p>	<ul style="list-style-type: none"> <li>• Assess the color of the stoma and mucosal appearance every 8 hours for the first 72 hours after surgery. Notify the surgeon if color is not red/pink</li> <li>• Extent of necrosis can be assessed by gently passing a small, well-lubricated glass tube into the stoma and visualizing the lumen using a penlight - Use extreme caution in a neonate or infant</li> </ul>	
<b>BLEEDING</b>	The stomal mucosa contains many small blood vessels close to the surface, which can lead to superficial bleeding from minor trauma.	<ul style="list-style-type: none"> <li>• If minor bleeding does not stop, direct pressure can be applied with a cold compress. Consider wrapping stoma in Surgicel. For excessive bleeding, apply silver nitrate</li> <li>• Pouching system that avoids pressure or trauma such as a flexible one-piece or two-piece pouching system with an adhesive coupling and an appropriately sized opening to avoid constriction</li> <li>• Rigid, protective, dome cover over the stoma during activities that have a potential for forceful injuries: contact sports or physical labor</li> </ul>	
<b>LACERATION / TRAUMA</b>	Cut or tear that is most often caused by trauma or pressure from an improperly sized or	<ul style="list-style-type: none"> <li>• Identify and eliminate the causative factor</li> </ul>	

	misaligned opening in the skin barrier/wafer or poor pouching technique.	<ul style="list-style-type: none"> <li>Assess the stoma for bleeding and apply direct pressure or topical hemostatic agents, such as silver nitrate, to control bleeding</li> </ul>	
<b>HYPERPLASIA</b>	Stomal hyperplasia is an overgrowth of tissue on the stoma from excessive exposure to stomal effluent.	<ul style="list-style-type: none"> <li>Evaluate the fit of the pouching system and adjust the size of the opening in the skin barrier/wafer to prevent irritation/trauma to the stoma and minimize exposure to effluent</li> <li>Use a gentle technique for cleansing and care of the stoma and peristomal skin</li> </ul>	

## 2-Complications with PERI-STOMAL SKIN

	Definition	Intervention / Treatment	Image
<b>Moisture Associated Dermatitis</b>	<p>Inflammation and erosion of the peristomal skin due to prolonged exposure to stool, perspiration, or wound exudate; may extend up to a 4 inch radius from the stoma/skin junction (Colwell et al., 2011).</p> <p>Volume of output, location of the stoma on the abdomen and if the stoma is well budded all affect the peristomal skin.</p> <p>Mechanical skin stripping, and prolonged wear of the skin barrier/wafer can damage the surrounding skin.</p> <p>Prolonged wearing of the barrier/wafer will cause faster erosion of the skin causing moisture to be in contact with the peristomal skin.</p>	<ul style="list-style-type: none"> <li>Determine the cause of the moisture and what pouching system will work the best for the patient.</li> <li>Use a cut-to-fit skin barrier/wafer for the first 6 weeks after surgery and for irregularly shaped stomas.</li> <li>Consider convexity for a flush stoma or if abdominal creases/folds are present. A belt can help improve convexity.</li> <li>Consider the use of moldable barrier rings to increase the seal and change the bag on a regular basis.</li> <li>Cut the bag no more than 1/8 inch larger than stoma.</li> <li>Use a “push/pull” technique for removal of the pouch (i.e., push down on the skin during removal while gently pulling up on the skin barrier/wafer.</li> <li>Gently cleanse the skin with warm water to remove the effluent and digestive enzymes. Do not use soap as this could affect the adherence of the new pouch.</li> </ul>	

		<ul style="list-style-type: none"> <li>• Clean the area with Vashe 5 minutes daily or with Aveeno/Domeboro soaks 5 minutes QD to help with the denuded moist skin</li> <li>• Apply a light layer of stoma powder to the moist skin and seal the powder with an alcohol-free skin barrier/sealant.</li> <li>• Over application will cause the bag to not stick well and decreased overall wear time</li> <li>• Never apply no sting more than once every 24 hours</li> </ul>	
<b>Allergy / Contact Dermatitis</b>	<p>Allergic contact dermatitis is an inflammatory response due to a hypersensitivity to chemical elements in products (e.g., skin barrier/wafer, skin pastes, wipes, tape) that contact the peristomal skin (Husain &amp; Cataldo, 2008; WOCN, 2010).</p> <p>The irritated area on the skin is the same size and shape as the irritant/allergen that is suspected.</p> <p>Symptoms may vary from mild redness to severe blistering or burning/skin breakdown.</p>	<ul style="list-style-type: none"> <li>• Consider patch testing to determine the allergen</li> <li>• Switch to a pouch without tape collar or switch pouch brand if problem persists</li> <li>• Topical anti-inflammatory products can be utilized but may cause difficulty with bag sealing</li> <li>• Domeboro/Aveeno soak x 5 minutes QD for weepy skin</li> <li>• Stop paste which often contains alcohol if being used and switch to moldable ring</li> <li>• Refer the patient to a dermatologist if not responding</li> </ul>	
<b>Mucocutaneous separation</b>	<p>A mucocutaneous separation is an early postoperative complication in which there is a partial or complete separation of the stoma from the surrounding skin (Butler, 2009; WOCN, 2010).</p> <p>Separation can lead to retraction of the stoma.</p>	<ul style="list-style-type: none"> <li>• Irrigate the separated area with normal saline and fill in with absorptive powder or a calcium alginate dressing</li> <li>• If drainage from the separation causes issues with the bag seal, it may be necessary to cover the filler material with an additional dressing (e.g., hydrocolloid)</li> </ul>	

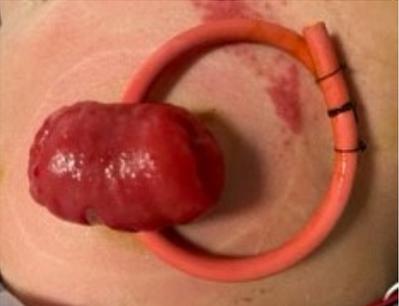
<p><b>Candidiasis / Fungal</b></p>	<p>A common cause of fungal infections in patients with stomas is an overgrowth of Candida</p> <p>It presents as pustules or papules with diffuse erythema, and maceration</p> <p>Common risk is prolonged exposure to moisture, immunosuppressants, corticosteroid therapy, diabetes mellitus, and use of antibiotics (Colwell, 2004; WOCN, 2007, 2010).</p>	<ul style="list-style-type: none"> <li>• Assess the fit of the pouching system to</li> <li>• minimize exposure of the skin to effluent; resize the stomal opening in the skin barrier/wafer as needed.</li> <li>• Use an antifungal powder and alcohol-free skin sealant prior to applying the bag. Avoid antifungal cream, which can lead to lack of adherence.</li> <li>• Clean with vashe 5 minutes QD. Crust method: nystatin powder/ no sting skin prep. May have to repeat 1-2x to create a sandpaper feel.</li> </ul>	
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### 3-Complications with STOMA MANAGEMENT

	Definition	Intervention / Treatment	Image
<p><b>LEAKAGE</b></p>	<p>One of the most common problems with ostomy management. Occurs when the appliance does not stay adhered for the expected amount of time.</p>	<ul style="list-style-type: none"> <li>• Prolonged exposure to effluent can lead to moisture-associated dermatitis and skin erosion, complicating pouching</li> <li>• Follow manufacturer's recommendation for product use (ie use of skin prep, change frequency, age appropriateness)</li> <li>• Asses the stoma for obvious issues such as prolapse, retraction or placement such as in a skin fold</li> <li>• Consider adding paste or moldable barrier to increase wear time and fill gaps</li> <li>• Consider use of non-alcohol skin prep to protect skin before appliance placement</li> <li>• Refer to retracted or prolapsed stoma for recommendations for management</li> <li>• Unlike adult appliances, pediatric choices are limited, especially for babies</li> </ul> <p><b>For SKIN BREADOWN:</b></p>	

		<ul style="list-style-type: none"> <li>• Cleanse the skin with warm water and pat dry</li> <li>• Apply a dusting of STOMA POWDER and brush off excess</li> <li>• Seal with a non-alcohol skin prep</li> <li>• May repeat these steps if skin still appears moist after application</li> <li>• This is often referred to as the 'crusting method' with a goal of achieving dry skin</li> <li>• Consider increasing frequency of appliance change until product adaptation has addressed unexpected leakage</li> </ul> <p>Consider trying alternate products or addition of hydrocolloids (i.e. Triad), barrier strips or silicone or waterproof tape to achieve adequate appliance seal</p>	
<b>Umbilical stump</b>	<p>The umbilical stump is located adjacent to the stoma.</p> <p>A skin barrier placed over the umbilical stump will keep it moist, delaying detachment.</p> <p>The moisture from the stump and the uneven skin surface produces a pouching challenge.</p>	<ul style="list-style-type: none"> <li>• Offset the stoma opening and trim the edge of the barrier to avoid the umbilicus</li> <li>• Consider 'picture framing' the appliance with silicone or waterproof tape, thin hydrocolloid or transparent film to prevent moisture from the umbilicus loosening the edge of the barrier</li> </ul>	
<b>Incision line</b>	<p>The stoma sets within or adjacent to an incision line</p>	<ul style="list-style-type: none"> <li>• Protect the incision line with an absorptive dressing such as a hydrofiber secured with a thin hydrocolloid or transparent film to increase pouching surface area</li> <li>• Add a thin strip of paste or barrier ring around the cut opening in the skin barrier</li> <li>• Apply the skin barrier over the protected incision line</li> </ul>	

<p><b>Open wound</b></p>	<p>The stoma sits within or adjacent to an open wound</p> <p>Determine most effective type of wound management related to wound and stoma location, wound size, and drainage</p>	<p><b>NPWT:</b> Follow your facility's policy:</p> <ul style="list-style-type: none"> <li>• The NPWT dressing is applied first leaving the stoma(s) exposed</li> <li>• Use of non-alcoholic skin barrier /sealant to the skin before application can prevent skin stripping with removal</li> <li>• Apply the skin barrier to overlap onto the NPWT dressing</li> <li>• Use of moldable barrier rings or paste may improve the appliance seal</li> <li>• Follow manufacturer's guidelines for dressing change frequency and negative pressure settings. Lower negative pressure settings are usually used in pediatric patients</li> <li>• Consider pain management prior to dressing changes</li> </ul> <p><b>Wound Dressing:</b></p> <ul style="list-style-type: none"> <li>• Determine type of dressing most appropriate for wound management; absorbent / moisture retentive, conformability, antimicrobial, age appropriate</li> </ul> <p><i>Examples:</i></p> <p><b>Absorptive:</b> dry hydrofiber or calcium alginate to manage drainage</p> <p><b>Moisture retentive:</b> NS moist hydrofiber, or calcium alginate or hydrogel to maintain moisture</p> <p><b>Antimicrobial:</b> kills or inhibits the growth of microorganisms in the wound</p> <ul style="list-style-type: none"> <li>• Secure the dressing in place with transparent film or thin hydrocolloid leaving stoma(s) exposed</li> </ul>	
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<b>Retention ring/rod/bridge in stoma</b>	A retention ring, rod or bridge is often used temporarily with a loop stoma until the site is healed	<p>This is a temporary situation as the bridge is usually removed 7-10 days after surgery</p> <ul style="list-style-type: none"> <li>• A two-piece appliance is often easier to manage as the barrier alone can be more easily manipulated during placement</li> <li>• Depending on the type of bridge used, the barrier may need to be notched out to accommodate it</li> </ul>	
<b>CENTRAL LINE</b>	Stoma is located in close proximity to a central line (CL)	<ul style="list-style-type: none"> <li>• Close attention must be paid to avoid contamination of central line dressing</li> <li>• Ensure that the central line dressing is secure and intact before performing ostomy care</li> <li>• Consider protecting the CL dressing during ostomy care with a dressing bordered by a strip of waterproof tape or transparent film over the CL dressing</li> <li>• Monitor the ostomy appliance integrity and change as soon as sign of leakage occurs</li> </ul>	

<p><b>HERNIATION</b></p>	<p>A defect in the fascia that allows a loop of intestine to protrude through an area of weakness into overlying skin, demonstrating a noticeable bulge in the area of the stoma</p>	<p>Assess the fit of the appliance system:</p> <ul style="list-style-type: none"> <li>• *may need to adjust the size, shape or type of skin barrier to accommodate the bulge</li> <li>• One piece pouching systems are generally more flexible to accommodate a rounded surface area</li> <li>• Adhesive coupling systems are more flexible than those that snap together with a flange</li> <li>• A belt or binder may help with adherence. Apply while lying flat as the hernia will be at its most reduced vs being upright</li> <li>• Monitor for any signs of incarceration or obstruction as these may warrant surgical intervention. S/S: discoloration of the stoma, usually darkened, abdominal pain, decreased or absent output, N/V, and loss of appetite</li> <li>• If stoma closure is planned, may consider waiting until that time</li> <li>• If stoma closure is not planned, may consider surgical repair of hernia</li> </ul>	
<p><b>OBSTRUCTION</b></p>	<p>Evidenced by a decline or absence of output from the stoma that can be caused by multiple factors including:</p> <p>1. Absence of peristalsis resulting in paralytic ileus</p> <p>-Possible etiologies: recent abdominal surgery, medications, spinal or metabolic disease, or trauma</p> <p>2. Pathologic causes can result in a surgical emergency.</p> <p>-Possible etiologies:</p>	<ul style="list-style-type: none"> <li>• Teach patients and families the signs and symptoms to report</li> <li>• For children who are on a regular diet, avoid high-fiber foods for 6 weeks after surgery. Refer to Nutrition for specific recommendations.</li> <li>• Slowly introduce new foods after the initial 6 weeks and monitor effect.</li> </ul> <p><b>Interventions:</b></p> <ul style="list-style-type: none"> <li>• Warm bath</li> <li>• Remove or replace the appliance with a larger system to accommodate stoma swelling</li> <li>• Add small cuts around the cut-out area of the barrier to allow for expansion</li> </ul>	

	<p>Crohn’s dz, adhesions, strangulated hernia, food blockages, epithelial hyperplasia, or trauma</p> <p>-Complete obstruction is more common with an ileostomy</p> <p>-Inadequate fluid intake, inadequately chewed food or too much high fiber food can create a mechanical obstruction</p> <p><b>Signs/Symptoms:</b></p> <p>-Presentation may vary</p> <p>-foul smelling, watery stool</p> <p>-Abdominal cramping / distension</p> <p>-Nausea / vomiting</p> <p>-Stomal swelling</p> <p>-Inability to pass flatus or stool</p>	<ul style="list-style-type: none"> <li>• Place child in side lying position with knees bent up and massage peristomal area</li> <li>• Increase fluid intake if not vomiting</li> <li>• Consider irrigating stoma or placing red rubber catheter</li> </ul>	
<p><b>HIGH OUTPUT STOMA</b></p>	<p>The location and type of stoma directly affects the type and volume of stoma output.</p> <p>Colon: right or transverse colostomies have more liquid or output with higher volume than left sided colostomies</p> <p>Small bowel: output is generally liquid of loose and often have higher volume</p> <p>Higher output is most often related to extensive bowel resection, diseases such as Crohn’s disease, infection or medications</p> <p>Excessive fluids loss can lead to dehydration and electrolyte imbalance</p>	<ul style="list-style-type: none"> <li>• Management may require a combination of fluid and electrolyte replacement, vitamin supplements and medications appropriate according to the age of the patient to decrease the output to an acceptable volume.</li> <li>• Patients should be closely monitored for S/S dehydration</li> <li>• Consultation from a dietician should be considered to optimize intake of foods that can thicken the stool and limit foods known to increase or loosen stool output</li> <li>• Appliance adaptation may be needed to accommodate large volume output</li> <li>• Frequent emptying of the pouch may be necessary</li> <li>• Placement of cotton balls in the pouch may help absorb excess fluid</li> </ul>	

**References:**

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