

# Using Evidence in Stoma Care Can Improve Patient Outcomes

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## I

### Abstract

Patients after ostomy surgery are at great risk of developing peristomal skin complications (PSCs) in the early post-operative period.<sup>1</sup> Additionally, patients with an ileostomy are almost 10 times more likely to develop a PSC than colostomies.<sup>1</sup> It is also cited in a study that 63% of 43 patients experienced their peristomal skin complications within the first 21-40 days after surgery<sup>2</sup> and this resulting peristomal skin damage has been shown to negatively impact a person's quality of life (QoL).<sup>3</sup> As such, it could be concluded from these evidence-based citations that it is imperative to address patient needs earlier in this post-operative phase as a goal of care in optimising outcomes throughout their journey.

This case study follows the experience of an elderly patient with a complex medical history who required emergency surgery for ischaemic colitis. She faced multiple challenges immediately after surgery, however some of these were not addressed fully until further review when she was re-admitted specifically for the management of her severe peristomal skin complications.

### Background & Surgical History

Mrs. M (initial changed to protect privacy) is an eighty-one-year-old female who presented to our hospital with a three-day history of peri-umbilical pain. Initially this was of sudden onset and associated with a loss of appetite and nausea.

Mrs. M has a past medical history of inflammatory bowel disease (IBD), and states that her bowel habits are normally irregular. Additionally, she suffers from diverticular disease. She has a past medical history of pulmonary embolus for which she is managed with oral anti-coagulant therapy – warfarin. She also suffers from hypertension and chronic kidney disease. Mrs. M resides in an aged care facility and is fully independent in managing her activities of daily living.

Mrs. M was originally admitted with presumed right sided colitis due to ongoing severe abdominal pain and constipation. Her bowels had not worked for several days. This led to the concerning diagnosis of ischaemic colitis. Ischaemic colitis occurs when blood flow to part of the large intestine (colon) is temporarily reduced, usually due to constriction of the blood vessels supplying the colon or lower flow of blood through the vessels due to low pressures.<sup>4</sup> Ischaemic colitis is more common in females, people aged over sixty, and those with clotting abnormalities.<sup>4</sup> Complications of this condition can include tissue death and/or perforation meaning urgent intervention is required.<sup>4</sup>

### Surgical Interventions

Mrs. M initially underwent a diagnostic laparoscopy. Findings during this exploratory procedure determined an open right-sided hemicolectomy and formation of ileostomy was necessary. She was eventually discharged a little over three weeks later, following a longer recovery period due to her advanced age and various medical conditions. On discharge, her stoma was protruding, and her output was quite fluid. She was originally recommended a comfortable flat pouching system, and she appeared to be managing her pouching system adequately at the time of discharge.



**Figure 1** Flush ileostomy, PMASD and visible skin damage



**Figure 2** Some visible progress using the crusting technique



**Figure 3** Leakage resolving and steady improvement in skin appearance

## LEVEL OF EVIDENCE - CASE STUDY

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### Nursing Interventions

Within a week post-discharge, she presented to our Emergency Department due to severe peristomal moisture associated skin damage (PMASD) related to frequent bag leakage and chronic contact of watery output with her peristomal skin.

During her first assessment Mrs. M was crying, and stating her skin was very sore. She described her inability to cope at home due to the frequent stoma leakage and was reluctant to go out because of possible leakage in public. Her pouching system was lasting only 1-2 hours and she described her QoL as very poor. Our objective assessment noted a DET score<sup>5</sup> of ten (10) which is defined as a 'severe' peristomal skin complication. (See Figure 1)

To help manage the PMASD, the 'crusting technique' was used with stoma powder and a non-sting protective wipe. The crusting technique produces a dry surface and absorbs moisture from broken skin creating an artificial 'scab' by using a skin barrier powder and a liquid polymer skin barrier. It is most frequently used on denuded peristomal skin to create a dry surface for adherence of an ostomy pouching system while protecting the peristomal skin from effluent and adhesives.<sup>6</sup> This technique resulted in only minor visible improvement after a couple of days. (See Figures 2&3)

Her pouching system was altered to a one-piece CeraPlus™ skin barrier\*. A pre-cut firm convex skin barrier (25mm) was needed and since the ileostomy was so flush to the skin, an Adapt CeraRing™ barrier ring was also used to help provide a secure skin seal.

It was determined that the output consistency needed management and adding oral loperamide and a psyllium husk preparation would help both slow and thicken the output. This new pouching system and output management meant her pouching system was changed every second day – a great improvement on her hourly changes previously described. Additional stoma education was provided to ward nurses and the patient was further educated regarding the best techniques for application of her products. Within one week her skin appeared markedly improved. (See Figure 4)

### Patient Outcomes

At the time of discharge, Mrs. M was confident in managing her revised pouching system, her peristomal skin health appeared dramatically improved, and there were no further incidences of leakage. (See Figure 5)

A follow up phone call was conducted after one-week post-discharge to assess her situation. Mrs. M was still leakage free, and she stated she no longer had sore skin and better still, she was able to leave her residence and socialise again without fear of leakage. She also verbalised that her skin condition was completely resolved in her opinion, and the skin looked like the skin on the rest of her abdomen.



**Figure 4** After one week of using the new Hollister pouching system



**Figure 5** Improved skin appearance - day of discharge

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### Conclusion

Practising stoma care using evidence-based practice can contribute to better patient outcomes. Using the citations in this case study from the beginning may have provided a better outcome for this patient. Knowing this patient had significant health issues that could add to her management objectives after surgery may have complicated some teaching, but some goals of care could have been achieved earlier by recognising her ileostomy may place her at ten times greater risk of PSC development<sup>1</sup> and that many PSCs occur in the immediate post-operative period should place the clinician on high alert when determining a management plan.

Additionally, the current consensus on convexity usage in ostomy care highlights that if output is liquid, convex products should be considered.<sup>7</sup> As such, convexity should have been a consideration from the onset in this case. This ongoing development of evidence in stoma care is critical if we are to further the profession while achieving better outcomes for our patients.



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Disclaimer: This case study represents this nurse's experience in using the Hollister CeraPlus skin barrier with an Adapt CeraRing barrier ring with the named patient, the exact results and experience will be unique and individual to each person.

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