

Taking the pressure off the NHS

Pressure ulcers present a huge burden for the NHS and, in light of the current global health crisis (COVID-19), it has led to growing concerns about the incidence of pressure ulcers, how their management could be affected and what this will mean for patient outcomes. So, how can the health service address the issue?

Pressure Ulcers (PUs) are one of the most common type of chronic wounds and are defined as localised damage to the skin or underlying tissue, as a result of pressure or pressure in combination with shear. Pressure injuries usually occur over a bony prominence but may also be related to a medical device or other object.¹ Under normal circumstances they exert a significant financial burden on the UK health system, costing the NHS £531 million.²

Pressure ulcers also have a negative impact on quality of life of patients by limiting their ability to perform daily activities.³ These wounds can cause patients distress due to pain and fear of exudate leakage.^{4,5} PUs most commonly occur in the elderly as comorbidities of other conditions such as cardiovascular disease and obesity.⁶ The combination of an increasing ageing population and long-term diseases has meant that more people will be immobile; immobility is a risk factor for the development of PUs.⁷

As population ageing is now a global issue, there is growing concern of the implications a fast ageing population will have on PU incidence, management and cost for the NHS as a significant amount of time is already dedicated to managing these wounds.⁶ To add to these pre-existing burdens, the global health crisis – COVID-19 – poses another significant challenge. A combination of its potential to increase the incidence of PUs, nurse shortages and redeployment into new clinical settings could have major implications on wound care in the future.^{8,9}

Implications of COVID-19 on PUs

Around 15% of critically ill COVID-19 patients with Acute Respiratory Disease (ARDS), the life-threatening symptom of the



virus, require the support of a mechanical ventilator.¹⁰ Patients who need ventilators usually remain in hospital for an average of 22 days.¹¹ Long hospital stays have been shown to increase the risk of PU development, with studies reporting that PUs can develop in as little as 4-6 hours following sustained pressure.¹² Clinical guidelines recommend placing patients in the prone position (face down) for mechanical ventilation if no improvements in oxygenation are observed in the supine position (face up).¹³ Studies have suggested that by alternating between prone and supine position for mechanical ventilation, patient outcomes can be improved.¹⁴ When a patient is mechanically ventilated in the supine position, there is direct pressure exerted on the patient's heels and sacrum.¹⁵

This suggests that critical COVID-19 patients mechanically ventilated in the supine position are at high risk of developing PUs.

The older population are more at risk of becoming unwell from COVID-19 (a new study found that the median age of patients admitted to hospital with severe COVID-19 was 63).¹⁶ They are also likely to have at least one comorbidity, such as hypertension, obesity and diabetes¹⁶ (also the risk factors of PUs).

Tissue viability nurse, Luxmi Dhoonmoon comments: "Though it is not widely reported, pressure ulcers will be on the rise in the COVID-19 wards. In my community setting for example, we have experienced an increase in PU incidence since the start of the epidemic and rapid deterioration in skin integrity despite all preventative measures in ►



place.”

The risk of PU development may also be increased in the community setting as immobility will continue to be an issue in a care home or domestic settings. Those who are discharged from hospital with COVID-19 (who would have already been immobile for a while) are then experiencing further immobility due to social distancing measures.¹⁷ Furthermore, as COVID-19 is debilitating, many people will be bedbound, further increasing the risk of PUs.^{18,19} Therefore, pressure ulcers could significantly increase in the hospital and community.

This means that now, more than ever, it is critical that healthcare providers implement and adhere to best practice for the management of PUs for clinical efficiency as well as using the best resources available to deliver quality care to achieve optimal patient outcomes.⁷

Prevention and management

Delivering optimal care will involve having a greater understanding of PUs, to know how to prevent them and how to treat them if they occur.^{7,20} In light of COVID-19, many newly qualified or retired healthcare professionals have been deployed to specialist areas they may be unfamiliar with and some nurses may have had little experience managing PUs.^{9,21} Nurses should have a clear understanding of PUs and their causes as they hold the most responsibility for their prevention and management.^{20,22,23} As the factors that cause PUs are the targets for their management, it is crucial they are identified for an accurate diagnosis to inform an effective treatment plan.²⁰

In addition, as 80-95% of PUs can be prevented, taking the appropriate

preventative steps could significantly reduce their incidence and subsequent burdens.^{6,24} Hence, this is why tissue viability nurses have been set targets to reduce the incidence of PU damage by NHS programmes, such as *Stop the Pressure*.^{25,25}

PU prevention is the most important step in their management.⁷ Prevention involves early identification of risk factors for PU development and implementing interventions.²⁰ For individuals that are at risk of PUs, due to factors such as reduced mobility, prevention is focused on reducing episodes of prolonged pressure by either placing padding on pressure points such as the sacrum and heel or frequent repositioning of the patient, which should be done every 2-4 hours.^{7,20}

However, if despite best efforts to prevent them, a PU has been identified, nurses should perform a full assessment of the wound. Wound assessment should focus on the location, size, depth of the wound and amount of exudate.⁷ PUs should also be graded or categorised to determine the extent of tissue damage and depth of the wound. According to the NPUAP, EPUAP and PPPIA grading system, PUs can fall into six categories, with six being the most severe.²³ Accurate diagnosis and categorisation is imperative if patients are to receive the best standard of care.²⁰

For the treatment of PUs, some of the prevention strategies can also be applied.⁷ The treatment of PUs, according to NICE guidelines involves:

- Offloading or pressure redistribution – to remove pressure from the site, by repositioning and applying padding to these pressure points.
- Debridement – to remove unwanted dead

tissue from the wound to enable drainage and improve healing.

- Wound dressings – to manage exudate.
- Addressing the underlying cause for a holistic approach.^{20,26}

To mitigate the burden of a healthcare service already on the brink, PU preventative strategies, such as those previously mentioned, should be prioritised. Padding or dressings on areas that are likely to be exposed to pressure, such as the heels and sacrum in bedbound or at risk patients, should be used to reduce the risk.^{7,15} Healthcare providers should consider using dressings such as Mepilex Border Heel and Sacrum. They have been developed with ‘Deep Defence Technology’ to protect against forces that contribute to PU formation.¹⁵

The efficacy of Mepilex Border Sacrum and Mepilex Border Heel were reported in a study which investigated the effectiveness of multi-layered soft silicone foam dressings in preventing PU formation in critically ill patients. The patients in the intervention group that received the Mepilex Border Sacrum and Mepilex Border Heel dressings throughout their stay at hospital had significantly fewer sacral and heel PUs than those who received the control.¹⁵

Findings from this study suggest that the use of these dressings could help reduce the incidence of PUs in the hospital and the community. Preventing the formation of the PUs, in the first instance, would limit the financial and human burdens, which is now more important due to the current healthcare challenges.^{2,6}

Once a PU has formed or is already present, it is important they are effectively managed to prevent them from

deteriorating.²³ PUs are commonly managed with dressings to control exudate. Exudate contains enzymes that can destroy the wound bed and prevent healing.²⁰ PUs produce high levels of exudate and leakage can cause peri wound damage and delayed healing, as well as distress for patients.^{4,5,27} Wounds that produce high levels of exudate require more dressing changes and frequent nurse visits.²⁸ It is estimated that 50% of nurses' time is dedicated to changing dressings.²⁹

However, in the current climate, this presents a challenge; nurses are responding to an unprecedented global health emergency where the immediate threat to life must be prioritised.³⁰ Even prior to COVID-19, there were already concerns about nurse shortages (estimated be around 100,000) and the implications on wound care.^{31,32} In hospitals, nurses are looking after more patients each than before.³³ As such, there will be a high number of patients discharged with a PU wound that will need to be managed by their primary care team.

PU management in the community setting

In the community sector, in which the amount of district nurses has fallen by 3,000, the unprecedented challenge presented by COVID-19 has exacerbated the situation.³⁴ There is expected to be a surge of discharged patients returning from hospital into the community which will put this sector under significant strain.³⁵ This nurse shortage and increased workloads means that frequent dressing changes may not be possible in the acute and community sector.

However, innovations in wound care and providing education on wound dressings to patients may help to navigate this issue.

Studies have also shown that keeping wounds covered with a dressing for longer may be beneficial to promote optimal wound healing.³⁶⁻³⁸ Therefore, it is important that, for positive patient outcomes, wounds are left undisturbed for as long as possible as each time a dressing is changed healing is delayed.³⁹

It is vital that healthcare providers use high quality dressings that are clinically effective to reduce dressing changes, such as Mepilex Border Comfort, which can be comfortably worn for up to seven days.⁴⁰⁻⁴³

A five-layer dressing, it is suitable for the management of PUs, with high exudate handling capacity.⁴¹⁻⁴⁴ Excessive exudate creates anxiety in the patients.⁴⁻⁵ Therefore, by selecting a dressing that maintains the moisture balance, the fear of leakage should be reduced addressing the emotional burden PUs place on patients.⁴⁵ With its exudate progress monitor, the spread of exudate can be assessed by the patient and carer at home to determine whether the dressing needs to be changed and how urgently. This is particularly important as it may help to limit visits to the patient's home, addressing both the increased workload of district nurses and because of the highly contagious nature of the virus.⁴⁶

With the ever-decreasing availability of nurses and the increasing prevalence of chronic wounds, self-management of wounds could alleviate some of the pressures on the NHS.⁴⁷ Online resources such as those on the Mölnlycke website,

offer practical guidance on how patients and/or their carers can safely change their wound dressings. This allows patients or their carers to take control of their own wound care management in the community when nurses are unable to visit them. With innovative dressings, requiring fewer dressing changes, nurses can feel confident that their patients are comfortable and their wounds have the potential to improve. Emergency associate practitioner, Joanna Doroz, states: "Patients are more comfortable to change their wound dressing if it doesn't cause pain on application or removal."

Conclusion

To conclude, PUs place an increasingly significant burden on the UK health system, and this may only rise as a result of the current pandemic. However, by adhering to best practice, healthcare professionals can ensure that optimal and efficient care is delivered to achieve positive patient outcomes in both the hospital and community setting.

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All Mölnlycke's resources are available to view, download and print via patient educational resource centre: <https://www.molnlycke.co.uk/education/wound-areas/wound-healing/how-to-look-after-your-wound/>

References for this article are available upon request.

