

A hygiene centric paradigm shift in ostomy care

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The purpose of this paper is to educate and inform nurses, ostomates, doctors and other members of the healthcare community about a new hygiene-centric approach to ostomy care management.

Loss of continence Impact

An ostomy is a surgical reconfiguration of the intestines or urinary tract where stool, urine or mucus is diverted to the outside of the body through a surgically created opening called a stoma. Individuals with urinary or fecal stomas have no control over the frequency or volume of output from their stoma. The loss of continence can have a detrimental impact on the health and social lives of an ostomate. The goal for many new ostomates is to master the care of their ostomy and resume the lifestyle they held before ostomy surgery. Providing strategies for everyday ostomy management, and for how to cope with situations that may challenge usual activities and daily living routines is vital to the success of the ostomate's rehabilitation and quality of life.

Ostomy care challenges

The most frequently expressed concerns of persons either planning for ostomy surgery or for those with an ostomy include the concern for odor and the fear of leakage. Teaching basic ostomy care and proper application techniques can help lessen these fears. There are products available to manage odor, however, leaking is often unpredictable and may occur at the most inopportune times. Leaking is generally associated with poor adhesion of the baseplate to the peristomal skin.

Some of the causes for poor adhesion include:

- Unsuccessful preparation of the peristomal skin prior to application of the baseplate.
- Poor peristomal skin condition providing a suboptimal surface for baseplate adhesion.
- Effluent or urine being trapped beneath the baseplate during the replacement process.

Many ostomates have challenges related to body shape and the specific location of their stoma. Dimples, creases, scar tissue and other malformations present obstacles for perfect baseplate adhesion. There are a variety of accessory products available to address and mitigate these conditions and create a suitable surface for baseplate adhesion. Application of these products requires adequate time during the baseplate replacement process, but uncontrolled output often leads to a rushed process, unsuccessful preparation of the peristomal skin, and poor application of remedial products prior to applying the baseplate. When applied ineffectively, products that are intended to create a suitable surface for adhesion do little to prevent leaking.

Breakdown of the peristomal skin is common among ostomates. According to studies published in the Journal for Wound Ostomy and Continence Nursing, over one-third of ostomy patients developed peristomal skin complications (PSCs) within 90 days of their surgery, and PSCs are associated with a greater likelihood of hospital readmission.¹

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PSCs are caused by a number of factors including moisture associated skin damage (MASD), medical adhesive related skin injury (MARI), and adverse or allergic reaction to product materials and ingredients. The breakdown of the peristomal skin can create a suboptimal surface for baseplate adhesion, often leading to the need for more frequent changes or unexpected leaking.

Additionally, uncontrolled output during the baseplate replacement process can lead to effluent or urine contaminating the ostomate's skin. Make-shift methods for wiping and removing output often provide inadequate cleaning and drying of the peristomal skin, and result in urine or fecal residue being trapped beneath the new baseplate.

This caustic residue can lead to breakdown of the skin, deterioration of the underside of the baseplate and compromised adhesion, resulting in leakage.

Providing ostomates the necessary tools and training to manage their ostomy appliance change in a hygienic manner may help them achieve better adhesion in the replacement of their baseplate, reduce the risk of baseplate failure, alleviate the fear of leakage, and improve their confidence and self-reliance.

Capture during change

The proposed solution requires a shift in the ostomy care paradigm, and a modification to the standard of care for ostomates. The specific technique supporting this new standard of care is referred to as "capture during change" and presents a simple solution to a chronic problem. Capture, containment and disposal of stoma waste during the baseplate replacement process, presents the ostomate or caregiver

with improved chances of successful application of the new pouching system. Learning to use a capture device in the baseplate replacement process, improves overall confidence in obtaining a good appliance placement which reinforces a sense of security for the ostomate.

Some of the advantages of capturing output during the appliance changing process include:

- Control over the pace and timing of the baseplate replacement process.
- Limit or eliminate contact of caustic output with the ostomate's skin.
- Reduce contamination of the environment.
- Lessen the anxiety associated with the baseplate replacement process.

**36.3% of patients
had evidence of peristomal
skin complications (PSC) within
90 days of ostomy surgery.**

The unpredictable nature of effluent output causes the ostomate to rush through appliance changes, leaving little time to properly treat and prepare the peristomal skin for baseplate application. However, using a disposable, ready-made device to contain the

effluent, enables the ostomate to control the process and perform proper peristomal skin care. This allows the time necessary for the skin to thoroughly dry before applying the new baseplate. This simple modification to ostomy care provides the ostomate a sense of confidence and control.

Capturing stoma output in a ready-made, disposable device, also limits or eliminates the chance that effluent or urine will come into contact with the ostomate's skin, reducing the chance that effluent or urine will be trapped beneath the new baseplate.

Completing the appliance replacement process with a disposable capture device reduces the

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contamination of the environment. The ostomate or caregiver simply seals the cartridge with a plug and disposes of the cartridge in a household waste can, rather than handling tissues or gauze that need to be discarded, or laundering towels and other linens.

Many ostomates express concerns about changing their appliance during travel or visiting others away from their home; often afraid of making a mess. Having the ability to protect the environment (and themselves) from effluent by using the disposable capture cartridge may reduce anxiety and increase confidence to manage the unexpected leak/need to change that occurs away from home, thus encouraging resumption of the ostomate's social activities.

The capture during change technique introduces a hygiene-centric protocol for ostomy appliance management and enhances the standard of care for ostomy patients.

Capture during examination

Ostomates surveyed at an ostomy support group noted reluctance by their primary care physicians and surgeons to assess stoma and peristomal skin issues, for the reason of environmental contamination from stoma effluent. Any reluctance to examine the stoma or peristomal skin could lead to prolonged or worsening health issues. The ability to manage stomal output using the capture cartridge alleviates this concern. The disposable capture cartridge allows the ostomate to remove their appliance and expose their stoma, without fear of contaminating the area in which the examination occurs. Having the capture cartridge in place to manage the effluent allows

the clinician to take the necessary time to examine the peristomal skin condition, develop a plan of care and instruct the ostomate. When the examination is complete, the clinician simply seals the cartridge with a plug and disposes of the unit in a standard waste receptacle.

Proper baseplate alignment

For ostomates using a two-piece appliance, a disposable capture cartridge may also aid in the proper alignment of the baseplate over the stoma. For ostomates with visual impairments

or with a stoma that is placed in a location that is difficult to see, being able to center their baseplate appropriately can be challenging. Using a capture cartridge, the ostomate can rely on their sense of touch and feel to locate their stoma and put the device in place. With the capture

cartridge in place over the stoma, the new baseplate may be guided over the capture cartridge with ease and will be properly aligned for optimal function and adherence.

It should be noted that ostomates using a one-piece pouching appliance will benefit equally from the capture, containment and disposal of stoma output, even though it is less practical to use the capture cartridge for alignment of a one-piece appliance.

Conclusion

As an ostomy nurse my primary goal is to encourage, instruct and provide methods of ostomy management that allow the ostomate to live life to the fullest. The new hygiene-centric capture during change protocol provides the perfect means to achieve this goal.

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Case Studies Illustrating impact of using a capture cartridge during pouching system changes²

Case 1 - Mrs. Jones is a healthy and active 68-year-old with a 1 ¼" diameter, ¾" protruding stoma, permeant ileostomy, with occasional skin irritation. Since surgery (4 months prior to this study), Mrs. Jones has depended on her husband, Mr. Jones to change her ostomy pouching system.

Issues and concerns: Mrs. Jones resisted changing her pouching system by herself based on her concerns for the inability to control stoma output during the change, the lack of time to adequately dry and treat her peristomal skin, and the inability to accurately align her new baseplate due to trembling in her hands.

Intervention and outcome: Mr. & Mrs. Jones were provided a package of 10 capture cartridges to assist the couple in changing the pouching system, typically every three days. The capture cartridge was used by the couple on multiple occasions, when Mrs. Jones proposed that she try changing the pouching system by herself. Using the capture cartridge, she successfully completed the pouching system replacement and was ecstatic and proud of her newly mastered skill. The capture cartridge technique allowed Mrs. Jones to regain her independence and she no longer required assistance during the ostomy pouching system replacement process. Mr. Jones stated, "My wife was actually able to change her bag/barrier herself without any help using the [capture cartridge] – a giant step for womankind!"

Case 2 - Ms. Doe is 87 years old with a 1" diameter, ¾" protruding oval shaped stoma, permeant ileostomy, with occasional skin irritation, and more than 4 peristomal skin infections over the previous 12-month period. Ms. Doe's son has assisted with changing her pouching system over the previous 7 years.

Issues and concerns: Ms. Doe and her son were in search of a new method for changing her pouching system. Their primary concern was the sanitary aspect of the change and the required cleanup following the pouching system replacement due to unexpected effluent output.

Intervention and outcome. Ms. Doe and her son were provided with a package of 10 capture cartridges to assist in changing her pouching system. The capture cartridge was used to capture effluent output and align the baseplate. Using the capture cartridge technique helped successfully capture effluent output and align the baseplate over Ms. Doe's stoma. The new technique made the changing process easier and more hygiene friendly for the caregiver. Mrs. Doe's son stated "I had my mom hold the tube on her stoma while I cleaned and dried around it. I then slipped the barrier over the tube and applied it to the skin. - I would have loved using this around 7 years ago when I was just learning how to do this especially when it was constantly active."

Case 3 - Mr. Smith is a healthy 68-year-old with a 1" diameter, ¾" protruding oval shaped stoma, permeant ileostomy (over two years post-surgery), with occasional skin irritation.

Issues and Concerns: Mr. Smith has no assistance during the changing process and often has problems aligning the baseplate directly over the stoma, occasionally causing skin irritation.

Intervention and outcome. Mr. Smith was provided with a package of 10 capture cartridges to use when changing the pouching system. The capture cartridge was used to capture effluent output and assist Mr. Smith with aligning the baseplate over the stoma. Using the capture cartridge technique helped Mr. Smith with the changing process, making it easier for self-application and allowed Mr. Smith to properly

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align the baseplate over his stoma. Mr. Smith stated “I have used your product every time since I received it. - I find the alignment VERY useful and it helps get things correct where it can be difficult to do without it. - I love how much simpler it is to align things. It also lets me get the cutout closer to the stoma which results in much less seepage/leakage.”

1 – Journal of Wound Ostomy Continence Nursing. 2019;46(2):143-149. Published by Lippincott Williams & Wilkins; Risk and Economic Burden of Peristomal Skin Complications Following Ostomy Surgery; Charu Taneja, et al

2 – 2018 user study conducted by Stomagienics Research & Development; 10 ostomy patients over 60 days