

Making moisture manageable: introducing a moisture lesion prescription sticker

KEY WORDS

- ▶▶ Adult critical care
- ▶▶ Moisture lesion
- ▶▶ Moisture lesion prescription sticker
- ▶▶ Tissue viability link nurse

Patients receiving critical care often go through a period of critical illness, making their skin vulnerable to moisture damage, which in turn can lead to further tissue deterioration. This moisture damage is identified as moisture-associated skin damage, or a moisture lesion. Within Adult Critical Care at Nottingham University Hospitals NHS Trust, variations in moisture lesion practice were identified. At times there was no prescription in place and the course of treatment did not always reflect the Trust's moisture lesions guideline. Therefore, a moisture lesion sticker was designed to standardise current, best practice. As part of the Plan-Do-Study-Act cycle, the sticker was introduced to an adult critical care clinical area, with an audit carried out 3 months after. Following the audit, the sticker was adapted further to improve its impact in clinical practice. The sticker has been well received and is in the process of being rolled out across the Trust.

A group of nurses within Adult Critical Care at Nottingham University Hospitals NHS Trust (NUH) identified variations in the treatment of moisture lesions in patients.

For patients, a moisture lesion can be extremely uncomfortable, painful and distressing, with prolonged exposure to moisture adversely affecting a patient's physical and psychological wellbeing (Bianchi, 2012). Through direct observation and discussing tissue viability practice with the Adult Critical Care team, it was found that the most effective course of treatment was not always delivered. At NUH, the wound care products Cavilon™ (3M, UK) and Cetraban® (Thornton and Ross, UK) are used as first-line treatment for moisture lesions. It was apparent that these products were not always prescribed. On identifying this, a moisture lesion prescription sticker was designed that also offered current guidance, supporting the correct course of treatment.

NUH is a regional teaching centre that provides healthcare services to 2.5 million residents of Nottingham and the surrounding communities. It also provides specialist

services to a further 3–4 million people across the East Midlands, including specialist cancer, neuroscience and major trauma. Adult Critical Care at NUH comprises three Critical Care Units, across two campuses with the capacity to admit 58 critically unwell patients. This is supported by a diverse multidisciplinary workforce.

Patients receiving critical care often have complex needs, including severe life-threatening injuries and illnesses, requiring multiple organ support and close multidisciplinary attention. Patients can have periods of physiological instability, including hypoxia and hypotension, limiting optimal repositioning to maintain skin integrity. Medication to increase blood pressure is often required, e.g. noradrenaline, causing vasoconstriction and reduction in tissue perfusion. Thermoregulation can also be disrupted in critically ill patients, with a variety of clinical manifestations (Faulds and Meekings, 2013) and patients can have prolonged periods of pyrexia, resulting in excessive perspiration.

Subsequently, this patient group is vulnerable to skin deterioration, including moisture-associated skin damage (MASD), also known as

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Figure 1. Moisture lesion with diffuse superficial spots (copyright Louise Morris)

a moisture lesion. Moisture lesion is the general term for skin deterioration exacerbated by prolonged exposure to different types of moisture. Superficial loss of the epidermis and/or dermis may develop (*Figure 1*). Evidence is sparse in the literature of moisture lesions directly causing pressure ulcer damage.

It is, however, apparent that skin moisture is an important factor to consider in pressure ulcer development (Coleman et al, 2013).

Moisture lesions often manifest as skin inflammation, with or without blistering, or erosion. They differ in appearance from pressure ulcers. There may be a linear-shaped wound if present in the natal cleft in between the buttocks. If they develop over more fatty tissue, they will be ill-defined and irregular in shape. Moisture lesions do not generally present over a bony prominence, unless it is a combined lesion. This is characterised when there are elements of both moisture and pressure present. For the healthcare provider without specialist tissue viability training and experience, a combined lesion can be challenging to identify. Moisture lesions will not heal if treated solely by pressure relief (Fletcher, 2008). The maintenance of skin integrity is vital for prevention. The aim is to keep the skin clean, dry and well hydrated. This can be achieved through the use of a moisturiser or skin barrier, depending on the condition of the skin, amount and frequency of moisture and incontinence.

Moisture lesions may present as a result of faecal and urinary incontinence. This is recognised as incontinence-related dermatitis and is considered to be the most common form of MASD (Young, 2017). In Adult Critical Care, however, the majority of patients will have a urinary catheter in situ as part of their fluid management. During periods of sustained faecal incontinence/diarrhoea, faecal management systems are commonly used.

Due to factors affecting patients' thermoregulation, perspiration is often present, as is seen commonly in patients with brain injury.

Other factors can affect the microclimate of the skin, often caused by the pressure-relieving equipment in place, such as a mattress and its protective covering. The skin can become damp, increasing the risk of damage from friction or shear (Clark and Black, 2011). Collectively, these are considered to be the main causes of moisture lesions in our patients, otherwise referred to as 'intertriginous dermatitis'.

MOISTURE LESION PRACTICE

Adult Critical Care at NUH is supported by Tissue Viability Link Nurses. They are Critical Care nurses with extended knowledge and skills to promote quality tissue viability practice. Moisture lesion education and training are provided to all nursing staff and healthcare assistants by this link group. This is delivered in the clinical environment and classroom setting. It is part of the NUH mandatory training and is also taught to all new nurses to Critical Care as part of an induction programme. Practice is also informed by a NUH moisture lesion guideline, where prevention through skin care is included.

Despite having all of this in place, there continued to be a noticeable number of moisture lesion incidents in our patients. All moisture lesions at NUH are collated through the Trust incident reporting system, 'Datix'. The moisture lesion incidents for Adult Critical Care from April 2016 to March 2017 were captured, providing a baseline of performance. On exploration, it was found that there were 337 reported moisture lesion incidents for this time period.

It proved to be difficult to compare this data against other, similarly sized Adult Critical Care areas. We were supported by Jacqui Fletcher, Senior Nurse Advisor for the NHS Improvement's Stop the Pressure Programme in investigating further. On communicating with other NHS Trusts, data were not readily made available to make meaningful comparisons. Unlike current practice at NUH, not all NHS organisations report moisture lesions. Consequently, there was limited availability of accurately reported incidents against which to compare this data. This is supported in the literature where figures are described as varied between clinical settings

and even geographically (Young, 2017). Without a consistent reporting culture, the prevalence of moisture lesions across the healthcare setting cannot be quantified nor monitored effectively over time. In recent NHS Improvement compulsory guidance (2018) for defining and measuring pressure ulcers, variations in reporting have been recognised. This has led to recommendations for the NHS in England that moisture lesions should be counted and reported in addition to pressure ulcers. A standardised approach for reporting moisture lesions will allow comparisons to be made between organisations, providing a better understanding of moisture lesions for service providers and commissioners, and encouraging shared learning from incidents on a national scale.

From the NHS organisations where contact was made, there was a reoccurring theme that they were also experiencing variations in moisture lesion practice, with a number of respondents describing it as an 'extremely challenging' area of practice.

METHOD

The group of Tissue Viability Link Nurses identified variations in moisture lesion practice from both the nursing and medical team within the clinical setting. This included variations in the correct course of treatment and documentation and ongoing evaluation of moisture lesions. On identifying this gap in practice, a member of the team had the idea to create a moisture lesion prescription sticker to support current best practice.

The sticker was designed adhering to the NUH Moisture Lesion Guideline. By providing a standardised course of treatment, the aim of the sticker was to ensure that all patients with a moisture lesion were consistently receiving the correct wound care products, at the correct time, with clear documentation of care. It was designed to be quick and simple to use for both the prescriber and care deliverer. The expectation was that all patients who had a moisture lesion would have the sticker implemented and prescribed in the Medicine Prescription and Administration Record, with the correct course of treatment commenced.

The process of approving the sticker comprised review by a number of committees as part of the trust governance structure, including the Adult Critical Care Clinical Governance, Trust Pressure Ulcer Strategy Group and Medicines Safety Group. Supportive changes were made as suggested by the groups before being introduced to the clinical area. It was agreed that it would be piloted in Adult Critical Care to monitor its impact on practice.

The sticker was introduced utilising a Plan-Do-Study-Act (PDSA) cycle (Deming, 2000). This quality improvement tool was used to test the innovation and change in practice, allowing time to assess its impact and effectiveness before making a change on a larger scale. As part of the PDSA cycle, the sticker was implemented and audited across Adult Critical Care to monitor compliance and efficacy. The audit was carried out three months after it was introduced, to allow time for its application and to embed the change (*Figure 2*). Prior to its implementation, communication was heightened in the form of bulletins, communication boards, discussions during the nursing handover period, Patient Safety and Care Walk Round and by utilising the Tissue Viability Link Team to vocalise this initiative and include it in their routine education and training delivery.

All nurses and health care assistants receive two-yearly mandatory tissue viability training. Training was standardised across the Adult Critical Care areas, with moisture lesion education incorporated into this. We aimed for a target of above 95% training for all nurses and healthcare assistants. A local initiative was also used in the form of a project focus, which aimed to challenge recurring themes in tissue viability practice. This proved to be a successful way of empowering the individual Critical Care Units to challenge any areas where improvements are required. For the sticker's introduction, all three areas focused on moisture lesion education and the implementation of the sticker.

FINDINGS

The Medicine Prescription and Administration Record charts of patients with a moisture lesion were audited over a three-month period (1st

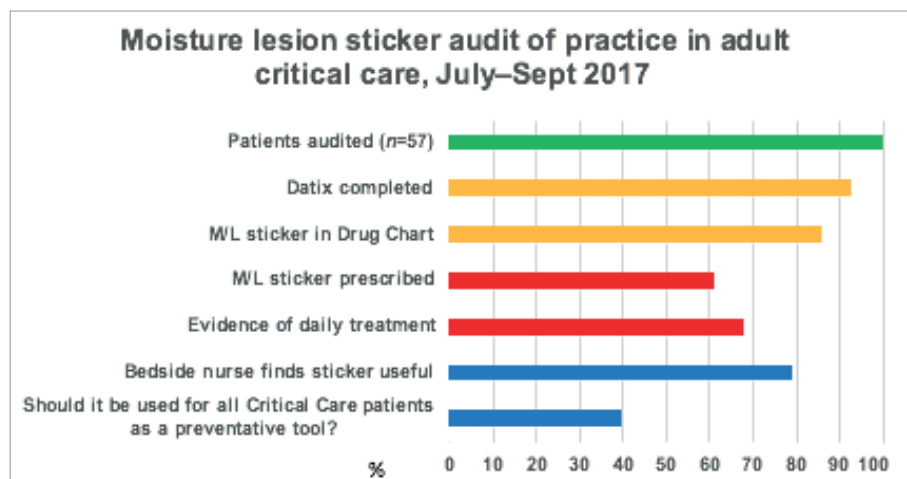


Figure 2. Moisture lesion sticker audit

July 2017–30th September 2017). The initial aim was to capture ten patients a month in each of the Critical Care areas. As the audit progressed, it became apparent that this number was not always achievable as the number of patients with a moisture lesion varied across the areas. Another approach may have been to not audit the areas individually, instead setting a target number of audits for Critical Care as a whole. It did, however, identify how the units were performing individually that went on to help put specific measures in place to improve practice.

A total of 57 patients were identified out of 979 admissions into the three Critical Care Units during this time period (5.8% of the total population of patients; $n=979$). Of these 57 patients, 53 (93%) had a Datix completed, in line with standard practice at NUH. The moisture lesion sticker was in place for 49 patients (86%). Of this group, 35 (61%) had a valid prescription signed by the medical team, whilst 39 (68%) had documented evidence of daily treatment. When questioned, staff stated that they had provided the treatment, but had not consistently documented this on the sticker. Additional feedback on the sticker showed that 45 (79%) found the sticker useful.

Supplementary comments revealed that it offers consistency, guidance and is an education resource for the treatment of moisture lesions. When asked whether they felt it should be used for all patients as a preventative course of treatment, 23 (40%) members of the nursing team

reported a positive response and view that this could be beneficial.

RECOMMENDATIONS TO PRACTICE

The audit identified improvements required in practice for treatment application and documentation.

In the first month of the data collection, all patients with a moisture lesion had a Datix in place. Gaps were identified in the following months. On further exploration, it was apparent that staff members were aware of the reporting procedure; there was, however, an assumption that this was already in place. Following this, a Datix tick box has been added to the sticker to act as both a prompt and to identify if the reporting system has been followed. This will also help to capture moisture lesion prevalence at NUH.

The requirement is that all patients who have a moisture lesion should also have a completed prescription sticker in place. More communication and education is required to embed this into routine practice. One simple and effective solution may be for a local nurse-led prescribing agreement.

As the audit commenced three months after the introduction of the sticker, time may play an important factor in the results. Further time allowing the change to embed into practice with ongoing support from the Tissue Viability Link Team may be required. Future audits as part of the PDSA cycle will inform this further.

MOISTURE LESION PRESCRIPTION For more information see NUH moisture lesion guideline			NUH04327N ©										Nottingham University Hospitals NHS Trust				
Prescriber Print Name		Prescriber Signature :										Date:					
CETRABEN CREAM		Date															
Dose <i>Daily Wash</i>	Route <i>Topical</i>	Time															
Additional Instructions Use daily to wash vulnerable and/or contaminated skin		Sign															
BARRIER FILM (specify)		Date															
Dose <i>Daily</i>	Route <i>Topical</i>	Time															
Additional Instructions Apply daily to affected areas		Sign															
BARRIER CREAM (specify)		Date															
Dose <i>Minimum twice daily</i>	Route <i>Topical</i>	Time															
Additional Instructions Apply a thin layer after every episode of incontinence		Sign															
DATIX completed please ✓			If no improvements after 7 days seek TVN advice										Place on drug chart				

Figure 3. The revised NUH moisture lesion prescription sticker

CONCLUSION

The introduction of the moisture lesion prescription sticker into Adult Critical Care at NUH has been well received, with a reported decline in incidents since its introduction. Although the sticker is not used as a preventative tool, it may be suggested that the guidance it provides is improving overall moisture lesion awareness and practice. Alongside ongoing education, this may be a significant factor to the change in culture resulting in this improvement in practice.

The sticker is in the process of being rolled out across NUH, meaning all patients who have a moisture lesion whilst in our care will benefit from this initiative. It has the capability of being utilised across all health care settings, both primary and secondary. The sticker has been further revised to allow the products used as part of the wound care formulary locally to be handwritten in (Figure 3). This allows the sticker to be more adaptable to be used across other health care settings and organisations.

The project has been shortlisted for national awards and features on the NHS Improvement Patient Safety web page for shared learning. We will continue to capture incidents to see if the change in practice will lead to a sustained reduction in moisture lesions in patients. With moisture lesion prevalence and evidence of

correct management, we also aim to explore the relationship between moisture lesions and pressure ulcers. WUK

ACKNOWLEDGEMENTS

Kerry Wright and the Adult Critical Care Tissue Viability Link Team at NUH for their ongoing commitment to this work. Maria Shallow, Rebecca Selwyn, Fiona Branch and Dr Joanne Cooper for their support and guidance. And Jacqui Fletcher for her encouragement.

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