Pressure ulcers are the result of tissue damage caused by a diminishing blood supply to the skin, usually because the area has been placed under pressure (EPUAP/NPIAP/PPPIA, 2019). Each year in the NHS in England, just under a quarter of a million patients develop a new pressure sore with, on average, 2000 newly acquired pressure ulcers developing each month (PHE, 2015).

Pressure ulcers typically occur in patients who are confined to beds or chairs due to illness and for this reason they are often referred to as “bed sores” or “pressure sores” but, in theory, any patient is potentially at risk of developing areas of pressure damage. The groups of patients who are at particularly high risk are those who are critically ill, have impaired mobility, have a poor nutritional intake, those with poor posture or those with a neurological condition (EPUAP/NPIAP/PPPIA, 2019). However, healthcare professionals need to pay close attention to all patients deemed at risk outside these categories.

The treatment of pressure damage costs the NHS more than £3.8 million every day (NHS England/NHS Improvement, 2020). In addition, pressure ulcers can prolong hospital stays, reduce patients' quality of life and cause pain, as well as resulting in potentially life-threatening complications such as osteomyelitis and sepsis. Gangrene may occur if there is an accompanied underlying ischaemia, such as in patients with diabetes who develop pressure damage to their feet (Bhattacharya & Mishra, 2015).

This part focuses on repositioning and early mobilisation. While repositioning the patient, assess the patient’s skin condition and general comfort (see also Part 1 of this series). If a patient is not responding and/or is continuing to develop new areas of reddened skin, reconsider the frequency and method of repositioning. It is important to assess whether the strategy in use is relieving or redistributing pressure effectively. Note that, if the patient’s skin is moist or sweating, you may need to clean, dry and moisturise it before repositioning the patient. Use an appropriate emollient/soap substitute according to local policy. Liaise with the medical team if the reddening persists. Document and photograph changes with the patient’s consent.

The mnemonic ASSKING is useful to help healthcare staff remember the ways to aid prevention of pressure ulcers (NHS Improvement, 2018).

ASSKING: prevention of pressure ulcers

- Assess risk
- Skin assessment and care: use a verified tool and regular assessment of the patient’s skin.
- Surface selection and use: make sure the patient has the right support.
- Keep your patient moving! Inform the patient and staff involved in care of the risks of immobility.
- Incontinence and increased moisture. Ensure that skin is cared for and cleansed correctly.
- Nutrition and hydration: ensure good nutrition and hydration of the patient.
- Give information

Pressure is the main factor in the development of pressure ulcers along with friction and shear forces. Repositioning patients reduces the time and extent of pressure over vulnerable areas of the body and can help with comfort, hygiene, dignity and promoting the patient’s functional ability. The need for regular repositioning applies to all patients who are nursed in bed, spend much of their time sitting in chairs or who use a wheelchair.

Encourage patients to change their position frequently. Patients who have been assessed as being at high risk should change their position at least every 4 hours (NICE, 2014). Even the patient’s own small movements, such as rolling slightly on one side, can make a significant difference to the skin (NICE, 2014). Follow local policy and good manual handling practice when repositioning patients (Wounds UK, 2012).
If patients are unable to reposition themselves, or have reduced mobility, healthcare staff must offer assistance using appropriate equipment. The patient’s individual needs, comfort, tolerance, level of mobility and medical condition will also help to determine the frequency of repositioning. Regular repositioning is not possible for some individuals because of their medical condition and staff will need to consider an alternative prevention strategy such as providing a high-specification mattress or bed.

The aim of repositioning is to relieve and redistribute pressure. For patients being nursed in bed, ideally repositioning should be undertaken using the semi-Fowler’s position, which is the 30-degree tilted side-lying position (right-side, back and left-side) (EPUAP/NPIAP/PPPIA, 2019). If patients can reposition themselves, they should be encouraged to sleep in a side-lying position with the back rest positioned at 30° to 40° or flat in bed (if not contraindicated).

Avoid postures that increase pressure and shear on the sacrum and coccyx, such as a 90-degree position or semi-recumbent position. Provide appropriate support or use a profiling bed to help with positioning for patients who need to sit upright in bed due to a medical condition or feeding considerations, to prevent them sliding down in bed and creating shear forces (EPUAP/NPIAP/PPPIA, 2019).

If possible, avoid positioning the individual on bony prominences or onto skin that is still reddened from previous pressure redistribution. Avoid positioning patients onto areas that already have a recognised pressure ulcer, or limit the time they spend in that position. Repeated pressure on a region of established pressure damage can delay healing and may lead to further deterioration.

Liaise with the local physiotherapy/occupational therapy team for further advice on equipment and repositioning. If using a mechanical hoist to transfer a patient to a chair or wheelchair, remove the sling immediately after transfer. Do not leave moving and handling equipment under the individual after use, unless the equipment is specifically designed for this purpose.
Importance of mobilisation

Avoid pressure on the ischial tuberosities

It is difficult to avoid pressure on the “sitting bones” or ischial tuberosities. Given the natural position when sitting, it is vital to provide the patient with a chair of the correct size, which allows the patient’s feet to touch the floor to help distribute pressure, as well as the correct support surface (Stephens & Bartley, 2018). The patient must continue to change position regularly.

Avoid prolonged pressure on the heels

Remember that the heels are still at risk of pressure damage when the patient is in a seated position for any length of time. The patient should adopt a reclined seating position with legs elevated, if possible. If reclining is not possible, then the patient should use a supported elevated foot position (EPUAP/NPIAP/PPPIA, 2019). The patient’s sitting position should allow them to maintain a range of movements such as eating and drinking but should minimise any shear forces. If the chair is too high and the patient’s feet do not reach the floor, provide a footrest. A footrest should allow the thighs to rest slightly lower than the pelvis, to reduce pressure on the sacrum and ischial tuberosities.

Limit sitting time if appropriate

Carefully consider patients with existing ulcers

If a patient can be seated in a chair but is unable to provide pressure relief to themselves, it is important to ensure they are seated for no more than the time recommended. Consider the need for a pressure-redistribution cushion. Consider periods of bed rest, or mobilisation, if the patient is able to do so. Individuals who use wheelchairs are likewise at high risk of pressure ulcers over the ischial tuberosities.

Consider carefully whether it is appropriate to position patients who already have an existing pressure ulcer, particularly those with ischial and sacral ulcers, in a chair or wheelchair. Evaluate the risks and benefits of supported sitting against the pressure exerted on pressure-damaged skin. Current guidelines recommend restricting sitting times to 60 minutes or less, divided into three sessions over 24 hours (EPUAP/NPIAP/PPPIA, 2019). Follow local policies and liaise with the physiotherapy and tissue viability teams.
Document the repositioning regime in the care plan

Document in the care plan each time the patient is repositioned. Record the frequency of repositioning, the position adopted, the assessment of the skin and the effectiveness of the regime. If the ulcer deteriorates or fails to improve, reevaluate the time schedules, seating surfaces and the individual’s comfort. Amend the care plan and repositioning regime as required.

Support surfaces: Justify the patient’s needs

Choose the support surface according to the patient’s individual needs. Support surfaces include any mattress, integrated bed systems, mattress replacements, overlays and seat cushions. Consider the patient’s comfort, size and weight, their level of immobility/inactivity, the need to reduce shear, the risk of their developing new pressure ulcers, and the number, severity and location of existing pressure ulcer(s). It is vital that the completed risk assessment tool reflects the true clinical picture, justifying the patient’s need for the appropriate support surfaces.

High-specification foam mattresses

As a fundamental standard, all patients assessed as being at risk of developing a pressure ulcer should be provided with a high-specification reactive foam mattress. This type of mattress will be standard in most acute care settings. An active support surface (overlay or mattress—see inset) may be used for patients at higher risk of developing pressure ulcers. Follow local guidelines and liaise with the appropriate team to obtain equipment quickly and put it into use promptly, as a delay can result in further tissue damage.

Compatibility with other products

Make sure that incontinence pads, clothing and bed linen are compatible with the support surface in use; use minimal linen and pads on pressure support mattresses. Regularly review the effectiveness of the support surface, performing frequent skin inspections. Even if a support surface is in use, it will still be necessary to reposition the patient for pressure relief and comfort.

Environmental factors and care of equipment

The support surface chosen needs to be compatible with the care setting. Consider factors including the weight of the bed, the structure of the building, the width of doors, the availability of uninterrupted electrical power and the provision of a safe location for the pump/motor, including its ventilation. Follow local infection control policy and the manufacturer’s guidelines for use, maintenance and cleaning. Check that the item is within its functional lifespan.

Pressure-redistributing support surfaces

Some support surfaces reduce pressure on the affected site by increasing the body surface area that comes in contact with the support surface. Other support surfaces work by altering the parts of the body that carry the pressure.

Do not undertake or attempt any procedure unless you are, or have supervision from, a properly trained, experienced and competent person.
Always first explain the procedure to the patient and obtain their consent, in line with the policies of your employer or educational institution.
Inspect cushions regularly

Inspect seating supports daily for signs of wear, to ensure that they continue to meet the patient’s needs and are functioning as they should. Do not use synthetic sheepskin pads, cut-out rings, doughnut-type devices or water-filled gloves.

Heel protection: (a) Elevation

For individuals who have, or who are at risk of, heel pressure injuries, elevate the heels using a specifically designed heel suspension device or a pillow/foam cushion. Offload the heel completely in such a way as to distribute the weight of the leg along the calf without placing pressure on the Achilles tendon and the popliteal vein (EPUAP/NPIAP/PPPIA, 2019).

Inspect heels regularly

Inspect the heels regularly when repositioning the patient. Remove anti-embolic stockings for a short period at least daily to facilitate the inspection (NICE, 2014). Ensure that the stockings fit correctly and that the patient has the correct-sized footwear.

(b) Knees remain slightly flexed

The patient’s knees should remain slightly flexed, to allow even weight distribution without putting pressure on the Achilles tendon. Extending the knees may cause obstruction of the popliteal vein which could potentially cause a deep vein thrombosis. Use a prophylactic dressing as an adjunct to heel offloading and other strategies, to prevent heel pressure injuries (EPUAP/NPIAP/PPPIA, 2019).

Testing for peripheral neuropathy

If your patient also has diabetes, it may be appropriate to test for peripheral neuropathy, if trained to do so (see clinicalskills.net procedure on “Annual review of a patient with diabetes”). Patients who cannot feel eight out of the 10 sites tested have peripheral diabetic neuropathy and will need to be referred to the local podiatry team for regular screening and education.
Reinforce advice on foot care, such as washing the feet daily, how to deal with calluses, and the correct way to cut the toenails (see also clinicalskills.net procedure on “Nail care”). Discuss the need for well-fitting footwear and the importance of avoiding shoes that cause blisters or ingrowing toenails (NICE, 2019).

Dispose of equipment according to local policy. Wash your hands and dry thoroughly following an episode of patient care. Document the care given according to local policy. Always provide a full verbal handover to colleagues.