

# A retrospective audit of the treatment of wounds with moderate to high exudate levels

## KEY WORDS

- ▶ Audit data
- ▶ Dressings
- ▶ Exudate
- ▶ Moderate to highly exuding wounds

A retrospective audit of clinical data of patients was taken who required treatment for the management of moderately to highly exuding wounds. The inclusion criteria for this retrospective audit included patients ( $n=30$ ) from the Worcestershire Health & Care NHS Trust that have already been treated and that required a wound dressing for the management of moderately to highly exuding wounds. **Results and discussion:** The results of the “in use” evaluations showed a high use of foam secondary dressings with adjunct treatments to manage exudate. However, 65% of these treatments did not meet the clinical objectives related to exudate management. The assessment of how effectively the patient’s treatment regimens managed exudate produced by the various wounds showed that exudate management was rated as “poor” or only “adequate” in the majority of cases. It is noteworthy that a proportion of patients suffered from peri-wound skin conditions, e.g. eczema, maceration and excoriation. Over 95% of patients received peri-wound skin treatments to prevent/treat these conditions. As a consequence, these additional treatments add to the product costs and nursing time required. The use of appropriate wound dressings for the management of moderate to high levels of exudate would have prevented these severe skin conditions and likely significantly reduce treatment costs. **Conclusion:** This paper shows that 65% of the patients included in this audit failed to meet the clinical objective of exudate management. Adverse event sequelae such as skin maceration/excoriation occurred and, consequently, direct and indirect costs associated with treating these patients increased. Using a more appropriate wound dressing such as superabsorbent polymer demonstrated significantly reduced costs when compared to these audit costs.

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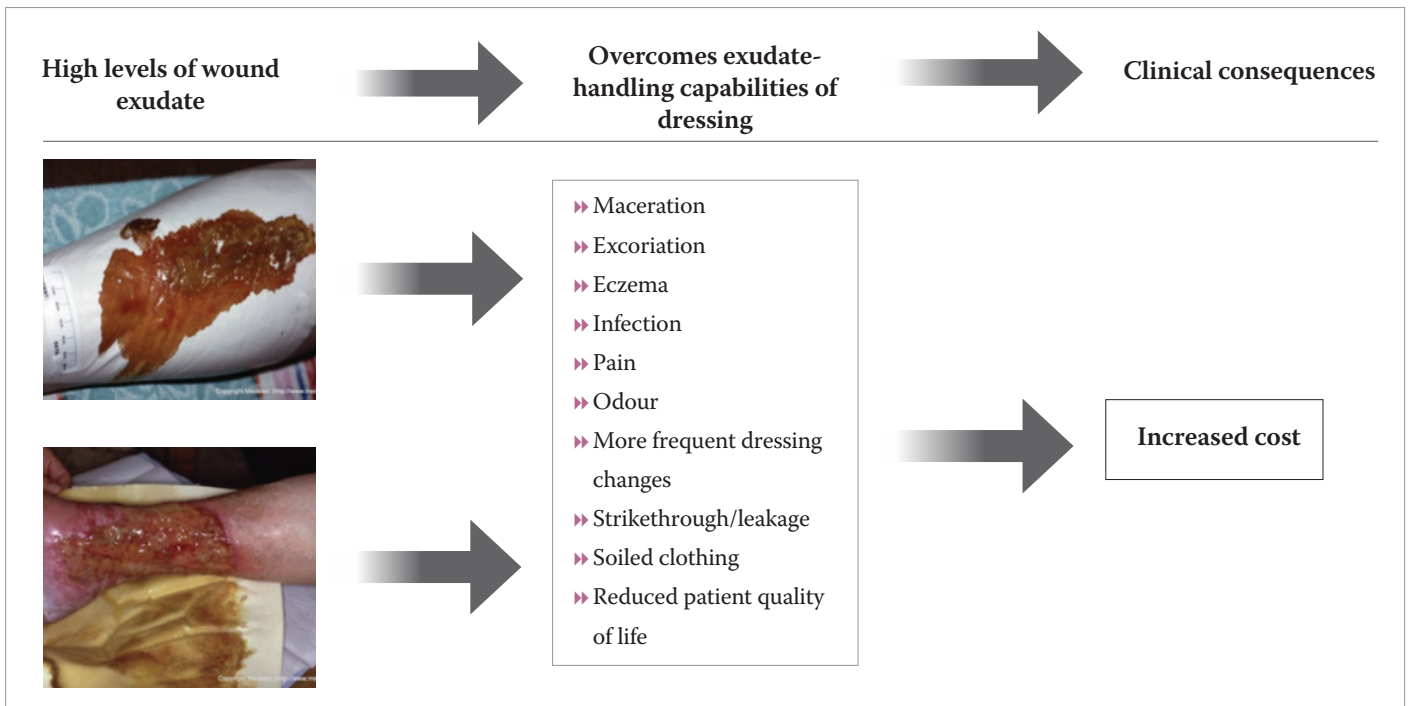
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Cutaneous wounds consist of a break in the continuity of the skin. As part of the normal processes that occur during the healing response, the body produces and releases wound exudate into the wound and the external environment (Ratcliff, 2008). In acute wounds, this exudate is considered to be beneficial and promotes the healing process (World Union of Wound Healing Societies [WUWHS], 2007). However, in chronic wounds, exudate may be detrimental to healing, slowing or halting healing from progressing (Lloyd Jones, 2014). It has been determined that chronic wounds have become fixed in the inflammatory phase of the healing response (Zhao et al, 2016) and excessive and prolonged releases of inflammatory mediators and proteases (e.g. matrix metalloproteinases [MMPs]) leads to a repeated cycle of localised activity and

tissue degradation (Gibson et al, 2009).

Within the acute wound healing response, Inflammation is one of the primary phases of normal healing and plays a role in the breakdown and removal of devitalised tissue via the tightly controlled action of proteases such as MMPs (Childs and Murthy, 2017). The inflammatory response also plays a role in the removal of harmful bacteria present at the wound site (Sorg et al, 2017). The cleansing of the wound bed is important in the progression of healing to the next stage (e.g. granulation and re-epithelialisation) where acute wound exudate growth factors promote new tissue production (Percival and Suleman, 2015). In chronic wounds, however, the inflammatory phase persists and the release of the wound-cleansing components in the wound exudate continues uncontrolled and at elevated levels,



**Figure 1. Consequence of poor dressing choice for exudate management**

resulting in prolonged tissue degradation of both damaged, devitalised tissue as well as healthy tissue (Lloyd Jones, 2014). This results in a stalling of the healing response and a delay of healing (Lazaro et al, 2016; Parnham and Bousfield, 2018). Despite there being a high level of inflammation, these chronic wounds are also susceptible to infection which may also lead to a further increase in exudate levels and its viscosity (Frykberg and Banks, 2015).

Research demonstrates that patients with chronic wounds have a poor quality of life compared to age-matched controls (Herber et al, 2007; Green et al, 2014). A systematic review of studies measuring quality of life of patients with leg ulcers showed a negative impact on several domains of quality of life, including exudate and pain (Herber et al, 2007; Phillips et al, 2018). General areas of impact of having a chronic wound included physical, psychological and social (Phillips et al, 2018). In most of the studies, pain was shown to be the major complaint among leg ulcer patients (Phillips et al, 2018). Ulcer and treatment-related pain as well as problems with exudate have significant and direct negative effects on quality of life. Patients with leg ulcers frequently complain of itchiness, odour and leg swelling associated with localised tissue reactions to exudate leakage onto surrounding skin (Woo et al, 2017). Psychological aspects can lead to a negative emotional impact on

life with symptoms such as anger, depression, and social isolation was reported by 68% of patients in a study exploring the impact of leg ulcers on quality of life (Phillips et al, 1994).

The cost of chronic wound care (e.g. venous leg ulcers) to the NHS has been widely reported (Guest et al, 2018a; 2018b) and both managers and clinicians are under scrutiny to make savings (Järbrink et al, 2017). This is supported by Government debate and there is an increased focus on Government to improving the strategy for wound care (House of Lords Hansard, 2017). All aspects of wound care should be scrutinised with a view to ensuring only the best treatments that produce both positive patient outcomes and financial outcomes are used. Therefore, the current treatment of wounds should be examined and the most significant clinical and costly challenges highlighted upon in order that they can become a focus of investigation and — if necessary — change for the better.

With regard to exudate and its management, levels of exudate production from wounds can be significant. It has been reported that the volume of exudate produced by burn wounds can be in excess of 5,000g/m<sup>2</sup>/day (Lamke et al, 1977; Thomas and Young, 2008) and in venous leg ulcers between 4,000–12,000g/m<sup>2</sup>/day (Thomas, 1997). This level of exudate production is a significant challenge for the

**Table 1. Costs associated with poor exudate management**

Implication of poor exudate management	Associated additional costs
Increased frequency of dressing change	Increased number of dressings and increased nursing time
Excoriation/maceration of peri-wound skin	Use of protective creams and emollients
Allergic reactions/eczema associated with exudate damage	Use of steroids
Peri-wound skin infection	Use of antimicrobials
Pain	Use of analgesia
Psychological distress	Prescribing of anti-depressive therapies and/or drugs

**Table 2. Poor exudate management implications (modified from Barrett et al, 2018)**

	Poor exudate management consequence	Clinical implications
1	Odour from wound or from leaked exudate	Psycho-social issues leading to patient isolation and embarrassment of the patient, carer, family
2	Wound exudate leakage leading to soiled clothing and furnishings (e.g. chairs, slippers)	Need for frequent dressing changes and/or having to wash clothes
3	Peri-wound skin damage	Skin maceration or excoriation that may also lead to localised infection
4	Patient discomfort/pain from (3)	Leading to patient quality of life issues
5	Elevated levels of detrimental wound exudate factors (e.g. protein-degrading enzymes: matrix metalloproteinases, [MMPs])	Tissue destruction and delayed healing

*Note. The majority of the above complications relating to poor exudate management will lead to an increase in costs*

clinician and failure to identify and utilise the correct wound dressings may result in a catastrophic failure of exudate management (*Figure 1*). This failure in effective exudate management has implications for the patient and the clinician, and impacts significantly on the cost of treatment (Lindsay et al, 2017). Exudate management should be seen as a high priority area in terms of clinical impact and costs related to its management (e.g. dressing and nursing costs). It should also be noted that there are also significant costs associated with poor exudate management (*Table 1*). In addition, there are specific clinical implications of poor exudate management for the patient and these are outlined in *Table 2*.

Wound dressings are the main tool of the clinician in managing exudate produced by wounds. A wide variety of wound dressings are available to aid in the management of this exudate (Broussard and Powers, 2013) that show varying levels of success. In addition, inappropriate dressing choice can exacerbate problems because exudate is not managed effectively

(Romanelli et al, 2010; Beldon, 2016).

Generally, superabsorbent dressings (SAPs) have been recommended for the treatment of moderately to highly exuding wounds (Wiegand et al, 2015). However, clinicians frequently use dressings such as foams (Diehm and Lawall, 2005; Fonder et al 2008) on exuding wounds (Barrett et al, 2018), possibly a result of ritualistic treatment. Whilst foam dressing manufacturers propose that they are suitable for the management of such levels of exudate, it has been reported that they cannot prevent peri-wound skin maceration in heavily exuding wounds (Fonder et al, 2008; Wiegand et al, 2015). In conclusion, the financial costs associated with exudate management can be high but, if the use of unsuitable dressings has been implemented the clinical cost can also be high with the cost associated with poor exudate management quickly escalating (White, 2006).

This retrospective study investigates the costs and consequences of exudate management in medium-to-highly exuding acute and chronic wounds with

dressings (excluding SAPs) and correlates those dressings used (and their cost) with clinical outcomes. This information will help to identify the most suitable (and appropriate) wound dressings to be used for specific levels of exudate, and ensuring that the best clinical outcomes can be achieved in the most cost-effective manner.

## METHODS

### Type of research

A retrospective audit of clinical data (e.g. wound treatment regimens) of patients requiring treatment for the management of moderately to highly exuding wounds.

### Patient population

The inclusion criteria for this retrospective audit included patients ( $n=30$ ) from the Worcestershire Health and Care Trust that have already been treated and that required a wound dressing for the management of moderately to highly exuding wounds. The patients included were identified by the Primary Clinical Investigator and documents relating to their treatment (e.g. patient notes) were interrogated (by a Tissue Viability Nurse specialist) for data relating to treatments of wound/peri-wound skin.

### Data collection

The data collected relating to patient treatment included:

- ▶ Recorded audit evaluation details relating to the Investigation Site and Primary Investigator
- ▶ Data collected retrospectively from patient notes or NHS records:
  - Background baseline patient data and wound and treatment histories
  - Data obtained relating to wound management and any events associated with this management. Data was obtained at each assessment and recorded in patient documentation:
    - ◊ Primary/secondary wound dressings, fixation and all ancillaries used
    - ◊ Information relating to additional aspects of wound treatment (e.g. medication, debridement, compression therapy etc)
    - ◊ Any complications related to wound management (e.g. but not limited to pain, infection or maceration) and treatment
    - ◊ Whether or not the treatment met the clinical

objectives (specifically in relation to exudate management)

- ◊ Data for peri-wound management (e.g. use creams and skin barriers etc)
- ◊ The level of nurse that delivered the treatment
- ▶ Cost data obtained from reference sources to provide a day to costing of treatment
  - Summary and total cost of treatment to be calculated and recorded

Costs were assigned to each treatment using a number of reference texts:

- ▶ Wound care products — Wound Care handbook 2017–2018 (Cowan, 2018)
- ▶ Nurse time — via Royal College of Nursing (RCN) NHS Payscale 2017–2018 (RCN, 2018)
- ▶ Pharmaceuticals — Dermatology Handbook 2017–2018 (van Onselen, 2018).

## DURATION OF DATA COLLECTION

Patient treatment data from a two-week period was collected and recorded for subsequent analysis.

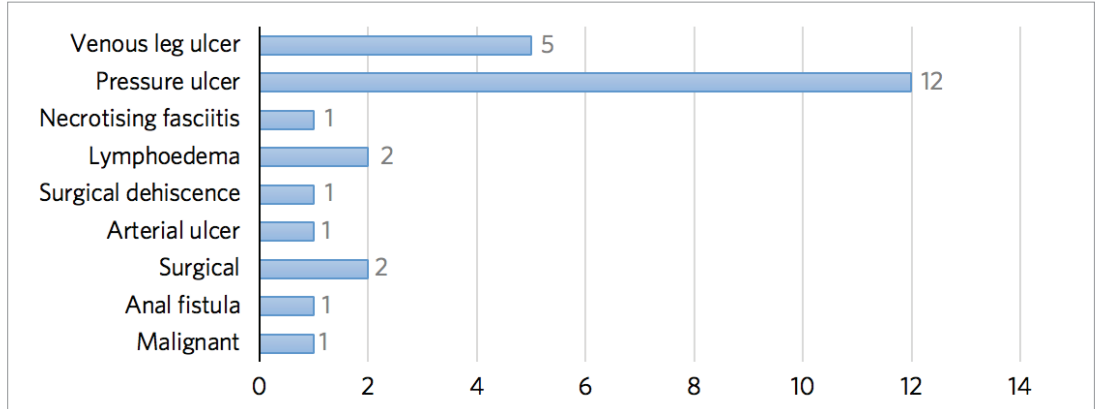
## Evaluation criteria

The criteria for primary and secondary objectives evaluated are outlined below:

### Primary objectives

- ▶ Exudate management: assessed at each assessment point in both a subjective and semi-quantitative manner. Assessment of exudate management was assigned as follows: “Poor” (0–25%), “Adequate” (26–50%), “Good” (51–75%) or “Very Good” (76–100%). The reasons for changing the dressing related to exudate management was also reported and included “a Scheduled Change”, “Leakage”, “Strike Through” or “Maximum Exudate-handling Capacity of Dressing Reached”. Additional reasons for dressing removal such as fixation issues or the requirement to remove the dressing in order to observe the wound’s progress were also reported
- ▶ Impact of exudate management on peri-wound skin: rated subjectively and assessment of exudate on skin was assigned using a number of different skin states: “Healthy”, “Dry”, “Eczematous”, “Excoriated”, “Inflamed”, “Macerated”, “Hyper-hydration” or “Other”. The skin assessments were to be described in a comments box on the evaluation form.

Figure 2. Study wound types



**Secondary objectives**

- ▶▶ Healing progression: wound area (width x length, mm) was measured as an indication of wound progression
- ▶▶ Pain: scored according to the validated VAS scale at both a) dressing change and b) between dressing changes
- ▶▶ Dressing assessment: an overall dressing assessment, with the patients and clinicians own views on the dressing, was undertaken at the end of each patient evaluation and were noted in the evaluation form.

**COMPARISON OF COSTS**

Barret et al (2018) have documented the costs of treatment of exudate (products and additional resources) over a two-week period in a heterogeneous population of patients and wounds before and during treatment with a superabsorbent dressing. By matching ten of these patients (Barrett et al, 2018) with patients with similar characteristics in terms of wound type from this current study, a cost comparison was undertaken to see if there were any differences related to the treatment of the patients with superabsorbent dressing vs. standard practice seen in this current study.

**Terms of study, ethics and IRB**

Ethics approval for the study was not required as no test products were evaluated and only retrospective data collected. The investigator of this audit gave permission for the data to be collected in her presence or a TVN she had appointed. No photographic data was collected. The patient data was anonymised so patient consent for use of data was not required.

**RESULTS AND DISCUSSION**

**Patient data**

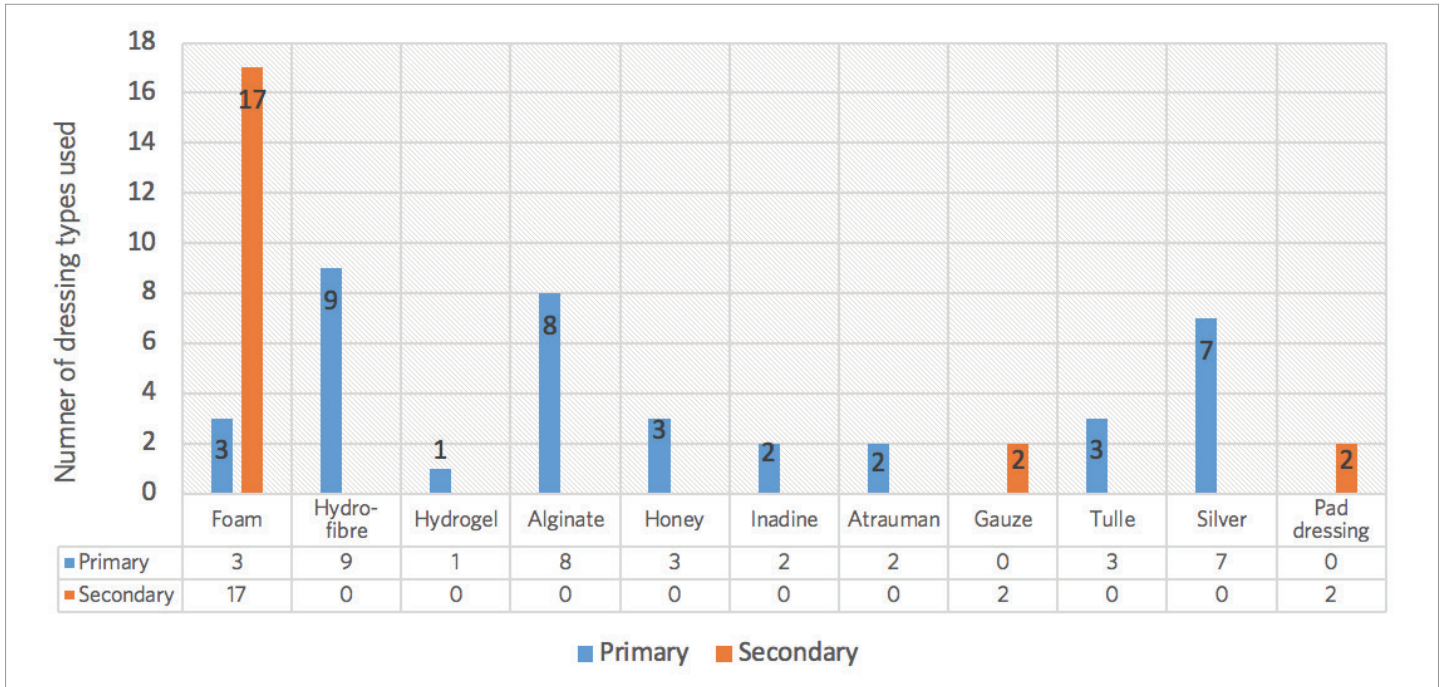
In total, thirty patient data sets were initially identified as fulfilling the criteria set out for this audit. However, four patient data sets were subsequently excluded as they had been managed at some time during their care with an SAP dressing. Twenty-six patients were included in this audit and one hundred and thirty-nine separate dressing changes were recorded for these patients over a two-week time period. The epidemiology of the patient population is presented in Table 3 and the different wound types are detailed in Figure 2. Pressure ulcers were the predominant wound type (n=12) followed by venous leg ulcers (n=5). A number of other wound types were also included (n=9). All the wounds demonstrated moderate to high levels of exudate production and the constituency of the exudate and flow rate varied (from haemoserous to thick and constant to irregular, respectively).

**Treatment history**

Figure 3 shows the different types of primary and secondary dressings used to treat these patients over the course of the study period. The largest primary dressing groups were Hydrofiber and alginate dressings (9 and 8 patients, respectively) and foam dressings were the predominant the secondary dressings (n=17). These results indicate that there were a wide variety of different dressing types used to treat this heterogeneous population of moderately (n=12) to highly exuding wounds (n=6). It is noteworthy that the majority of the wounds appeared to have been infected and this would have likely contributed to the relatively high levels of wound exudate produced in this population. The presence of wound infection can be seen by the use

Sex	No.	Age Range	Mean age (SD)
M	7	46–88	72.9 (13.2)
F	19	46–97	76.9 (14.7)





**Figure 3. Primary and secondary wound dressings used during study**

of a variety of antimicrobials (honey, iodine, silver) used in the study. An antimicrobial was used in 46% of patients (Figure 4).

Sixty-five percent of patients had a foam dressing applied as a secondary dressing during treatment (Figure 4). Additional dressings (e.g. Hydrofiber and alginates) were used to aid exudate management. The use of additional wound dressings for exudate management not only adds to the overall cost of the treatment regimen but will also increase the nurse time involved (and hence overall cost) when changing dressings. Over 80% of patients were treated with barrier protective creams and 38% of patients had emollients applied (Figure 4). The use of additional dressings for exudate management and the use of ancillary products such as creams and emollients to treat and/or prevent peri-wound skin damage from wound exudate indicates that the treatments were unable to manage exudate fully.

The observation that foam dressings were used in so many treatments as a secondary dressing that generally required adjunct dressings to manage exudate (and yet still did not meet the exudate management objectives is contrary to the established principles of exudate management. These principles have been stated in a number of consensus documents and have highlighted the use of SAP dressings for the management of highly

exuding wounds. For example, in the WUWHS Consensus Document (2007), it was highlighted that the importance of appropriate dressing selection for exudate control and removal of excess exudate. It is probably worthwhile re-iterating here the statement made by Nielsen and Fogh (2015) in a paper reviewing the clinical utility of foam dressings in wound management where they say “The ability of a given foam to maintain the optimal level of moisture in the wound bed should be evaluated continuously to avoid complications from a mismatch of absorptive capacity to exudate production”.

Figure 5 indicated that, over the course of the evaluation period, the mean number of dressing changes per week was 3.4 and that the number of dressings (both primary and secondary dressings) used per week was 7.3.

**Clinical objectives**

Figure 6 documents the results of a number of clinical parameters measured related to dressing use. These clinical parameters included whether the clinical objectives of the study were met (“yes” or “no”), a semi-quantitative assessment of exudate management (“very good”, “good”, “adequate”, “poor”) and whether there was healing progression (“very good”, “good”, “adequate”, “poor”). Overall, 35% of the patients met the clinical objectives set by the

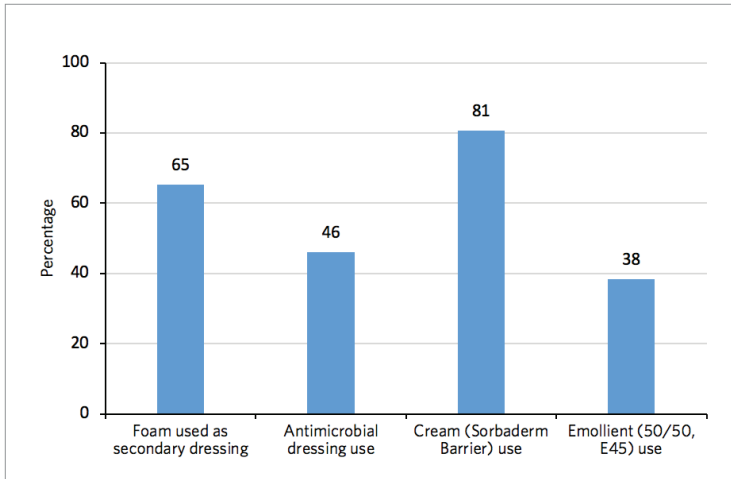


Figure 4. Breakdown of foam, antimicrobial and protective cream use

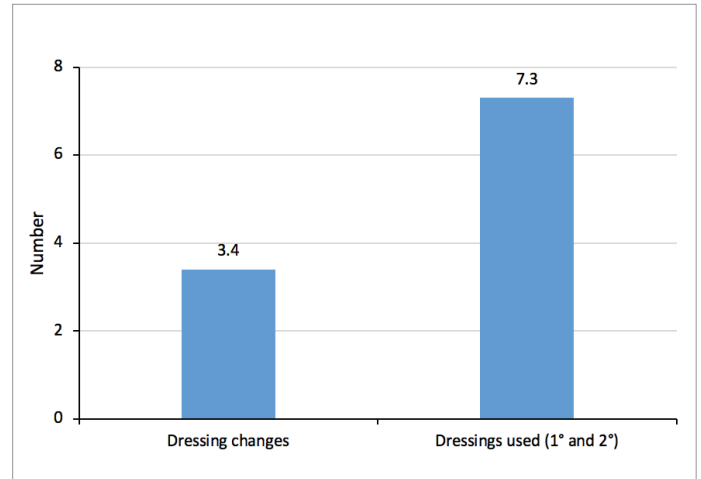


Figure 5. Summary of frequency of dressing change and use

clinician, of those one patient had been treated with NPWT. Overall, therefore, it would appear that exudate was not managed well by the wound dressings provided.

**Exudate management**

The assessment of how effectively the patient's treatment regimens managed exudate produced by the various wounds showed that exudate management was rated as "poor" or only "adequate" in the majority of cases (37.5% and 58.3%, respectively). There were no instances where exudate management was rated as "very good" (Figure 6). It is noteworthy that a proportion of patients suffered from peri-wound skin conditions (e.g. eczema, maceration and excoriation). Over 95% of patients received peri-wound skin treatments to prevent/treat these conditions. As a consequence, these additional treatments would be added to the product

costs and time required for the nurse to apply them. The use of appropriate wound dressings for the management of moderate to high levels of exudate would have prevented these severe skin conditions and likely significantly reduce treatment costs.

**Pain**

Generally, pain did not appear to be an issue (data not shown). However, many did take analgesia (paracetamol) with one patient requiring oral morphine solution (data not shown).

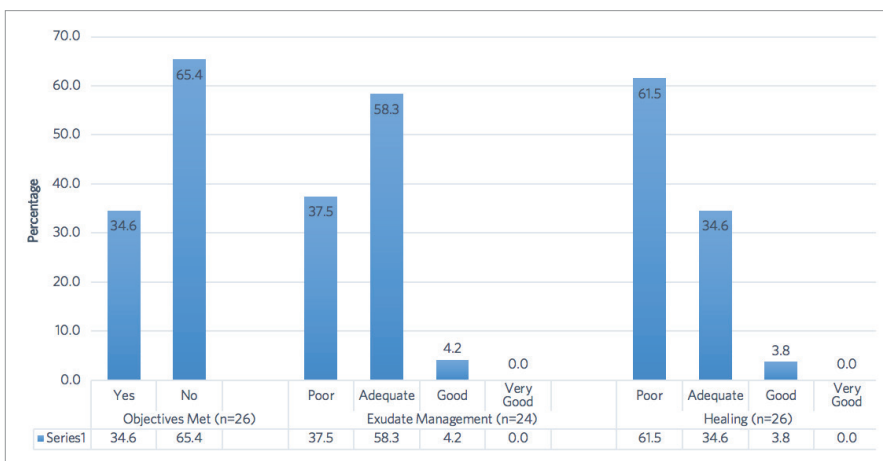
**Wound healing**

Assessment of wound progression in patients found that healing progression was rated as "poor" and "adequate" in the majority of patients (61.5% and 34.6%, respectively). Wound healing was assessed as "good" in only 3.8% of patients. No patients had wound progression rated as "very good," suggesting that the wound dressing's inability to manage exudate effectively may have resulted in poor wound progression. This detrimental effect of wound exudate on progression of healing is a well-recognised implication of poor exudate management (Spear, 2012).

**Treatment costs**

The results of the audit relating to costs (Table 4) showed that the total treatment costs of all 26 patients (over a two-week period) of product used and nurse time were £2062.77 and £2618.37, respectively with a total cost of £4681.14. The mean values were calculated, per patient, per dressing change as product used and nurse time of £79.34 and £100.71, respectively and the mean total cost was £180.04. The mean cost per

Figure 6. Summary of clinical parameters of dressing



**Table 4. Breakdown of costs**

Patient	Product costs (£)	Nursing costs (£)	Total costs (£)	Mean costs* (£)
1	215.75	110.69	326.44	51.11
2	100.11	67.95	168.06	36.64
3	33.13	67.95	101.08	21.64
4	258.97	95.13	354.10	52.62
5	53.48	75.73	129.21	52.11
6	10.19	67.95	78.14	17.89
7	54.80	81.54	136.34	25.10
8	88.60	54.36	142.96	37.52
9	50.54	54.36	104.90	32.37
10	47.51	81.54	129.05	24.59
11	61.19	102.91	164.10	61.80
12	42.13	81.54	123.67	24.24
13	41.87	67.95	109.82	24.10
14	44.32	67.95	112.27	24.59
15	44.16	81.54	125.70	25.99
16	89.43	95.13	184.56	28.40
17	75.92	95.13	171.05	26.47
18	78.22	89.32	167.54	52.74
19	65.22	175.70	240.92	34.42
20	64.96	100.40	165.36	41.34
21	74.38	75.30	149.68	49.89
22	77.11	175.70	252.81	36.12
23	85.72	175.70	261.42	37.35
24	100.73	50.20	150.93	75.47
25	86.20	351.40	437.60	31.26
26	118.13	75.30	193.43	96.72
<b>Total cost:</b>	<b>2062.77</b>	<b>2618.37</b>		
Mean patient cost:	79.34	100.71		
<b>Mean costs</b>				
	Mean total cost (£)		Mean daily cost (£)	
	£180.04 (SD 85.53)		39.33 (SD 18.30)	

*\*Mean costs are calculated by averaging the total cost of each dressing treatment, ancillary treatments and nursing costs separately by the frequency of that individual treatment. The mean cost expressed here is a sum of each averaged cost. This method takes into account different frequencies of treatment rather than frequency of primary dressing change*

dressing change (taking into account the frequency dressing change for each patient was calculated to be £39.33. The total number of dressings used per patient ranged from 4–28, which also highlights the number of primary (4–28) and secondary (4–14) dressing used on each patient, the frequency of dressing changes ranged from every day up to every four days.

The audit cost data can be compared with the cost analysis data from a recent study examining the

effect of a superabsorbent dressing on patients with moderately to highly exuding wounds of varying aetiologies (Barrett et al, 2018) In this study, Barrett et al (2018) calculated costs in a sample of 10 patients prior to treatment with the superabsorbent dressing, Zetuvit® Plus, at £2491 (Table 5). For the purposes of our comparison, 10 patients from this current audit were matched for wound type with the 10 patients from the Zetuvit Plus study (Barrett et al, 2018) and



the total cost was calculated at £1738. This is slightly less than the costs calculated in the Barrett study, but patient aetiology similarities between the groups and, allowing for treatment variations, this data may be considered as comparable. The Barrett study calculated the costs associated with treatment of the sample of 10 patients with Zetuvit Plus to be £1312, a saving of 47% (Barrett et al, 2018). Assuming that both patient groups are comparable, a potential cost saving of £426 can be estimated if the subset of patients from this current audit were treated with Zetuvit Plus; a cost reduction of 25% against standard practice. These results, therefore, highlight the differences in treatment options available, but also underline the fact that costs savings of between 25–47% would have a significant impact upon local wound care budgets. Analysis of the data by Barrett suggested that the greatest saving was seen in nurse time that would also significantly impact local resource and budgets, both studies show that the use of SAPs reduced costs in relation to managing exudate (Barrett et al, 2018).

From reviewing the literature, a number of papers have focused on the monetary cost of chronic wounds (Guest et al, 2017; Guest et al, 2018a; 2018b). For example, a recent study (Guest et al, 2015) presented data relating to a retrospective cohort analysis of the records of patients in The Health Improvement Network (THIN) Database, a large general practice database of patient records from over 500 practices in the UK (<https://www.birmingham.ac.uk/research/activity/mds/projects/HaPS/PCCS/THIN/index.aspx>). Analysis of the database showed that there were an estimated 2.2 million wounds managed by the NHS in 2012/2013. The annual levels of resource use wound management (and associated comorbidities) included 18.6 million practice nurse visits, 10.9 million community nurse visits, 7.7 million GP visits and 3.4 million hospital outpatient visits. Overall, the results presented an annual NHS cost of was £5.3 billion (later adjusted for comorbidities to between £4.5 billion and £5.1 billion). However, few papers focus down onto the specific components of wound care that have a significant cost or resource impact. As such, these costs calculated do not allow us to make any more in-depth interpretations of the factors wherein costs are high but it is likely that significant savings could be made. One paper that does attempt to assess the impact of sub-optimal wound management and presents data relating to an investigation into the consequences and hidden costs

of dressing-related trauma. The results showed that the consequences of poor dressing choice (in this case dressings that adhere to peri-wound skin) in the treatment of patients with wounds results in further clinical problems (e.g. skin stripping, maceration, drying etc) that are associated with an additional clinical cost and resource utilisation (Charlesworth et al, 2014). A specific example of onward costs due to the consequences of poor dressing choice is maceration (as a result of poor exudate management), where mean expected cost was estimated conservatively at £175. The costs were assessed to be made up of inpatient management, pharmaceuticals (e.g. antimicrobials, topical steroids), materials (e.g. dressings, skin barriers, bandages etc) and nursing time. This study provides evidence as to the financial cost implications related to poor exudate management where a dressing's inability to manage high exudate levels from moderate to highly exuding wounds leads to wound- and peri-wound skin-related problems.

## CONCLUSION

This paper shows that 65% of the patients included in this audit with moderately-to-highly exuding wounds were treated with inappropriate wound dressings that failed to meet the clinical objective of exudate management. Adverse event sequelae such as skin maceration/excoriation occurred and, consequently, direct and indirect costs associated with treating these patients increased. Using a more appropriate wound dressing such as an SAP (e.g. Zetuvit plus) has demonstrated significantly reduced costs when compared to these audit costs.

## Limitations of the study

This was a retrospective symptom-specific audit, measuring quality related to a clinical topic, in this case exudate management. Whereas the clinical objectives of exudate management are clear for the clinician at the time of treatment. Whether, subsequently, those objectives have been reached and if not why not might not be clear when historical notes are interrogated by a third party. Therefore, there is a degree of subjectivity in relation to gathering data in this manner. The inclusion of the Barrett study 2018 is for a general comparison of costs only, patients and wounds cannot be matched in a statistically significant manner but may act as a significant point for consideration.

Table 5. Matched wounds

Patient	Wound type (Barrett et al, 2018)	Audit data				From Barrett et al (2018)		
		Audit wound type	Product (£)	Nurse time (£)	Total costs (£)	Product (£)	Nurse time (£)	Total costs (£)
1	VLU	VLU	100.73	50.20	150.93	48.46	75.30	123.76
2	Surgical	Surgical	258.97	95.13	354.10	53.72	50.20	103.92
3	Arterial	Arterial	64.96	100.40	165.36	47.42	75.30	122.72
4	PU	PU	89.43	95.13	184.56	44.34	50.20	94.54
5	PU	PU	75.92	95.13	171.05	42.48	75.30	117.78
6	Chest	Malignant	42.13	81.54	123.67	62.39	75.30	137.69
7	VLU	VLU	50.54	54.36	104.90	48.22	75.30	123.52
8	VLU	VLU	44.16	81.54	125.70	92.71	75.30	168.01
9	Wet Legs	Wet legs	61.19	102.91	164.10	147.85	75.30	223.15
10	VLU	VLU	118.13	75.30	193.43	47.36	50.20	97.56
			<b>Total:</b>	<b>1,738</b>			<b>Total:</b>	<b>1,312</b>

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