

# Translating the evidence into clinical practice – a journey through change

## ABSTRACT

Driving changes to clinical practice can be a daunting task. However, if meaningful change is to occur, the use of evidence to support the decision for change can be crucial in gaining agreement with stakeholders. This article describes the journey taken at one institution by a clinician following the trail of evidence that has recently been developed regarding the use of convexity with a barrier ring, earlier in the patient journey for creating positive impacts in patient outcomes.

**Keywords** evidence, clinical practice, change, convexity, skin barrier.

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## INTRODUCTION

In today's rapidly changing healthcare environment, innovation can challenge nurses in many ways. Switching from mercury thermometers to electronic could be considered an easy change as the benefit can clearly be seen. Sometimes, however, the benefits may not be as easily recognised at first. Additionally, implementing a change in practice can produce anxiety or fear of failure leading to resistance.<sup>1</sup> In the 1940s Kurt Lewin introduced a change model involving three steps: unfreezing, changing, and refreezing.<sup>2</sup> (Figure 1) *Unfreezing* relates to recognising the need for change; *changing* implements the transformation and demonstrates its benefits, and *refreezing* reinforces the change in behaviour and helps sustain it.<sup>2</sup> The goal is to make changes that create minimal impact on people, yet ensure better outcomes.<sup>2</sup> Utilising Lewin's theory can lead to a greater understanding of how change can affect an organisation and an individual, help to recognise the barriers and solutions to successful implementation, and to identify opposing forces that act on human behaviour during change.

This paper discusses the use of recent evidence to implement change in clinical practices throughout an entire organisation. This change concerned moving from flat ostomy skin barriers to using convexity products earlier in the patient journey with the primary objective of improving their outcomes.

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## UNFREEZING

Any surgery can create a level of anxiety in the prospective surgical patient. Ostomy surgery is particularly fraught with challenges including medical, psychological, and social issues,<sup>3</sup> as well as depression, which occurs in almost 50% of ostomy patients.<sup>4</sup> This experience can be worsened with the onset of leakage in the first instance for the person with a newly fashioned ostomy. We have observed at our hospital that the language around this leakage can play a profound impact on person's adjustment after surgery. For example, the patient may experience this first leakage after surgery in the hospital bed and have the attending nurse pronounce what they assume to be reassuring, passing references regarding the leakage. Comments such as *'this happens often'* or *'don't worry you will get used to it'* can unintentionally create negative expectations around their ostomy management. While clinicians may be used to the experience, it should be recognised that the new



Figure 1. Lewin's Change Model

Source: [https://www.change-management-coach.com/kurt\\_lewin.html](https://www.change-management-coach.com/kurt_lewin.html)

patient is not. A more appropriate response, for example, might be *'well that should not be happening, and we can fix this.'*

In my practice I have recently become cognisant that within the 24–48 hours post-operative period, leakage of effluent was frequently occurring under recently applied flat ostomy skin barriers post-operatively (Figure 2). Additionally, speaking with colleagues at various conferences, I heard that they had noticed similar occurrences and reported that they were beginning to use soft convex skin barriers in the initial post-operative period as a prevention mechanism for reducing leakage on patient discharge. This message to me was compounded when some recent publications around the use of convexity earlier in the journey were described at different educational events, as well as professional conferences. Of note, two of the more recent publications, each resulting from consensus statements, provided supportive evidence around the early post-operative use of convexity. One article describes the characteristics of convexity which recommends the use of a more compressible convex skin barrier in the immediate post-operative period<sup>5</sup> and the second reported on the ability to use convex skin barriers at any point along the patient journey.<sup>6</sup> One of the chief objections in the past regarding the use of convexity post-operatively was the risk of mucocutaneous separation.<sup>6</sup> However, the evidence in the literature does not support this as a risk<sup>7</sup> and some studies have shown that the convexity can be used in the post-operative period.<sup>6,8</sup> I felt comfortable in the evidence supporting me in changing my practice.

There were several concerns for our patients with the current situation in our organisation. Ostomies are often created close to an incision point based on the stoma site marking process and this is frequently the midline. This means that effluent from leakage could come into contact with the newly created surgical incision. It was presumed that there would be increased risk of surgical site infection as a result.

Leakage of stomal effluent is also a significant risk factor in the development of peristomal skin complications (PSCs), such as peristomal moisture associated skin damage (PMASD).<sup>8</sup>



Figure 2. Flat skin barrier less than 24 hours post-operatively

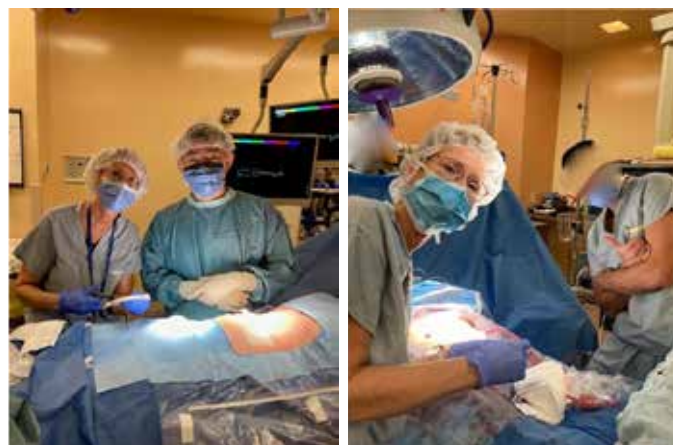
PSCs occur in up to 80% of patients with an ostomy<sup>6</sup> and are associated with impairments in physical function, multiple components of health-related quality of life, failure to adjust, and higher costs.<sup>6</sup> As described previously, leakage also can also have dire consequences for the confidence of the newly ostomised patient.<sup>6</sup>

During my thought processes, I questioned the use of a flat skin barrier at all during the post-operative period. Why would I not consider changing the flat skin barrier used in the operating room to that of a soft convex skin barrier given this new evidence and the results? In terms of unfreezing, there was high recognition that an opportunity for change was apparent, and such change had the potential to afford real patient benefits if successful.

### MAKING THE CHANGE

The standard practice at our organisation included the application of flat ostomy skin barriers intraoperatively for patients undergoing ileostomy, colostomy and urostomy surgery. Additionally, flat ostomy skin barriers were used to manage patients on the surgical wards post-operatively. I conducted a retrospective review of my patients with this method of management and discovered that many experienced leakages once discharged with these types of products. In some instances, the patient record described that *'probable use of convexity in the future will be required'*. This provided me with further information that proactive change was required.

Initially, a case series of seven patients (two urostomy, four ileostomy, and one colostomy) were selected to provide directional data regarding the success (or failure) of the proposed change. One surgeon was identified, and an operating room (OR) education nurse provided support and guidance to help facilitate the process (Figures 3 and 4). Patient ages ranged from 55 to 85 years old with varying aetiologies, including Crohn's, diverticular disease, rectal cancer, bladder cancer and pancreatic cancer. OR staff also recognised the role of barrier rings and suggested that they would be able to apply these to the patients in the OR, as well, as they understood the risk of leakage and the potential associated challenges. Under my



Figures 3 and 4. In our hospital operating room with the colorectal surgeons

supervision, all patients had a two-piece soft convex skin barrier and flat barrier ring (slim) applied to their newly created stoma in the OR while on the operating table (Figures 5, 6 and 7).

All patients in this series had successful pouching application using the new products and none experienced leakage, including one patient with a high output stoma (Figures 8 and 9). This provided further evidence that allowed me to continue with the change. As they say, 'the proof is in the pudding.'

## REFREEZING

Maintaining and entrenching the change meant engagement with all OR staff and surgeons to relay all the evidence and its purpose. Additionally, ward staff were educated on the new products to manage the patients post-operatively. Lastly, engaging with procurement to ensure supply of the correct products in each area. This also meant active removal of all the current flat products to ensure these patients all received the new, more compressible, convex products and barrier rings. Education with all staff was ongoing. There was minimal



Figure 5. Two piece soft convex skin barrier cut to size of colostomy



Figure 6. Application of skin barrier ring



Figure 7. Application of skin barrier to stoma (note midline dressing applied over the skin barrier edges).



Figures 8 and 9. High output loop ileostomy (note flat skin while supine, skin barrier appearance after 24 hours (note skin topography when semi-recumbent))

upheaval and there were real patient benefits from this change, which made it easy for all to accept. We now have this as standard practice in our organisation.

## OUTCOMES

While the case series and the supporting evidence helped prove my case for change, it is important to continuously monitor such a change, particularly after long held process has been altered. To ensure the ongoing success for our patients is maintained, a retrospective chart review was undertaken. One of the biggest fears many clinicians expressed was about the increased potential for convexity to contribute to mucocutaneous separation. This concept was monitored specifically in 21 patients during this retrospective review. Only one experienced any mucocutaneous separation. However, this patient had risk factors including high BMI (body mass index) and challenging stoma construction that was under tension with low stoma height. These factors have been shown to predispose patients to the development of peristomal skin complications including mucocutaneous separation.<sup>9,10</sup> All indications are favourable thus far, based on this review and another publication with all the data is underway to illustrate the patient outcomes.

## CONCLUSION

Change for some is never easy. However, real, and impactful change can be made when there is solid evidence and a willingness to approach change with an open mind. Knowing that our patients will experience better outcomes in their journey because of this change, is testament to our belief that they deserve better outcomes. We know our patients face significant challenges in their journey. If we can reduce some of their stressors by making changes that give better results, we can give them one less thing to worry about and their overall adjustment and quality of life after surgery can be improved.

We have found that the soft convex skin barrier with a slim ring provides a customised and secure skin seal against leakage. The characteristics of a compressible and flexible skin barrier provides just the right amount of tension to address peristomal topographies and stomal challenges. I would urge fellow clinicians to review the evidence and see where change can make a positive difference for the patients in their practices.

## CONFLICT OF INTEREST

The author declares no conflicts of interest.

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