

European Wound, Ostomy and Continence Supplement



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Identifying pressure ulcers and incontinence- associated dermatitis

Every year, the European Pressure Ulcer Advisory Panel (EPUAP) holds the *Stop Pressure Ulcer Day* every third Thursday in November. The next will be held on 16 November 2023 (EPUAP, 2023).

Every year, the European Pressure Ulcer Advisory Panel (EPUAP) holds the *Stop Pressure Ulcer Day* every third Thursday in November. The next will be held on 16 November 2023 (EPUAP, 2023).

Being able to differentiate between pressure ulcers (PU) and incontinence-associated dermatitis (IAD) is important in helping to ensure appropriate measures for prevention and treatment can be implemented (Beeckman et al, 2023). IAD is a specific type of irritant contact dermatitis characterised by erythema and oedema of the perianal or genital skin. In some cases, IAD is accompanied by bullae, erosion or secondary cutaneous infection (Gray et al, 2012). The aetiology of IAD is complex and multifactorial (Beeckman et al, 2023). Excessive moisture of the skin surface resulting in skin maceration, chemical and physical irritation enhances the permeability of the skin compromising the skin barrier function (Mugita et al, 2015). IAD prevalence and incidence figures vary by type of setting and populations.

The prevalence of IAD is estimated between 5.7–22.8%, and the incidence of IAD is between 3.4–50% (Gray et al, 2012). These differences may be explained by the lack of internationally agreed diagnostic criteria and the potential confusion with superficial pressure ulcers or other skin conditions (Beeckman et al, 2007). IAD is also categorised as moisture-associated skin damage (MASD). It is often difficult to estimate how many patients have this problem, because globally accepted tools such as the Ghent Global IAD Monitoring Tool are not used, or the education of the medical staff is insufficient.

Damage to the skin in the anogenital region is very often described as PU, especially grade II. Not enough thought is given to the mechanism of such tissue damage, especially in the anogenital region. IAD of that region occurs as a result of long-term exposure of the skin to urine and stool. PU always has in its mechanism of formation tissue hypoxia and possibly some other associated factors. Pressure on the skin and tissues causes hypoxia, which always leads to tissue damage and death, depending on the duration of the pressure. It is also important to know that IAD can occur together with PUs. In this case, we are talking about combined tissue damage. To effectively differentiate between IAD and MASD, it is crucial to consider the patient's history. A detailed history can offer valuable insights, as pressure injuries are linked to persistent pressure, while MASD/IAD is associated with moisture exposure. The location of the skin damage is another key factor. Pressure injuries typically occur over bony prominences, whereas MASD/IAD affects moist, friction-prone areas. The appearance and margins of the skin damage. Well-defined margins suggest a pressure injury, while poorly defined margins point towards MASD/IAD. The most common localisations for IAD include the perineum, buttock, thighs, lower back, lower abdomen, skin folds and the perianal area. Key interventions for IAD management include the incontinence management strategy, the use of IAD recognition tools, the determination of IAD degree and good healthcare planning. Perform a



thorough skin assessment to determine the severity and extent of damage. Assess the margins of the wound and refer to the patient's history to differentiate between MASD/IAD and pressure injuries to ensure appropriate treatment (Woo et al, 2017). Prevention and treatment strategies for MASD and IAD are primarily focused on maintaining skin integrity, managing moisture and protecting the skin from further damage.

Effective prevention and treatment of MASD and IAD requires a comprehensive, multidisciplinary approach. This approach should involve a variety of health professionals, including nurses, clinical nurse specialists and physicians. It is imperative to tailor strategies to each patient's unique needs and conditions and actively seek guidance from wound care professionals whenever necessary (Beeckman, 2023).

GN

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BJN

Stoma care



Supplement published three times a year covering all aspects of stoma care in nursing from stoma management to patient care and support

The British Journal of Nursing (BJN) Stoma Care Supplement aims to promote evidence-based practice and the provision of high quality patient care. We welcome unsolicited articles including those reporting case studies, service improvement initiatives and original research in all areas of stoma care. To contribute to the supplement or to enquire about how to become a peer reviewer in this area, contact us at bjn@markallengroup.com or 0207 501 6754.



Join us in London for ECET 2024: 15th Conference of the European Council of Enterostomal Therapists

The European Council of Enterostomal Therapy (ECET) announced their 15th Conference will be held in May 2024

Gabriele Kroboth, ECET President

We are happy to announce that the 15th Conference of the European Council of Enterostomal Therapy (ECET) will take place in London, UK on 2–3 May 2024. ECET 2024 will be held jointly with the European Wound Management Association Annual Conference, EWMA 2024, which will take place 1–3 May 2024.

The ECET conference 2024 offers two full days of high-level scientific and clinical sessions and workshops, networking activities as well as excellent opportunities to exchange knowledge and experiences with international colleagues.

You can attend ECET 2024 or combine two conferences with a registration for both ECET and European Wound Management Association (EWMA). More registration information will be available soon.

By participating in ECET 2024, you will:

- Become updated and educated on the most recent knowledge and research within enterostomal therapy
- Get the opportunity to experience and meet with peer researchers and clinicians
- Get the chance to attend a variety of high-level sessions, free papers and workshops
- Meet suppliers and exchange experiences related to their products.

The ECET exhibition will include over 150 companies at the EWMA exhibition, where you will have plenty of opportunities to meet companies in the field.

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Clinical digest

A brief overview of recently published articles on wound, ostomy and continence care

Renata Batas, Enterostomal Therapist at Community Health Centre Ljubljana, Slovenia (renata.batas@gmail.com)

Survey on the use of a convex pouching system in the postoperative period

Stoia-Davis J, Colwell JC, Emodi K et al. Survey results on use of a convex pouching system in the postoperative period. *J Wound Ostomy Continence Nurs.* 2022;49(3):247-250. <https://doi.org/10.1097/WON.0000000000000877>

Convex pouching systems are used to provide a secure seal around the ostomy and to prevent leakage which can cause peristomal skin irritations. During the postoperative period, changes in the stoma and peristomal body profile are expected. As such, the product that creates the most secure seal may need to be adjusted to adapt to these changes.

There is a lack of evidence about the use of convex pouching systems for the management of a stoma patient during the postoperative period. There is also controversy concerning the frequency and severity of potential complications associated with the use of a convex pouching system during the postoperative period, particularly mucocutaneous separation. Best practice guidelines consistently recognise that a secure seal around the stoma is required to minimise leakage that is associated with peristomal skin complications and diminished health-related quality of life.

The purpose of this study was to validate time frames for postoperative care following stoma surgery and to determine participants' current practice with convex pouching systems during the postoperative period.

A cross-sectional survey study design was used to assess US-based ostomy clinical practice following stoma surgery. The sample comprised 332 ostomy care specialists practising in the US. Most ($n=220$; 66%) had more than 10 years of experience caring for patients with

ostomies, 82% ($n=272$) were certified wound, ostomy, and continence or ostomy care nurses (certified wound, ostomy and continence nurse and certified ostomy care nurse), and 7% ($n=23$) were board-certified colorectal surgeons. A 23 item online questionnaire was created for purposes of the study. Items in the questionnaire queried professional background and experience caring for patients with an ostomy. A single item was used to identify postoperative care periods following ostomy surgery. Additional items queried current practice patterns related to the use of convex pouching systems and the timing of their use. Data were collected from 18 January to the 8 February 2021.

The results of the study showed that most respondents ($n=270$; 90%) agreed with the following postoperative periods after ostomy surgery: immediate postoperative period (days 0–8); postoperative period (days 9–30); and transition phase (days 31–180). Most respondents ($n=274$; 95%) indicated they would use a convex pouching system when clinically appropriate during the first 30 days following ostomy surgery and 79% ($n=228$) indicated using a convex pouching system regardless of when the surgery was performed. Less than 1% ($n=2$) indicated never using convexity within the first 30 days following stoma surgery and only 3% ($n=8$) indicated avoidance of convexity pouching systems in the immediate postoperative period.

Findings indicate that the use of convexity during the postoperative period is prevalent to provide a secure seal and predictable wear time.

Use of a convex pouching system

in the postoperative period a national consensus.

Use of a convex pouching system in the postoperative period a national consensus

Colwell JC, Stoia Davis J, Emodi K, Fellows J, Mahoney M, McDade B, Porten S, Raskin E, Sims T, Norman H, Kelly MT, Gray M. Use of a Convex Pouching System in the Postoperative Period: A National Consensus. *J Wound Ostomy Continence Nurs.* 2022;49(3):240-246. <https://doi.org/10.1097/WON.0000000000000874>

Convex pouching systems have been available for ostomy patients for decades. Their use immediately after surgery is controversial. There are some concerns raised by clinicians about the possible complications from the use of convexity in the postoperative period, which include the development of a mucocutaneous separation and pressure injuries. Despite this, clinicians have asserted that convexity is needed in some instances to maintain the seal around a new ostomy, and pouching systems incorporating convexity can be safely used immediately following stoma surgery.

A scoping review was conducted using PRISMA scoping review guidelines to identify the current best evidence related to the use of convexity following ostomy surgery and to identify gaps in knowledge. An expert panel was convened, comprising of 10 nurses and physicians with expertise caring for patients with an ostomy completed a scoping review identifying research-based evidence and gaps in our knowledge of the safety and effectiveness related to the use of a convex pouching system following ostomy surgery.

The panellists reached a consensus on

three postoperative time periods:

1. Immediate postoperative period, days 0–8
2. Postoperative period, days 9–30
3. Transition phase, days 31–180.

The expert panel reached a consensus on eight statements for the use of convex products immediately after surgery and throughout the first 6 months after stoma creation, as well as describing goals in choosing the best pouching system for the patient with an ostomy. Those statements are:

1. The primary goals when working with a patient to choose an ostomy pouching system are to:

- Secure a reliable seal around the stoma to avoid leakage
- Provide a predictable wear time
- Contribute to an optimal quality of life for the patient.

2. A convex ostomy pouching system can be safely used regardless of when the stoma was created

3. Convexity should be considered in the immediate postoperative period to ensure a secure, consistent, predictable seal and reduce the risk of leakage. The type and characteristics of the convexity used should be based on the ability to provide a secure seal and exert the least amount of pressure on the mucocutaneous junction

4. A convex pouching system may be necessary if any of the clinical findings are present:

- The patient is experiencing leakage.
- Peristomal skin complications due to leakage are present
- The area around the stoma pulls or dips inward, recesses into the abdomen, is concave, or there is a moat around the stoma
- The abdomen is soft and/or the peristomal area has creases, folds, or scars
- The position of the stoma opening is level with or below the peristomal skin, allowing the effluent to undermine the seal

5. A pouching system belt should be introduced when convexity alone does not provide a secure seal. The

group acknowledged that using a belt in the immediate postoperative period may increase pressure on the mucocutaneous junction

6. Follow-up by an ostomy nurse specialist should occur within the first 2 weeks after hospital discharge following stoma creation or stoma revision

7. A full assessment of the patient's ostomy needs should be conducted at each stage of the postoperative periods: immediate postoperative period (days 0–8), postoperative period (days 9–30) and transition phase (day 31–6 months) and should include:

- Type of ostomy
- Characteristics of the stoma
- Stoma effluent—type and volume
- Patient's peristomal body profile.
- Topography of the area around the stoma assessed in the sitting, standing and supine positions (may need to consider lying on your back and on your side)
- Condition of peristomal skin
- The ability of the patient to self-manage the pouching system
- Patient's physical activity levels
- Patient's preferences.

8. If a change in the pouching system is made, reassessment should be conducted by an ostomy nurse specialist within 2–3 weeks after the change to assess the seal, wear time, and patient acceptance of the new system.

A panel of nurses and physicians practicing in the US with experience and expertise in ostomy care reached the consensus that convexity can be used any time after surgery, consensus concerning the need for a routine follow-up visit with an ostomy nurse 2 weeks following hospital discharge and additional visits when pouching system changes are made.

The consensus of using convex in the postoperative period achieved a similar result as it was described by the International Consensus meeting about the use of convexity in ostomy care in 2017, where 15 nurse panellists from 9 countries (The Netherlands, France,

Italy, Belgium, US, Germany, Denmark, Canada and the UK).

Efficacy of a social interaction intervention in early postoperative period to improve coping in persons with an ostomy a randomised controlled trial

Martín-Muñoz B, Montesinos-Gálvez AC, Crespillo-Díaz AY, Jódar-Sánchez F. Efficacy of a social interaction intervention in early postoperative period to improve coping in persons with an ostomy: a randomized controlled trial. *J Wound Ostomy Continence Nurs.* 2022;49(4):352–357. <https://doi.org/10.1097/WON.0000000000000886>

Colorectal cancer often leads to ostomy surgery. It is reported that approximately 70 000 persons with an ostomy are estimated to live in Spain and it is estimated that 16 000 new cases will occur in Spain annually. A faecal ostomy affects self-image and has a great impact on ostomy patients' quality of life.

The purpose of this study was to analyse the efficacy of a social interaction intervention delivered during the early postoperative period on the coping process in persons with a new ostomy.

The sample comprised 52 persons who underwent surgical management of colorectal including a fecal ostomy; 27 were randomly allocated to the intervention group and 25 to the control group. One participant allocated to the control group died before data collection; thus, the findings are based on data from 51 participants. The study setting was the Regional University Hospital of Malaga, located on the southern coast of Spain.

Ostomy visitors (persons living with an ostomy) were taught to listen to the experiences and concerns of the participant and to serve as an example of an individual who has successfully learned to live with a faecal ostomy. The intervention was a visit with a person with a new ostomy during the early postoperative period. Control group participants were offered standard care that did not include the visit from a person with an ostomy. Outcome measures were taken from the Nursing

Outcomes Classification taxonomy. The main outcome measure was coping; secondary outcome measures were health beliefs and acceptance of health status. Bivariate analyses were performed to evaluate differences between groups in terms of the primary and secondary outcomes. A multivariate linear regression analysis was performed to identify predictor variables of the primary outcome, and effect size calculations were used to differentiate statistical significance versus clinical relevance.

The findings of the study showed that there were no differences in demographic or pertinent characteristics of participants in the two groups. Participants who received the intervention achieved higher mean coping process scores: 3.90 vs 3.19, $P=0.002$ and Cohen $d=0.97$. In addition, intervention group participants achieved a higher mean efficacy for the secondary outcomes: 3.78 versus 2.97 ($P=0.0004$) and Cohen $d=1.11$ for health beliefs, and 3.68 versus 2.83 ($P=0.0001$) and Cohen $d=1.24$ for acceptance of health status. Linear regression analysis indicated that the social interaction intervention ($\beta=0.799$; $P=0$) and undergoing urgent versus routine ostomy surgery ($\beta=-0.610$; $P=0.005$) were related to coping.

Findings indicate that a visit with a trained person living with an ostomy facilitated coping and improved health beliefs and acceptance of health status. Study findings also indicated that participants with temporary ostomies benefited more from the intervention than those with permanent ostomies. However, analysis revealed no significant differences with respect to acceptance or their use of coping strategies. This result conflicts with previous studies in which participants living with a permanent stoma demonstrated greater adaptation

to the ostomy than patients with a temporary ostomy. This discrepancy might be attributable to differences in processes of adaptation and coping, two distinct concepts that were studied using different instruments. Furthermore, the time since ostomy surgery in our study differed from these studies. Data collection from these studies occurred from 1 month to 1 year following stoma surgery. In contrast, this study occurred during the immediate postoperative period, during their initial hospitalisation.

The limitations of the study are that the questionnaires used to measure outcomes were developed specifically for this research and did not undergo evaluation for validity and reliability. Outcomes were selected based on the nursing outcomes classification taxonomy.

Effectiveness of pelvic floor muscle training for patients following low anterior resection a systematic review and meta-analysis

Kim YM, Oh EG. Effectiveness of pelvic floor muscle training for patients following low anterior resection: a systematic review and meta-analysis. *J Wound Ostomy Continence Nurs.* 2023;50(2):142-150. <https://doi.org/10.1097/WON.0000000000000958>

Patients undergoing low anterior resection syndrome (LAR) experience symptoms, referred to as low anterior resection syndrome (LARS), which include faecal incontinence, rectal urgency, frequent or fragmented intestinal motility, difficulty evacuating the bowel and increased intestinal gas. It is reported that prevalence rates vary, between 34% and 80% of patients exhibit LARS. LARS impairs health-related quality of life and negatively affects not only known cancer patients' symptoms such as fatigue, constipation and diarrhea, but also physical, emotional, role and social functions. It is reported that 46% of

patients continuously experienced major LARS 14 years after surgery. These results suggest that active intervention is needed to improve outcomes and quality of life in these patients.

Pelvic floor muscle training (PFMT) is considered a first-line option for relieving bowel dysfunction. The aim of this systematic review and meta-analysis, where pooled findings were conducted according to PRISMA guidelines, was to identify the effects of PFMT on bowel function and health-related quality of life among patients who have undergone low anterior resection.

In that research, 36 of 453 articles retrieved were read in full and 12 articles were included in the systematic review. In addition, pooled findings from five studies were selected for meta-analysis. Analysis revealed that PFMT reduced bowel dysfunction with statistical significance (mean difference [MD] -2.39 , 95% confidence interval [CI] -3.79 to -0.99) and improved several domains of health-related quality of life: lifestyle (MD 0.49 , 95%; CI 0.15 to 0.82), coping (MD 0.36 , 95%; CI 0.04 to 0.67), depression (MD 0.46 , 95%; CI 0.23 to 0.70), and embarrassment (MD 0.24 , 95%; CI 0.01 to 0.46).

The outcomes of this meta-analysis indicated that PFMT is effective in improving bowel function and enhancing multiple domains of health-related quality of life after low anterior resection. The timing of the PFMT intervention varied among the studies. Most of the older studies began the intervention after a diagnosis of faecal incontinence and more recent studies started PFMT immediately following surgery or before surgery. Future studies should adopt a rigorous experimental design to provide more robust evidence for patients undergoing rectal cancer surgery.



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Community nursing and wound care: from TIME to TIMERS

Renata Batas disusses the implications of using the TIMERS assesment tool in practice

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Community nurses perform wound care at the patient's home until the wounds are healed, which may take several months or even years. A wound is classed as chronic if it lasts over 4-6 weeks. The complexity of the patient's health needs and the wound itself often makes this task highly time-consuming for the nurse.

To assess chronic wounds, nurses use a wound assessment tool with the following components: tissue, infection/inflammation, moisture balance and wound edges, known as TIME. This tool was amended a few years ago to include two additional components: repair/regeneration and social (TIMERS) (Lumbers, 2019).

The global prevalence of chronic wounds in the population is estimated at 1.51 to 2.21 per 1000, and the incidence is expected to rise with ageing populations worldwide. It is estimated that 1–2% of the population will experience a chronic wound during their lifetime in developed countries (Martinengo et al, 2019). However, there is wide variation in the reported prevalence and incidence of chronic wounds worldwide and within each care setting. The most prevalent wounds are venous leg ulcers (VLU), pressure ulcers (PU) and diabetic foot ulcers (DFU) in people aged >60. A percentage of wounds may not heal completely for a year or more, and this places a significant burden on healthcare systems and economies (Atkin et al, 2019). Atkin and Tettlebach (2019) acknowledged that in areas with ageing populations, the incidence of hard-to-heal wounds is increasing. Using

a structured wound assessment tool helps support clinical judgement and decision-making (Lumbers, 2019).

With longer life expectancy and shorter hospital stays, there is a big challenge for community nurses to deliver safe and appropriate wound care in times when we have a lack of nurses and not all of them possess specialist wound care knowledge. Because of that, community nurses must be supported in their decision-making for them to be able to provide the most appropriate, evidence-based wound care to their patients (Lumbers, 2019).

Hard to heal wounds

A hard-to-heal wound (HTHW) is defined as a wound that fails to progress towards healing with standard therapy in an orderly and timely manner. They should be referred to a qualified wound care provider for advanced assessment and diagnosis if not healed or reduced in size by 40–50% within 4 weeks. HTHWs occur in patients with multiple comorbidities and display increases in exudate, infection, devitalised tissue, maceration or pain, or no change in wound size. Community-based healthcare providers (CHPs) can play an important initial role by seeing the individual's HTHW risk, addressing local infection and providing an optimal wound environment (Beeckman, et al, 2023).

There are many reasons why some wounds fail to progress in their healing. Many chronic wounds are trapped within the inflammation phase of wound healing. Factors that predispose wounds to turn into chronic ones include (Atkin, 2019):

- Underlying disease process (such as venous hypertension, diabetes and

Box 1. Risk factors associated with hard-to-heal wounds

- Anaemia
- Arterial disease
- Behavioural factors
- Cancer
- Chronic inflammation
- Comorbidities
- Demographic factors
- Diabetes
- Genetics
- Hypoxia
- Immobilisation
- Immune suppression or disease
- Lymphatic insufficiency
- Neuropathy
- Obesity
- Oedema (if no lower limbs)
- Older age
- Patient adherence
- Patient economic status
- Poor nutrition
- Psychosocial
- Radiation
- Smoking
- Systemic medication
- Venous disease

peripheral arterial disease)

- Hypoxia of the wound bed
- Wound infection
- Presence of biofilm
- Increased level of inflammatory mediators, such as matrix metalloproteinases (MMPs)
- Poor nutrition.

Jones (2020) states that the key to effective care is the application of a good standard of care (SoC). SoC has to include the identification of the risk factors, monitoring outcomes and recognition of the correct course of action if the wound

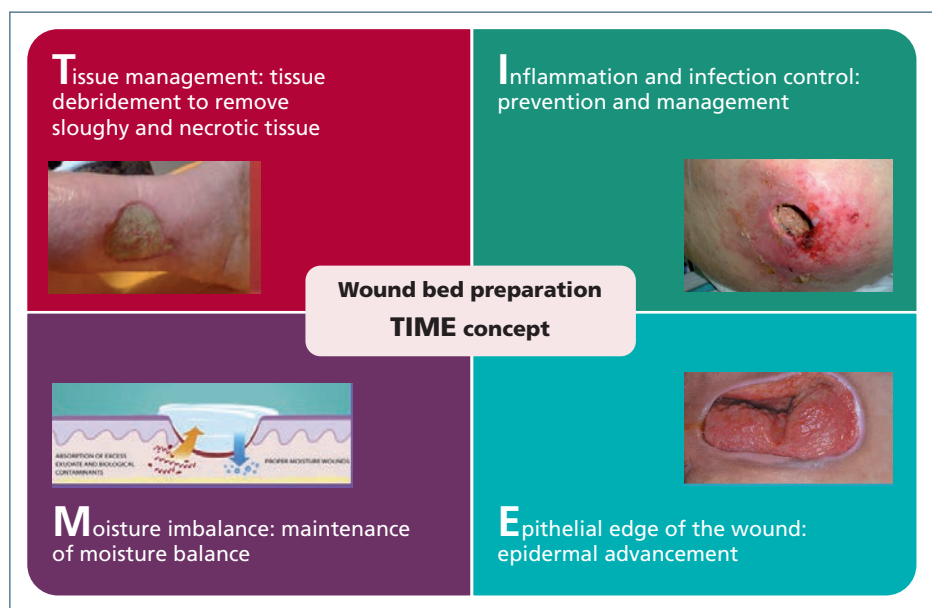


Figure 1. Wound bed preparation - TIME concept

is responding to the treatment and the action that needs to be taken if the wound is not responding (Atkin et al, 2019). The risk factors associated with HTHW are listed in *Box 1*.

TIME: wound bed preparation

An international group of wound healing experts developed the TIME acronym. It aimed to provide a framework for a structured approach to wound bed preparation to achieve wound closure. The framework was therefore termed 'wound bed preparation' and was published by Schultz et al (2003). Since then, the TIME acronym has been widely used as a practical guide for assessing and managing chronic wounds. Leaper et al (2014) describe that the clinical observations and interventions relating to wound bed preparation are grouped

into four areas, all of which need to be addressed at each wound assessment (*Figure 1*).

- **Tissue:** assessment and debridement of nonviable or foreign material (including host necrotic tissue, adherent dressing material, multiple organism-related biofilm or slough, exudate and debris) on the surface of the wound.
- **Infection/inflammation:** assessment of the aetiology of each wound, need for topical antiseptic and/or systemic antibiotic use to control infection and management of inappropriate inflammation unrelated to infection.
- **Moisture imbalance:** assessment of the aetiology and management of wound exudate.
- **Edge of wound:** assessment of non-advancing or undermined wound edges (and state of the surrounding skin).

Atkin (2019) states that wound preparation and TIME need to be used within the context of total patient care, where local factors such as nutrition, pain and hydration are also being considered.

In 2018, international experts re-visited the principles of TIME and accepted that the focus of the assessment crucially failed to recognise and address the factors of tissue repair and regeneration or how various social factors can impact wound healing, as well as how best to address these issues. This led to the production of a consensus document to address these areas of concern, which expanded the TIME framework to TIMERS (Atkin et al, 2019), to incorporate and address tissue repair regeneration (R) and social factors (S) (Lumbers, 2019).

TIMERS

The TIME concept is a framework focused on the management of specific, important parameters of the wound. When a wound does not respond, even when its management is guided by TIME, other factors that have an impact on outcomes must be recognised. The consensus panel of experts in wound care recommends updating TIME to recognise these factors with the integration of repair/regeneration (R) and social factors (S) (Atkin et al, 2019). The new framework provides structured guidance on approaches to managing wound parameters and it identifies where advanced adjunctive therapies should be considered alongside standard care. TIMERS represents the assessment and analysis of all of the following (Atkin et al, 2019):

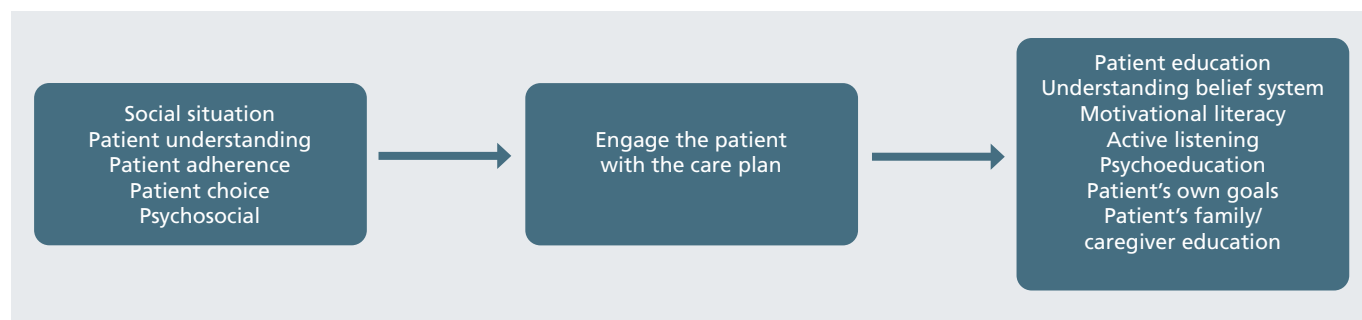


Figure 1. Social- and patient-related factors that impact healing (Atkin et al, 2019)

- **T**: tissue viability (deficient or non-viable)
- **I**: infection/inflammation
- **M**: moisture balance (too much or too little)
- **E**: wound edge (undermined or non-advancing)
- **R**: repair of tissue/regeneration
- **S**: social- and patient-related factors that impact healing (*Figure 2*).

Diagnosis and holistic assessment, as well as social- and patient-related factors, are the foundation on which treatment should be based (Atkin, et al, 2019).

TIMERS is a general framework to guide care at all competency levels in all settings. Although relevant to all care settings, the details of wound management would vary according to each setting and health professional competencies.

The TIMERS wound assessment tool has been designed to enable holistic care to be delivered to the patient, which includes timely healing, since the tool identifies and addresses factors affecting healing, whether directly related to the wound itself or social aspects related to the patient (Lumbers, 2019).

Wound repair and regeneration are likely to occur in HTHW once the wound bed has been adequately prepared. The removal of associated risk factors identified during the comprehensive wound care assessment (TIME elements) will support and encourage wound closure. Key factors known to detrimentally affect healing are biofilms, infection, underlying pathology and patient-related factors, such as smoking and diabetes as a comorbidity (Atkin et al, 2019).

Various advanced treatment measures are available for hard-to-heal wounds, and product selection should focus on and address the elements delaying wound healing in addition to the overall needs of the patient. Atkin et al (2019) identified a wide range of appropriate advanced therapies. They include growth factor preparations, systematically delivered oxygen, nitric oxide and sucrose octasulfate, tissue equivalent products, systemic pharmacotherapy, protein-based

nutritional supplements and negative pressure wound therapy (Lumbers, 2019).

Holistic care of patients is essential in achieving positive outcomes. The addition of 'S' to the TIMERS framework introduces a concept that should run alongside each part of the assessment from T through to R, as an overarching theme, as social aspects are crucial to healing at all stages.

TIMERS helps support the clinician in recognising and addressing various wound-related factors that may delay or affect healing. While there are numerous causes of chronicity, research has shown that 70% of chronic wounds have an established biofilm (Atkin et al, 2019). To achieve healing in this large proportion of chronic wounds, it is imperative that the clinician recognises the presence of the biofilm and addresses this (Lumber, 2019).

Discussion

Due to the increasing elderly population, we meet with more and more patients with chronic wounds in community settings. HTHWs are defined as any wound that has not healed by 40–50% after 4 weeks of evidence-based SOC. The impact of risk factors and multiple comorbidities on patients with chronic wounds very often leads to HTHWs. Community nurses have to be competent in the wound management of HTHWs if they want rich wound closure. Knowledge and skills of community nurses vary but the wound assessment tools, such as TIME and TIMERS concept, can be a very successful guide in wound care or management if they know, understand and use them in practice.

Beeckman et al (2023) state that community-based healthcare providers (CHPs) can play an important initial role by seeing the individual's HTHW risk, addressing local infection and providing an optimal wound environment. CHPs are often not specialised in wound care.

It is surprising that in a survey of 196 questionnaires completed by healthcare practitioners involved in wound care, 40% of the respondents did not use any form of wound bed assessment tool,

despite being aware of their existence (Ousey et al, 2018).

In the study, Dowsett (2009) examined the impact of delivering an educational programme using the concept of wound bed preparation (WBP) and the associated TIME framework on community nurses' wound care knowledge and practice. The methods of the study were an experimental pre-test–post-test design using repeat measures to test the hypothesis that a structured educational intervention based on the TIME framework would positively impact on community nurses' wound care knowledge and practice. Data were collected using questionnaires, non-participant observation and recording of data from patients' clinical records. The findings of the study showed that community nurses' wound care knowledge and practice improved significantly after training ($t[39]=17.37$, $p<0.001$ and $t[32]=7.12$, $p<0.001$, respectively). Dowsett (2009) states that nurses' knowledge of wound healing was found to be poor before the educational intervention and most nurses were only able to identify two stages of wound healing before training. Before the educational intervention only 18 (45%) of the community nurses involved in the study were able to define the concept of WBP, but this improved to 35 (88%) after training. Likewise, the TIME framework was poorly understood before the educational intervention but this improved significantly after training. Community nurses' knowledge of each element of the TIME framework improved. The conclusion of the study was that the TIME framework is a useful tool for delivering wound care education and can make significant improvements to wound care practice.

The extended wound assessment tool TIMERS has been developed to provide a general framework to help support all qualified clinicians, regardless of their competency levels, in achieving wound healing (even for HTHW). TIMERS is a versatile tool that takes into consideration

the wide range of knowledge that qualified clinicians have.

The use of TIMERS as a comprehensive wound assessment framework in the community setting may take some more time in practice but using this framework will provide better outcomes for patients. It will ensure that they have received evidence-based holistic care from the outset and will also result in fewer visits required by the clinician, therefore ultimately reducing caseloads (Limber, 2019).

The 'S' component of TIMERS focuses on the social situation and patient-related factors. They are classified as: psychosocial factors, factors that affect adherence, physical and comorbidity factors and extrinsic factors. The addition of an 'S' section is representative of the patient's social situation and how this may impact healing. For community nurses, a review of social aspects should involve the patient themselves. Lumber (2019) states that they should try to understand areas that could affect the patient's social situation, such as language, knowledge, mental health, living conditions or where they live. Through their work, community nurses witness great variation in the living conditions of their patients, ranging from the cleanliness in patients' homes to their ability to access facilities.

Conclusion

Due to the increasing elderly, long-living population, nurses meet with

more patients with chronic wounds, who can have many risk factors for the development of HTHW. The patient's environment and living conditions, the distance from their home to the clinical setting, living alone, social isolation, and access to care can have a great impact on wound care and the process of healing. Community nurses can recognise them because they work in patients' home environments where they can assess the real social conditions of the patients. In that way, they have a good opportunity to help them to resolve some problems which will enable better wound care and the healing process of the wound.

The opportunity for health professionals to prevent wounds from becoming chronic is in identifying the underlying cause, applying evidence-based therapy and ensuring appropriate wound bed preparation. Because of that, healthcare professionals and community nurses must follow the newest approaches to wound care. Developed assessment tools for chronic wounds, such as TIME and extended TIMERS, can greatly contribute to comprehensive, high-quality, holistic and individual patient wound care that will have positive results for the patients and professionals with optimal health economic burden. Future research about using TIME and TIMERS in community nursing, primary care, secondary care level and hospitals should be done to compare wound care practice and

management in different countries and different levels of healthcare system. **GN**

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Stoma care accessory products: an overview

Abstract

Stoma care is complex and challenging and can result in complications that can cause psychological distress and negatively impact ostomates' quality of life. These include appliance leakage, contact dermatitis, mucocutaneous separation and parastomal herniation. Flange extenders, adhesive removers, barrier films, support garments, discharge solidifying agents, powders, seals, protective and adhesive pastes and deodorants aim to prevent or reduce these. By drawing on assessment tools and guidelines and patient preferences in combination with patient education, stoma care nurses can help patients identify and correctly use the most appropriate accessories for them. Incorrect use of a product can worsen or result in further complications.

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Approximately 205 000 people have a stoma in the UK (Hodges, 2022). A stoma is a surgically created artificial opening on the surface of the abdomen, which diverts the flow of faeces or urine. There are three types: a colostomy, urostomy and ileostomy (Colostomy UK, 2019). Output from a stoma is collected into an appliance (a bag or pouch).

The skin is the largest organ of the body (Peate, 2021), and the area directly surrounding the stoma is known as peristomal skin. Taking care of a stoma and peristomal skin can be complex. An imperfect seal between the appliance and the skin can result in leaking which can cause complications such as contact dermatitis. These can cause psychological distress and negatively impact ostomates' quality of life (Evans and Burch, 2017). Fortunately, there are accessories available to treat leaks and other issues and, ultimately, reduce peristomal skin complications and improve the life quality for ostomates. Nurses play a vital role in supporting patients with selecting and using the most suitable accessory for them.

The nursing role

It is the role of the specialist stoma care nurse to assist patients in choosing the stoma accessories suited to them and to advise patients how to use them correctly. Maintaining communication with the patient and both

the surgical team and other members of the multidisciplinary team is imperative (Bladder and Bowel Community, 2018); nurses should share the rationale for accessory use, including clear guidance and a follow-up plan, with patients and their GP (Evans and Burch, 2017). Patients should be provided with sufficient supplies of all the equipment they require as per the prescribing guidelines (PrescQIPP, 2015) and local policy and consideration of the Patients Industry Professionals Forum (PIPs, 2014) recommendations.

Stoma complications

Common complications for ostomates include leaks, retracted or prolapsed stoma, parastomal hernia (PSH) and peristomal skin complications (PSCs). The exact incidence and prevalence of PSCs are unknown (Maydick-Youngberg, 2017), but they are reported to affect up to 75% of patients and are often extremely debilitating as they physically damage the skin which can affect normal appliance use (Hollister, 2022a). Common PSCs include:

- Contact dermatitis: red or dark discolouration, inflammation, blistering, thickening or dryness of the skin (NHS, 2019), usually caused by effluent leaking onto the skin (Evans and Burch, 2017)
- Folliculitis: inflamed hair follicles with red spots or pustules at the base of the hair follicle

Key words

- Appliance leakage
- Contact dermatitis
- Peristomal skin complications
- Stoma accessories
- Stoma care
- Stoma products

This article has been subject to double-blind peer review

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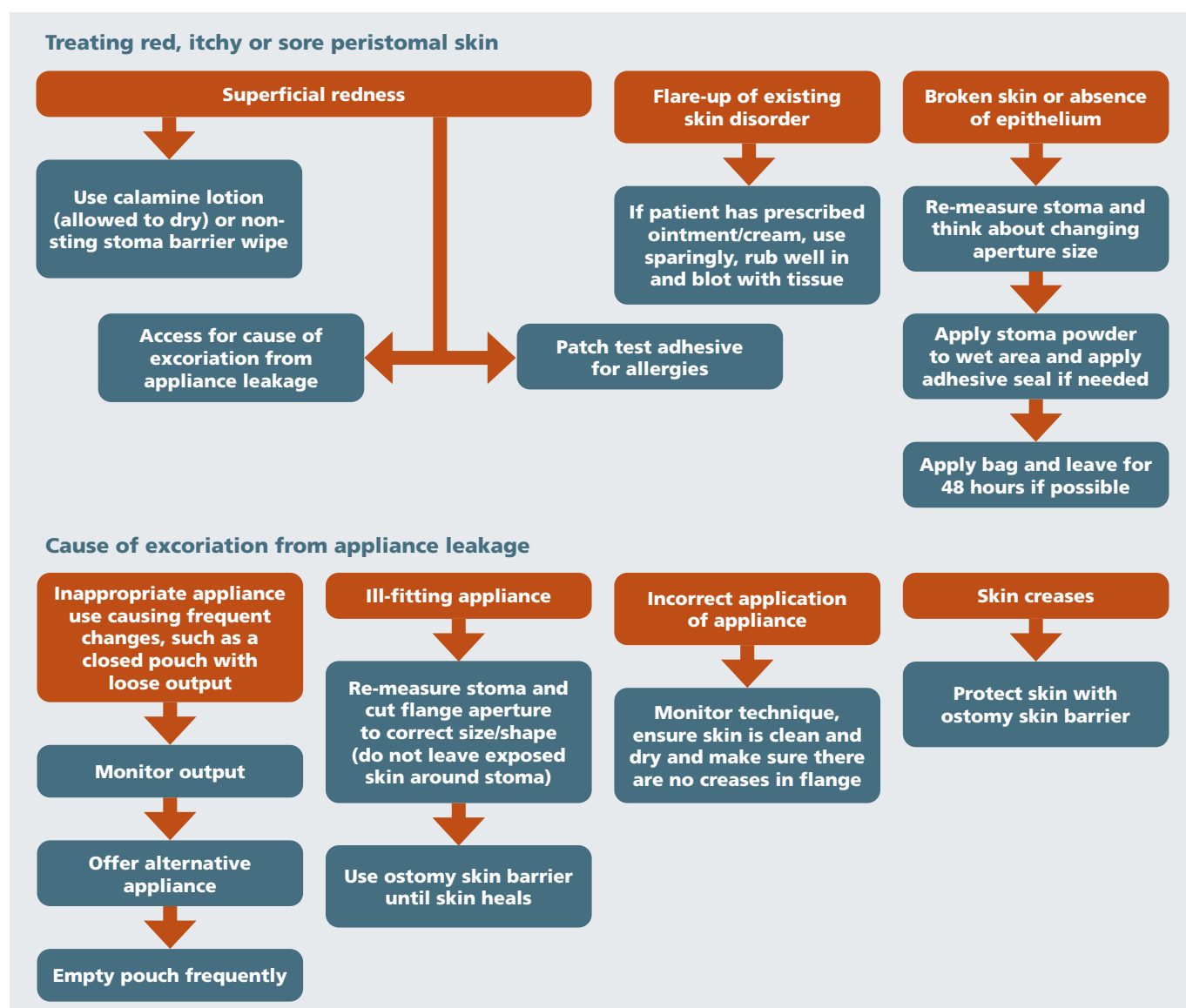


Figure 1. Flow chart for assessing and treating sore skin (ASCN, 2016)

(Burch, 2021). Rough appliance removal or incorrect or frequent removal of hair follicles under the flange can be causes (Coloplast Care, 2022)

- Mucocutaneous separation: peristomal skin separates from the bowel mucosa of the stoma which can be caused by infection, tension on the stoma during surgical formation or impaired healing (Evans and Burch, 2017; Ndlovu, 2015).
- Other complications include granulomas (small, red, raised areas on or around the stoma, that can cause bleeding and discomfort) (Colostomy UK, 2017), candida (sore, itchy skin with white pustules occurring) (Chandler, 2015) and pyoderma gangrenosum (inflamed

and painful ulcers with purple edges) (Burch et al, 2021).

Adhesives used in stoma appliances and accessories help to maintain skin integrity; however, they can cause medical adhesive-related skin injury (MARS). This occurs when the bond between the skin and adhesive is stronger than the bond between skin cell to skin cell. This injury can manifest itself as skin stripping, maceration (from trapping moisture next to the skin for prolonged periods), and blisters or tears (Boyles and Hunt, 2016).

Selecting an appropriate accessory

It is necessary for a comprehensive assessment of the stoma and peristomal skin to be carried

out. Firstly, it is important to identify the complication's cause before recommending products to solve it (Evans and Burch, 2017). To assist in the assessment stage, the Association of Stoma Care Nurses (ASCN, 2016) provides a stomal leakage tool and flowchart (*Figure 1*) to determine a particular skin condition, it's probable contributing factors and its potential solutions, with many being stoma accessories. Crohn's and Colitis Foundation (2020) has also published a useful resource for assessing a patient's stoma and identifying any peristomal skin complications. Further, Martins et al (2022) have developed a new tool – Ostomy Skin Tool 2.0 – to regularly track changes in the peristomal skin and, thus, enable early interventions to help prevent severe PSCs.

Accessory products

A wide range of accessories are available for use in conjunction with stoma appliances. These can help to improve or prevent stoma complications and, for many patients, form a vital part of their daily hygiene and ostomy care routine (Hollister, 2022b). Stoma prescription guidelines (PrescQIPP, 2015) recommend that stoma patients maintain a straightforward and simple bag-changing procedure to reduce or avoid the need for expensive accessories. It is important to be aware that companies will send samples of new, expensive and usually unnecessary accessory products to patients and patients will obtain information about accessories via the internet and fellow patients (PrescQIPP, 2015). Allergic reactions from stoma accessories are rare but can occur; treatment entails substituting the offending product with a nonallergenic alternative or using topical aerosolised corticosteroids if necessary (Steinhagen et al, 2017).

Stoma powder

Stoma powder (*Figure 2*) is a non-medicated powder that absorbs moisture from irritated, broken or weeping peristomal skin. Absorbing moisture enables better adhesion of a stoma appliance to the skin (Hollister, 2022b). For this reason, stoma powder is significantly more suitable than most creams and lotions used to soothe peristomal skin, as these tend to be oil-based, which adversely affects appliance adhesion and, consequently, can make the

situation worse. However, stoma powder should be applied in small quantities to avoid problems with appliance adhesion.

Patients should be alerted that the powder may cause a harmless stinging sensation for a few seconds after application. However, if patients experience extreme discomfort, this may indicate sensitivity to the product, therefore, they should immediately wash it off with water, cease using that product and monitor the area. It is advised that stoma powder is not used on unbroken skin with a healthy colour; barrier film is more suitable in this instance (Evans and Burch, 2017).

According to O'Flynn (2016), when used in conjunction with the correct appliance and accessories, stoma powder can be extremely effective in treating conditions including folliculitis and contact dermatitis.

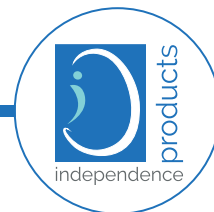
Stoma pastes

There are two different types of stoma pastes: adhesive pastes and protective pastes (*Figure 3*). Adhesive pastes are used to fill creases and dips in skin and assist with appliance adhesion. Meanwhile, protective pastes are usually applied to eroded, raw or ulcerated peristomal skin, including wounds caused by more severe mucocutaneous separation, to protect against further erosion and allow the skin to heal. As these pastes are oil-based, they will potentially compromise adhesion of appliances and, therefore, should be used with care (Evans and Burch, 2017).

Stoma seals

Stoma seals (*Figure 4*), also known as barrier rings, washers or donuts, are flat rings consisting of either a hydrocolloid- or silicone-based material. The material is nonporous and mouldable and can be stretched, broken, rolled or used whole to smooth out irregular skin and fill dips and creases; encircle the stoma to prevent corrosive output from damaging the appliance flange and separate and protect areas of skin when managing complex conditions, such as a stoma near an abdominal fistula (Evans and Burch, 2017). These are useful for patients with a higher output in protecting the peristomal skin and reducing the incidence of irritation and breakdown (Boyles and Hunt, 2016). Stoma seals are particularly effective at preventing

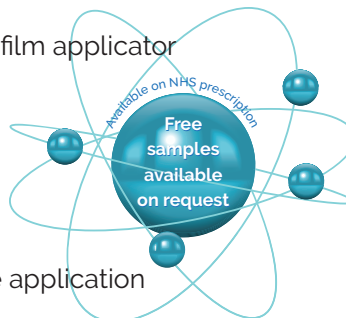
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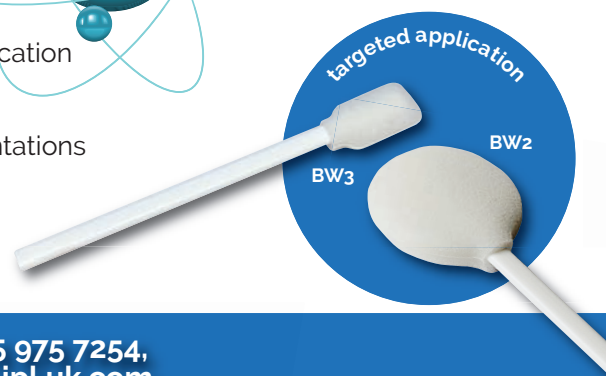
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Figure 2. Stoma powder

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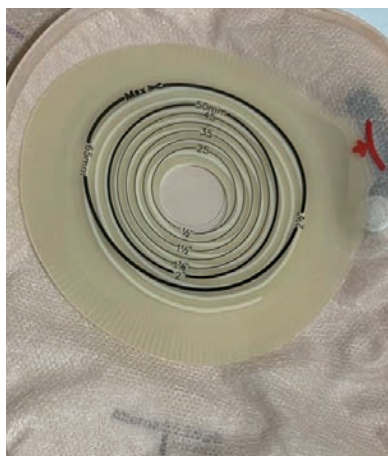


Figure 4. Stoma seal

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Figure 6. Adhesive remover

Convatec



Figure 3. Adhesive paste

Trio Healthcare



Figure 5. Genii flange extender

Maria del Mar Alcalá



Figure 7. Support garment

Flange extender

Also known as security frames, bananas or horse shoes, these are hydrocolloid semicircles or strips with one adhesive side (Hall, 2018). After the stoma appliance is fitted, the flange extender (Figure 5) is applied around the edge of the flange to provide the appliance with extra adhesion. This can increase security of the appliance's seal and, as a result, improve patients' quality of life. Flange extenders are particularly useful for patients with stomas sited in a difficult position or those with a PSH. However, flange extenders must not be used to patch or repair a stoma appliance that has begun leaking and it is important to notify patients that using them this way will probably cause sore skin (Evans and Burch, 2017).

Adhesive removers

Adhesive removers (Figure 6) are wipes and sprays applied to the flange before removing the stoma pouch to release the adhesive bond between the skin and appliance, preventing trauma to the skin such as MARSI (Evans and Burch, 2017; PrescQIPP, 2015). Removers are increasing in popularity among nurses and patients, plus ASCN (2016) recommends routine prescriptions, taking into account local policy. Compared with sprays, wipes may be better suited to patients who are travelling or have reduced manual dexterity (Readding, 2016). Prescription guidelines (PrescQIPP, 2015) state barrier creams should not be used if the patient is using wipes.

Patients should be informed that using a remover to remove an appliance is not essential and they are intended for people having particular difficulty. They are useful for patients who use adhesive paste or have folliculitis (Evans and Burch, 2017). Many brands of adhesive remover exist, available as alcohol/organic-, oil- or silicone-based (PrescQIPP, 2015).

Support garments

Belts and underwear (Figure 7) are available to stoma patients; they are specifically designed to support the abdominal muscles, either preventing a PSH or holding in an existing hernia. Both unisex or gendered garments are available, made from materials including cotton, microfiber, elastic, lycra and hydrophilic fabrics. Plus, there are specially designed support

faecal contamination of a wound caused by mucocutaneous separation and protecting the skin from contact dermatitis (Evans and Burch, 2017; O'Flynn, 2016).

garments for discretion, sport or swimming (Evans and Burch, 2017). ASCN's (2016) prescription recommendations are up to three belts and/or six pairs of underwear per year, however, these are also available to purchase.

A study, by Hubbard et al (2019), exploring people's experiences of using support garments following stoma formation found participants with a PSH claimed support garments provided support, reduced associated pain and could prevent enlargement of a hernia. Despite this, many participants complained about ill-fitting support garments. This evidences there are benefits of using support garments but suppliers also need to work to improve them. Further, a pilot study, which used a PSH risk assessment tool (North and Osborne, 2017) intending to develop a measuring tool to ensure the specialist nurse provides adequate patient information and the support garment is worn prophylactically, has been undertaken. Evaluation of this study identified more research into the effectiveness of the available support garments and clarity surrounding their categorisation determined by the degree of support they each provide is needed (Osborne et al, 2018).

Barrier films

Available either in the form of wipes, sprays or creams, these are applied to the peristomal skin to form a film that prevents effluent making contact (Evans and Burch, 2017) (Figure 8). The ASCN (2016) recommends barrier products for broken skin around a fistula. Barrier films are particularly effective for patients with contact dermatitis, where the skin is red and glossy but not yet broken, and those with sensitive peristomal skin that breaks down easily or skin creases around the peristomal skin (Evans and Burch, 2017; O'Flynn, 2019). Similar to protective pastes, barrier creams can impede appliance adhesion and should be used with care.

Discharge solidifying agents

Also known as stool thickeners, these are absorbent strips, gel capsules, tablets or sachets that are placed into the stoma appliance to thicken and solidify the effluent. Patients and carers should be made aware that these are not to be taken orally (Evans and Burch, 2017). They are useful for patients with liquid or watery



Maria del Mar Alcalá

Figure 9. Deodorant



Medcareplus

Figure 8. Skin barrier wipe

output. ASCN UK (2016) advises using solidifying agents with caution in high-output stomas as identifying when the bag is full can become more difficult. A 2014 study focussing on the AbsorbaGel discharge solidifying agent shows it can help to improve a patient's confidence and quality of life (Slater, 2014).

Deodorants

Deodorants – available in various scents as drops, sachets or sprays – neutralise the odour produced by stoma output (Evans and Burch, 2017). Although, most stoma bags have an integral filter which should prevent odour (PrescQIPP, 2015). Therefore, ASCN UK (2016) does not recommend routine prescription of deodorants, unless a clinical need is demonstrated.

Conclusion

Stoma and peristomal skin care is complex and can include contending with complications such as parastomal herniation and leakage. Nurses need to stay up to date with developments in and availability of stoma accessories that prevent and/or reduce these; a list can be found in the annually updated product selection guide Bladder, Bowel and Stoma Handbook (MA Healthcare, 2021). As there isn't a one-size-fits-all solution, consulting assessment tools and guidelines from organisations such as the ASCN UK (2016) alongside the Handbook and patients' preferences will help stoma care nurses identify the accessory best suited to an individual. Nurses should also communicate their knowledge of accessories and the correct use of them to patients. Overall, this can significantly improve

CPD reflective questions

- What is the most common PSC and what accessories can be used to treat it?
- How can adhesive removers help patients and when should they be recommended?
- Why is educating patients about correct and appropriate product usage important? Consider which accessories might benefit a patient with a parastomal hernia.

patients' stoma management and, consequently, their quality of life.

GN

Declaration of interest None

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The role of the clinical nurse specialist in stoma care: a scoping review

Abstract

Aim: Rapidly evolving roles in nursing require exploration and description. This review aims to examine the role of the clinical nurse specialist (CNS) in stoma care from the UK perspective.

Design: A scoping review was undertaken using the Preferred Reporting Items for Systematic reviews and Meta-Analyses guidelines. Data were synthesised using content analysis to derive meaning units and themes.

Data sources: Three electronic databases were used to conduct the search: Embase, AMED and Ovid Medline. Additional sources identified through the reference lists of included studies and guidelines were also included.

Methods: Two reviewers undertook the search for articles that described the role of the stoma care CNS in the UK. Any disagreements were to be resolved through discussion.

Results: Seven papers met the eligibility criteria. Analysis resulted in 184 unique meaning units. Meaning units were grouped into themes reflecting the four pillars of advanced practice: advanced clinical practice; leadership; facilitation of education and learning; and evidence, research and development. The fewest meaning units were attributed to the evidence theme ($n=13$) and the most related to advanced clinical practice ($n=107$) such as having specialist knowledge and skills to manage complications.

Conclusion: The stoma care CNS role reflects the four pillars of advanced practice. These practitioners are valuable, carrying out a complex role that involves high-level, specialist decision-making skills. The results from this scoping review could be useful in service development; they will be used to inform the Association of Stoma Care Nurses UK modified Delphi consensus to examine the views of stoma care CNS practitioners.

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There are an estimated 600 clinical nurse specialists (CNSs) in stoma care in the UK (Hodges, 2022), working predominantly in England. The stoma care CNS provides care for people preparing for and living with a stoma pre-operatively, postoperatively and in the long term.

Pre-operative practice includes stoma siting, where the stoma care CNS will mark the place on the abdomen where the surgeon will form the stoma, and providing pre-operative counselling (Katté and White, 2021). Postoperative care includes preparing the person with a newly formed stoma for stoma self-care, identifying and managing complications and planning a

safe discharge from hospital to the community (Swash, 2022a). In the long term, care may include assessing and managing complications, such as a prolapsed stoma or parastomal hernia (Skipper, 2021), evaluating care interventions and providing psychosexual and social support. At each stage of the care pathway, the stoma care CNS role is likely to involve advanced clinical reasoning and tailoring decision-making knowledge and skills to the individual needs of patients, many of whom are vulnerable (Swash et al, 2022b), such as people who have dementia and a stoma (Swash et al, 2022c).

Stoma care CNS roles and settings vary both within the UK and around the world.

In other countries, the role can incorporate continence and wound care. In the UK, stoma care CNS roles vary, reflecting patient needs. Nurses might be employed by the hospital or a community organisation, depending on which organisation provides the service. In addition, professional boundaries are becoming blurred with the development of newer positions, including those held by specialist but unregistered practitioners. It is therefore uncertain what the essential and common areas of the stoma care CNS position are. The role of the stoma care CNS requires evaluation to determine clear boundaries and capture and clarify its complexities.

Background

Defining the stoma care CNS role is difficult because of the number and variety of activities that are undertaken and the rapid way in which nursing roles evolve.

In the wider context, the International Council of Nurses (ICN, 2020) define the role of the CNS in the context of possessing expert knowledge and decision-making skills. This emphasises the difference between being a novice and working at an advanced level. Further compounding the challenge of defining specialist practice is the growing emphasis on advanced practice, with roles such as the advanced nurse practitioner. The ICN (2020) explores the need for additional graduate education. The Royal College of Nursing (RCN) (2021) describes the four pillars of advanced practice as clinical expertise, education, leadership and evidence. It is of note that the ICN (2020) and the RCN (2021) descriptions concur.

More than 10 years ago, the RCN (2009) described the role of the stoma care CNS but this has since evolved and the changes have not recently been explored. Ensuring the stoma care CNS role is understood, what it can involve (activities can vary, and the work can be linked with cancer care) and standards of care required for advanced nursing practice need to be maintained. Furthermore, demonstrating the value of the stoma care CNS is useful to inform service developments.

This review was also undertaken to inform a subsequent Delphi consensus undertaken at the UK national stoma conference.

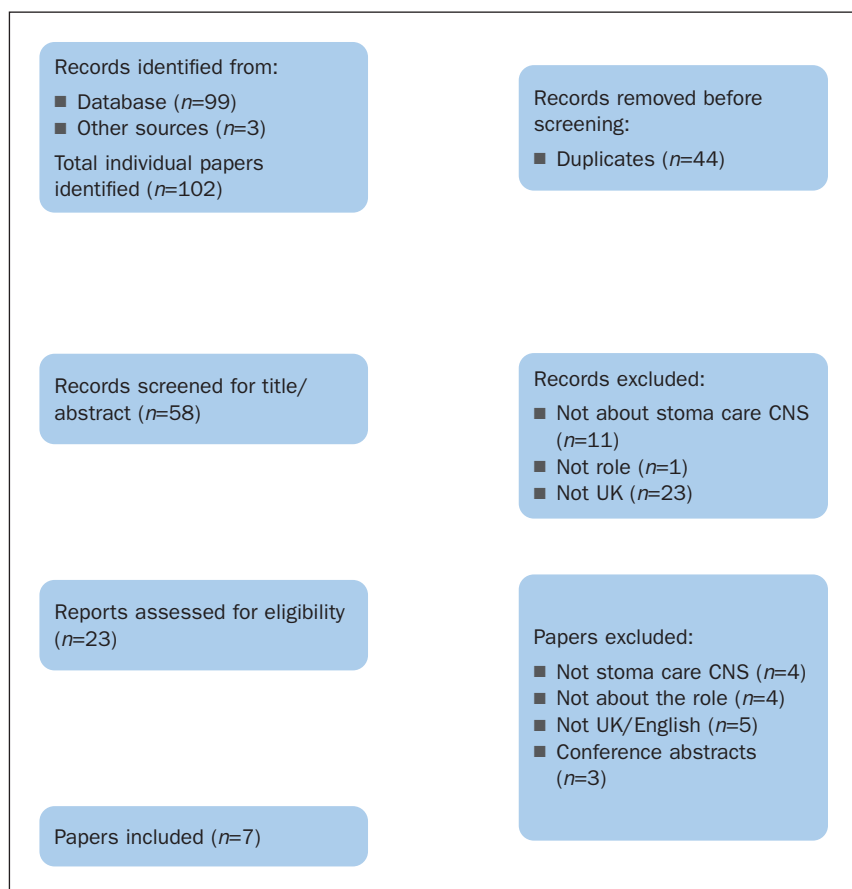


Figure 1. PRISMA selection flow diagram (Page et al, 2021)

Table 1. Eligibility criteria

Inclusion criteria	Exclusion criteria	Rationale
Description of the role of the clinical nurse specialist in stoma care in the UK	Nurses outside the UK	The study population is nurses working in the specialist field of stoma care within the UK
Papers written in English Full papers, including reviews, commentaries and guidelines	Conference abstracts	Authors can only read English Perspectives on the role of the clinical nurse specialist in stoma care are likely to be captured in the wider literature as no research was available

The review

Aim

The aim of the scoping review was to synthesise the available evidence to answer the question formed using the PCC (population, concept, context) from the Joanna Briggs Institute's Manual for Evidence Synthesis (Aromataris and Munn, 2020). The intention was to establish 'How is the role of the CNS in stoma care in the UK described and understood within the published evidence?'

Key words

- Clinical nurse specialist
- Role
- Colorectal
- Stoma

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Table 2. Papers included in the review

Author (year)	Aim of paper	Design of paper	Meaning points
Comb (2003)	To explore the role of stoma nurses in cancer care	Case study	16
Royal College of Nursing (2003)	To provide guidance on documentation in stoma/ colorectal nursing	Narrative review	4
Skingley (2004)	To describe improvements achieved by educating non-specialist, community-based nurses	Narrative review	29
Royal College of Nursing (2009)	To improve documentation in stoma care nursing	Narrative review	32
McGrath (2017)	To explore the role of the specialist nurse in managing stoma-associated problems	Narrative review of study follow-up	8
Association of Stoma Care Nurses UK (2018)	To detail competencies for stoma nurses working at band 7	Competency framework	70
Henbrey (2021)	To explore the role of stoma care CNS in maintaining quality of life in palliative care	Literature review	25

Design

The original idea was to undertake a systematic review, but it became clear during preliminary searches that there was no published research on this topic. The review was therefore revised to be a systematically undertaken scoping review.

The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) selection process (Figure 1) (Page et al, 2021) was used to inform the methodological approach employed to conduct the systematic scoping review. The process had three steps: identification of relevant literature; inclusion/exclusion; and review of the included papers.

Search methods

Three online databases – Embase, AMED and Ovid Medline – were considered relevant after preliminary searches to test the terms within these databases were carried out. These databases were systematically searched; the final search on 26 August 2022 used the search terms nurs* AND (stoma OR ostomy OR ostomate OR ostomist) AND (role OR duty OR duties OR obligation OR accountability OR performance OR

representation OR job OR function OR position OR skill OR task OR work OR responsibility) within paper titles.

Eligibility criteria (Table 1) were used to screen papers, first by titles and abstracts of citations identified through the initial database search and then the full-text papers identified for potential inclusion. There were no restrictions on publication date, but it was not anticipated anything would be found before 1971 when the first UK stoma nurse was appointed (Black, 2000).

Further papers for inclusion were identified through relevant professional guidelines and reference lists of papers that met the eligibility criteria. Two reviewers (JB and AB) independently screened the title and/or abstract then the full text of each paper identified for review. Differences were resolved by discussion; discussion with the third author (GT) to resolve disputes was unnecessary.

Search outcome

There were 99 articles identified in the initial search; three guidelines were added and 44 duplicates were removed. Thirty-five papers not meeting the eligibility criteria were rejected at the title and abstract screening stage. Twenty-three full-text papers were assessed for eligibility and seven (Table 2) were included for review.

Quality appraisal

No critical appraisal of the included papers was attempted as no research papers were identified. The authors recognised that it would be appropriate to: include a wider range of literature to answer the search question; and use the findings of the review to inform a consensus study through which the findings would be indirectly appraised.

Data analysis

The results from the review were synthesised using content analysis. Content analysis enables large amounts of text to be transformed into a highly organised and concise summary of key points (Erlingsson and Brysiewicz, 2017).

Data were broken down into meaning units; these are short pieces of text that maintain original meanings. During the analysis process, each reviewer listed the meaning units from each source. JB and AB reviewed all included

papers independently to identify meaning units, which were then discussed and agreed. If a meaning unit was identified in the same source more than once, the second and subsequent occurrences were ignored. Results were added

to a purpose- designed Excel spreadsheet by AB. Related meaning units, either through content or context, were grouped into subcategories (codes) and categories. These categories were then grouped into themes.

Table 3. Relationships between themes, categories and meaning units

Theme	Category	Code	Number of meaning units (n=184)
Advanced clinical practice	Has specialist knowledge and skills	Specialist knowledge and skills	27
	Support provider	Support	21
		Counsel	11
	Delivers care	Provides care	22
	Assesses, plans, documents and evaluates care	Assessor	13
		Plans, documents and evaluates care	4
	Skilled communicator with patients and their significant others	Collaborates and communicates with patients	7
Facilitation of education and learning	Specialist point of contact for information and advice	Patient adviser	13
		Be a resource	5
		Provide patient information	5
		Mentor/preceptor	1
	Educator	Educate patients	3
		Educate healthcare professionals	3
		Educate others	2
		Educate significant others	1
		Educator	2
	Leadership	Autonomous and collaborative	Collaborate/communicate with multidisciplinary team and other health professionals
Signpost			2
Autonomous			2
Refer			1
Advocate and role model		Patient advocate	3
		Speciality advocate	2
		Service improver	4
		Role model	1
Steward of the NHS		Resource/product management	5
Manager		Manager	3
Leader		Leader	1
Evidence, research and development		Uses and contributes to a specialist evidence base	Research
	Uses evidence base		4
	Audit		3

Discussion was held with all authors until agreement was reached over the meaning units, codes, categories and themes.

As the findings were to be used in a consensus study, statements were formed to capture each of the 13 categories identified to describe the role of the stoma care CNS.

Results

The seven included papers were published in the UK between 2003 and 2021 (*Table 2*). There were three guidelines (RCN, 2003; 2009; Association of Stoma Care Nurses UK (ASCN UK), 2018), two narrative reviews (Skingley, 2004; McGrath, 2017), a case study (Comb, 2003) and a literature review (Henbrey, 2021).

The results of the synthesis are summarised in *Table 3*. There were 184 individual meaning units and 30 codes derived from the seven papers. The codes were grouped into 13 categories. During data synthesis, it became clear that the 13 categories effectively fit into four themes. The themes reflected the four pillars of advanced practice: advanced clinical practice; leadership; facilitation of education and learning; and evidence, research and development (RCN, 2018).

Distribution of the categories, codes and meaning units varied between the four themes. Advanced clinical practice contained the most meaning units; leadership contained the most codes; and evidence, research and development contained the fewest categories, codes and meaning units. Advanced clinical practice contained five categories, seven codes and 105 meaning units. Facilitation of education and learning contained two categories, nine codes and 35 meaning units. Leadership contained five categories, 11 codes and 31 meaning units. Evidence, research and development contained one category, three codes and 13 meaning units.

Each of the 13 categories contained between one and five of the 30 codes; the median was two. There was an average of 14 meaning units per category. Four of the categories contained 20 or more meaning points, predominantly in the theme of advanced clinical practice. These categories were: is a support provider ($n=32$); has specialist knowledge and skills ($n=27$); is a specialist point of contact for information and advice ($n=24$); and delivers care ($n=22$). Five categories contained only one meaning unit:

mentor/preceptor; educate significant others; refer; role model; and leader. Discussions to try to join meaning units revealed that topics such as manager and leader were distinctly different and should remain separate.

Of the 30 codes, three contained over 20 individual meaning units: specialist knowledge and skills ($n=27$); provides care ($n=22$); and provides support ($n=21$). These three meaning units were all in the theme of advanced clinical practice.

Discussion

This is the first scoping review to examine how the role of the stoma care CNS in the UK is described and understood within the published evidence base. The categories and themes identified reflect the diversity and complexity of the role within the context of advanced specialist practice.

The CNS can be described as a registered nurse who is authorised to practise as a specialist and who has advanced expertise in a branch of nursing that includes clinical, teaching, administration, research and consultant roles (Lowe and Plummer, 2019). The role of the stoma care CNS was first described in the UK in the 1970s (Black, 2000). Initially, the CNS role was developed to meet the changing needs of patients and in line with the evolving healthcare workforce. Subsequently, this nursing role developed to enable nurses to extend their clinical knowledge, expertise and skills to inform high-level, autonomous clinical reasoning and decision-making to improve care for patients with complex diseases or conditions (Chan and Cartwright, 2014). Similarly, in colorectal cancer, the role of the advanced nurse practitioner is described as including autonomous working (Carvalho et al, 2022), showing commonality between the different nursing roles.

Although associated with a high level of clinical expertise, the CNS role has long been considered to extend beyond specialist clinical practice. There are role expectations that include quality improvement, service and system management as well as staff education and leadership, including mentorship. These roles seamlessly combine to impact positively on the experiences and clinical outcomes of patients and their families (Kidner, 2022).

It is important to consider the transition from novice to advanced specialist practitioner. When a nurse first specialises in stoma care, they will have a degree of knowledge about the topic. However, it could be argued that nurses should not use the term CNS without first acquiring formal, specialist education. Health Education England (2017) states that health professionals working at an advanced level are required to work at master's level and are able to make sound judgements in complex, ambiguous situations.

This scoping review suggests that the stoma care CNS role largely conforms to the RCN's (2018) four pillars of advanced practice. Nonetheless, the extent to which each individual stoma care CNS meets these expectations will be determined by their personal expertise, experience, specialist education and scope of practice.

Advanced clinical practice

The largest reported interactions of the stoma care CNS related to the care and management of people living with a stoma. This included supporting preparation for stoma-forming surgery or working with significant others to optimise quality of life for people with a stoma; this was demonstrated by the prominence of advanced clinical practice within meaning units and categories.

These results, however, may have been influenced by the nature of the publications. Henbrey (2021) for example, focused only on the stoma care CNS role in palliative care. Palliative care is only a small part of most stoma care CNS roles, as many people live a long life with their stoma. Additionally, Comb (2003) included a large focus on building a rapport with patients to better enable the nursing process when issues arise. Rapport enables the patient to volunteer information to the stoma care CNS to enable assessment and resolution of issues.

Within clinical practice, it is important to identify and define the scope of practice of the stoma care CNS in both direct and indirect care (ICN, 2020). In the UK, doctors have a limited role in stoma care following surgery, with responsibility for this falling predominantly to the stoma care CNS. It is therefore unsurprising that the content analysis exercise identified the highest number of meaning units relevant to

the possession of specialist skills and knowledge category. This involves managing complex situations such as choosing the most appropriate place for the stoma to be surgically formed, as well as managing stoma complications that require complex decision-making skills such as the management of enterocutaneous fistulae.

Excellent communication skills are fundamental to the provision of support and counselling as well as when conducting the essential roles required by the nursing process of assessing, planning, implementing and evaluating stoma care needs. Support is essential to enable adjustment to life with a stoma, which involves profound disruption in the sense of the patient's embodied self. Counselling is necessary to enable relationships with others to enable the person living with a stoma to experience people and engage with the world around them (Thorpe et al, 2016). The stoma care CNS needs a vast amount of knowledge and understanding to enable this, using sensitive and appropriate communication skills.

Facilitation of education and learning

The stoma care CNS facilitates learning within the clinical environment with patients and their significant others as well as with colleagues, in addition to their own education. The stoma care CNS is also a valuable resource, being the specialist point of contact for information and advice on stoma care for patients, significant others, colleagues and others. This aspect of the role is recognised by Kidner (2022), who describes the CNS role as a consultant to other health professionals to enable high-quality care. The ICN (2020) also identifies the part that the CNS plays in the provision of education to colleagues.

Self-education is also an important aspect of the stoma care CNS role. Historically, the English National Board for Nursing, Midwifery and Health Visiting enabled training to be conducted to a set standard within all institutions in the UK that provided education in stoma care, with education available at diploma and degree level. Once the board was disbanded in the 1990s (Stronge and Burch, 2019), specialist education was offered at the same levels but the range of content varied considerably between institutions. With nursing becoming a graduate profession, a greater importance was placed on

senior nurses such as stoma care CNSs having stoma-related qualifications at master's level. The RCN (2018) suggests that nurses working at an advanced level should be educated to master's level. The ICN (2020) concurs, stating a CNS has completed a master's degree specific to their practice.

However, there is no master's pathway for stoma care CNSs to complete in the UK, only a stoma-related module that is incorporated into a master's programme. It is uncertain how many stoma care CNSs have completed a relevant master's degree. Stronge and Burch (2019), in an audit, reported that 72% of stoma care CNSs had a stoma-specific qualification at degree level or above. This is an increase on an earlier audit, which reported that 49% of stoma care CNSs had completed a degree-level stoma-related module (Burch, 2014). The earlier survey of stoma care CNSs showed that 25% held a degree and 30% a master's as their highest qualifications (Burch, 2014). It is likely that these figures will have altered in the years since this audit was undertaken.

Stoma-related education was undertaken for three main reasons: professional development; to underpin clinical knowledge; and to improve patient care (Stronge and Burch, 2019). Therefore, CNSs in stoma care recognise the importance of improving patient care as well as developing themselves professionally through education.

Leadership

Leadership in the stoma care CNS role includes being a steward of the NHS, particularly regarding the management of resources and stoma products. Careful and efficient use of stoma products was described as important in the audit by Bowles et al (2022). One perception of nurses is that patients consider that stoma-related products being available on prescription means they can 'have whatever they want' (Bowles et al, 2022: S17).

In this review, limited meaning units were related to being a manager or a leader, indicating that these aspects of the role were not explicitly recognised in some of the publications reviewed. ASCN UK (2021) identified a set of quality statements to set standards and ensure stoma care healthcare goals are met. These standards do not include leadership or management,

except in the foreword. Conversely, domain two of the ASCN UK band 7 stoma care CNS competency framework relates to leadership and management and includes overseeing the stoma service and being accountable for maintaining service standards (ASCN UK, 2018). It is possible that the role of management is associated only with the department lead. It could be that, because leadership was associated with management, it was not recognised and identified separately.

There was no discussion about sponsorship of nursing posts. A recent audit by Bowles et al (2022) showed that, in England, three-quarters of a large sample of stoma care CNSs ($n=108$) were directly or indirectly funded by industry.

The ASCN UK (2018) recognises leadership and management in their competency framework for stoma care CNSs but this is not included in the other publications. This may reflect the topics of discussion of publications or possibly suggests these aspects of the role have a lower priority than others, for the stoma care CNS.

Evidence, research and development

The CNS role needs to include the assessment of relevant data and research (Kidner, 2022) so practitioners are able to understand and draw up guidelines.

To enable service evaluation, the ASCN UK (2021) has undertaken work to improve the understanding of the care that should be provided and has also established a set of standards that stoma care CNSs can use to benchmark their care. As part of service improvement, Metcalf (2017) and Walker et al (2018), in their separate audits using the ASCN UK standards and audit tool, both recognised areas of their service that needed improvement. The number of research studies, audits and evidence-based articles about stoma care that are written by or include the stoma care CNS are increasing; this is improving the evidence to guide care and ensure that high standards are met and maintained.

The ICN (2020) considers the role of the CNS to include innovation and facilitating change. Change management and service development as well as undertaking research are not well described in the literature in relation to the role of the stoma care CNS. Evidence-based nursing is essential for all nursing roles, which is evident in the ASCN UK (2018; 2021) guidelines

that have been published to assist the stoma care CNS.

Implications for practice

The blurring of nursing roles in the UK as they have progressed and evolved has resulted in disparity and confusion about them. It was considered necessary to define the stoma care CNS role, but there is no research on this topic, making role definition difficult. Further empirical enquiry is required.

There was some resonance between job roles within the reviewed papers. However, most papers were not written with defining the complete role of the stoma care CNS as an outcome but focused on select aspects of the role. This limited perspective may have contributed to a fragmented understanding of the role.

Anecdotally, fragmentation of the role may be perceived by colleagues and patients. For example, colleagues might see only aspects of the stoma care CNS role being undertaken, such as those that take place on the ward or in clinic. This can result in an incorrect perception of what is included in the role, excluding care provided within the community or management roles undertaken in the office. This limited perspective, with the stoma care CNS role being viewed through only one lens, does not enable a full understanding of the position.

A broader, more holistic role description and understanding are needed to include all aspects of the stoma care CNS role, with a comprehensive definition of the role through further research.

Clinical impact

This is the first scoping review undertaken to examine the stoma care CNS role. Although only UK roles were included, the findings might be transferable both to other countries and the various roles in the UK.

Consideration needs to be given to the need to move from specialist into advanced practitioner roles. This requires gaining advanced skills to enable transition into advanced roles through shadowing, networking and formal teaching (Gee et al, 2018). It could be suggested that the stoma care CNS should have a master's degree and additionally be expanding their scope of practice towards becoming an advanced practitioner with an increased focus

on education, research and leadership, to match their clinical skills. There are master's programmes available that include specialist clinical modules such as stoma care as well as core modules that include clinical assessment, leadership, education, prescribing and research. Obtaining such an education would create a fully rounded advanced practitioner.

Results from this scoping review were subsequently used to inform a consensus study. A modified Delphi consensus was undertaken at the ASCN UK conference in October 2022 with a vote on the results of this review to see if they reflected the opinions of stoma care CNSs in the UK. Nonetheless, more research is needed to examine the CNS role in stoma care.

Limitations

A lack of studies on this topic meant that a systematic review was not possible; a scoping review was undertaken instead. None of these papers lent themselves to critical appraisal or would have been deemed robust evidence on a hierarchy of evidence; nonetheless, they were included within the review.

Papers were included because of the rationale for undertaking the scoping review: to establish how the role of the stoma care CNS is described and understood within the published evidence to provide baseline criteria for a modified Delphi consensus study. No research has been undertaken in this area, which shows a need for robust evidence; this would potentially be useful for UK workforce planning.

Limitations of this scoping review include missing potentially important publications because of the search terms used. However, the search terms were deemed to be appropriate to establish how the role of the stoma care CNS in the UK is described and understood within the published literature. Non-UK publications were excluded, there are disparities between roles and expectations in other countries, such as the additional roles around wound and continence care as well as care provided outside of the context of the NHS. Furthermore, the authors all have many years of experience in stoma care and education; they carefully considered the terms and no known articles were excluded.

To reduce bias associated with poorly conducted reviews, this review of the papers was robustly undertaken to ensure results were

CPD reflective questions

- Reflecting on your role, does it meet the four pillars of advanced practice?
- How can you develop yourself and your role to better meet all four pillars of advanced practice?
- Reflecting on nursing in general, why are different roles important to meet the varying patient needs encountered?

reliable. This was achieved by discussion and documentation of methods before undertaking the review.

Additionally, bias can occur during data analysis. Content analysis is useful for interpreting the meaning of the data but there is a risk that themes will be based upon the frequency of occurrence rather than their importance. This was avoided by discussion during the analysis process to ensure that the meaning of the sources was not lost. It was considered that the subsequent consensus study would enable the importance of each theme to be captured.

Conclusion

This scoping review identified a range of non-research papers to answer the question: 'How is the role of the CNS in stoma care in the UK described and understood within the published evidence?' It was identified that the stoma care CNS role is complex and involves all four pillars of advanced practice: clinical; education; management and leadership; and research.

The greatest proportion of the stoma care CNS role appears to be clinical practice, reflecting its patient-centredness, with education of themselves and others also highlighted as important. The management and leadership components of the role were identified but less well defined. The least prominent pillar of practice in the stoma care CNS role was research and evidence-based practice.

The review findings highlight that the stoma care CNS can be a novice or experienced specialist nurse. Consequently, the clinical pillar is likely to be most prominent in nurses with less experience and expertise, with the other pillars developing over time as expertise is gained and with continuing professional development. Confirmation of these role descriptors is required by the stoma care CNS through qualitative enquiry to ensure they are current and relevant.

GN

Declaration of interest None

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