



EUROPEAN PRESSURE ULCER ADVISORY PANEL

Pressure Ulcer Prevention Guidelines

INTRODUCTION

Pressure damage is common in many healthcare settings across Europe, affecting all age groups, and is costly both in terms of human suffering and use of resources. With an ageing population, and changes in patterns of sickness, this problem will increase unless action is taken. In all care settings the risk of pressure damage should be highlighted.

Most pressure damage could be prevented and it is important to have prevention and educational strategies in place.

These should be based on the best available evidence.

All interventions and outcomes should be monitored and documented.

Guidelines are based on the following evidence:

[A] Results of two or more randomised controlled clinical trials on pressure ulcers in humans provide support.

[B] Results of two or more controlled clinical trials on pressure ulcers in humans provide support, or where appropriate, results of two or more controlled trials in an animal model provide indirect support.

[C] This rating requires one or more of the following:

1. results of one controlled trial,
2. results of a least two case series/descriptive studies on pressure ulcers in humans, or
3. expert opinion.

RISK ASSESSMENT TOOLS AND RISK FACTORS

1. **Goal:** Identify 'at risk' individuals needing prevention and the specific factors placing them at risk
We believe that there are a number of issues associated with risk assessment tools. Risk assessment should be used as an adjunct to clinical judgement and not as a tool in isolation from other clinical features. **[C]**
There should be clarification of a full risk assessment in patients to include:
General medical condition, skin assessment, mobility, moistness and incontinence, nutrition and pain. **[C]**
All strategies related to pressure damage should always be based on the best available evidence.
Assessment of risk should be more than just the use of an appropriate risk assessment tool and should not lead to a prescriptive and inflexible approach to patient care. **[C]**
Whilst risk assessment should be performed immediately on entry into an episode of care, this assessment may take time to fully complete if information is not readily available. **[C]**
Assessment should also be ongoing and frequency of re-assessment should be dependent on change in the patient's condition with the environment.
2. **Goal:** Maintain and improve tissue tolerance to pressure in order to prevent injury
Skin condition should be inspected and documented daily and any changes should be recorded as soon as they are observed. Inspection must be documented.
Initial skin assessment should take into account the following:
 - I. Bony prominences (sacrum, heels, hips, ankles, elbows, occiput) to identify early signs of pressure damage.
 - II. Identify the condition of skin - dryness, cracking, ery-thema, maceration, fragility, heat and induration. **[C]**

Every effort should be made to optimise the condition of the patient's skin. Assessment of patients with dark or tanned skin is especially difficult. **[C]**

Avoid excessive rubbing over bony prominences as this does not prevent pressure damage and may cause additional damage. **[C]**

Find the source of excess moisture due to incontinence, perspiration, or wound drainage and eliminate this, where possible. When moisture cannot be controlled interventions that can assist in preventing skin damage should be used. **[C]**

Skin injury due to friction and shear forces should be minimised through correct positioning, transferring and repositioning techniques. **[C]**

Following assessment nutritionally compromised individuals should have a plan of appropriate support and/or supplementation that meets individual needs and is consistent with overall goals of therapy. **[C]**

As the patient's condition improves the potential for improving mobility and activity status exists, rehabilitation efforts may be instituted if consistent with the overall goals of therapy. Maintaining activity level, mobility, and range of movement is an appropriate goal for most individuals. **[C]**
All interventions and outcomes should be monitored and documented. **[C]**

EXTERNAL PRESSURE AND SUPPORT SURFACES

3. **Goal:** Protect against the adverse effects of external mechanical forces; pressure, friction and shear
Any individual who is assessed to be at risk of developing pressure ulcers should be repositioned if it is medically safe to do so. **[B]** Frequency of repositioning should be consistent with overall goals. **[C]** Documentation to record repositioning should be completed. Correct positioning and support is important to minimise friction and shear in both bed and chair. **[C]**
Correct positioning or devices such as pillows or foam wedges should be used to keep bony prominences (for example knees, heels or ankles) from direct contact with one another in accordance with a written plan. **[C]** Care should be taken to ensure that these do not interfere with the action of any other pressure relieving support surfaces in use. **[C]**
When repositioning patients do so in such a way as to minimise the impact on bony prominences. **[C]**
Devices to assist manual handling should be used during transfer and positioning of patients to minimise shear forces for those patients who require assistance in movement in accordance with EU manual handling regulations. In all care settings individuals considered to be at risk of developing pressure ulcers should have a personalised written prevention plan which may include a pressure redistributing device. **[C]**
Patients at risk of developing pressure ulcers because of the time spent sitting in a chair should be allocated a chair of the correct height in addition to a pressure relieving device. **[C]**
Any person who is acutely ill and is at risk of developing a pressure ulcer should avoid uninterrupted sitting out of bed. **[B]** The period of time should be defined in the individualised care plan but generally will not be more than two hours. **[B]** Individuals, where appropriate, should be encouraged to reposition themselves if this is possible. **[C]**
Individuals at risk from pressure ulcers who are likely to spend substantial periods of time in a chair or wheel chair should generally be provided with a pressure redistributing device. **[C]**
Individuals who are able should be taught to redistribute weight every fifteen minutes. **[C]**

EDUCATION

4. **Goal:** To improve the outcome for patients at risk of pressure damage through educational programmes. Educational programmes for the prevention of pressure damage should be structured, organised and comprehensive, and made available at all levels of health care providers, patients and family or caregivers. **[C]**
The educational programme for prevention of pressure damage should include information on the following items:
- Pathophysiology and risk factors for pressure damage.
 - Risk assessment tools and their application.
 - Skin assessment.
 - Selection and instruction in the use of pressure redistributing and other devices.
 - Development and implementation of individualised programmes of care.
 - Principles of positioning to decrease risk of pressure damage.
 - Documentation of processes and patient outcome data.
 - Clarification of responsibilities for all concerned with this problem.
 - Health promotion.
 - Development and implementation of guidelines.

The educational programme should be updated on a regular basis based on the best available evidence. The content of the programme should be modified according to the audience. **[C]**

Pressure Ulcer Treatment Guidelines

DEFINITION

Pressure Ulcer - A pressure ulcer is an area of localised damage to the skin and underlying tissue caused by pressure, shear, friction and or a combination of these.

The above is a working definition. New theories are being developed but further work is required before they can be included in an accepted definition.

CLASSIFICATION

Grade 1: non-blanchable erythema of intact skin. Discolouration of the skin, warmth, oedema, induration or hardness may also be used as indicators, particularly on individuals with darker skin.

Grade 2: partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion or blister.

Grade 3: full thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through underlying fascia.

Grade 4: extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures with or without full thickness skin loss.

GUIDELINES

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ASSESSMENT

Assessing the Pressure Ulcer

Assess the pressure ulcer(s) initially for location, grade, size, wound bed, exudate, pain and status of surrounding skin.

Care should be taken to identify undermining and sinus formation. **[C]**

Reassess pressure ulcers when possible daily or at least weekly. If the condition of the patient or of the wound deteriorates, re-evaluate the treatment plan as soon as any evidence of deterioration is noted. **[C]**

History and Physical Examination

Perform a complete history and physical examination, because a pressure ulcer should be assessed in the context of the patient's overall physical and psychosocial health. Address identified needs. **[C]**

ASSESSING COMPLICATIONS

Nutritional assessment and management

Ensure adequate dietary intake to prevent malnutrition to the extent that this is compatible with the individual's wishes or condition. **[B]**

Pain assessment and management

Assess all patients for pain related to the pressure ulcer or its treatment and document. **[C]**

Manage pain by eliminating or controlling the source of pain (e.g., covering wounds, adjusting support surfaces, repositioning).

Provide medication or other methods of pain relief as needed and appropriate. Seek specialist advice if necessary. **[C]**

Psychosocial assessment and management

Assess resources (e.g., availability and skill of caregivers, home conditions, equipment, patient's preference) for individuals being treated with pressure ulcers in the home. **[C]**

MANAGING TISSUE LOADS

Managing tissue loads can be achieved in a variety of ways including:

- 1) manual repositioning,
- 2) use of specialist equipment,

and is a 24-hour provision whether the patient is in a bed or chair. Periods spent immobile in chairs should be limited to two hours or less per session, unless their clinical condition prevents doing so. [B]

Following assessment of the patient and pressure ulcer a plan of treatment consistent with the overall goal of therapy should be developed. [C]

Whenever possible avoid positioning patients directly on a pressure ulcer or directly on a bony prominence unless this is contra-indicated by their general treatment objectives, in which instance an adequate pressure relieving device (e.g., an alternating pressure device) should be used. [C]

THE USE OF PRESSURE ULCER PREVENTION DEVICES

There is no agreed definition of the terms of pressure:

relief - reduction - redistribution.

Therefore, for simplicity, the term pressure ulcer prevention device will be used.

Consider postural alignment, distribution of weight, balance, stability, and pressure ulcer risk reduction when positioning patients or selecting equipment. This is especially important in the sitting position whether in bed or chair. [C]

Reposition, or where possible teach the patient to reposition themselves at frequent intervals to redistribute pressure. [C]

Benefit may be derived from a variety of pressure ulcer prevention devices but information on patient outcomes and information on the cost effectiveness of any of these devices is scarce. [B]

It is necessary to develop international and European standards to which these devices should perform, e.g., similar to already existing standards in some countries. [C]

WOUND TREATMENT

Debridement is defined as the removal of devitalised tissue from a wound.

The rationale for removing such tissue is that:

- it removes a medium for infection,
- it facilitates healing,
- it aids assessment of wound depth. [C]

Remove devitalised tissue in pressure ulcers when appropriate for the patient's condition and consistent with the patients goals. [C]

With the terminally ill patient their overall quality of life should be taken into account when deciding whether to debride the wound and the manner in which it should be accomplished. [C]

Surgical, enzymatic and/or autolytic debridement techniques may be used when there is no urgent clinical need for drainage or removal of devitalised tissue. [C]

If there is an urgent need for debridement, as with advancing cellulitis or sepsis, surgical debridement* should be used.

Surgical debridement must be performed by a competent person. [C]

Methods of debridement include surgical, enzymatic, autolytic, larvae or a combination.

Dry eschar need not be debrided if oedema, erythema, fluctuance or drainage are not present. Dry eschar may be removed with dressings which provide moist environment to encourage autolysis. They include hydrocolloids, hydrogels. [C]

These wounds should be assessed daily to monitor pressure ulcer complications which would require debridement. [C]

Prevent or manage pain associated with surgical debridement. [C]

* *Surgical methods range from scissors and scalpel used at the bedside by a competent nurse or surgical debridement performed by a surgeon in the operating theatre.*

WOUND CLEANSING

Cleanse wounds as necessary with tap water or with water which is suitable for drinking or with saline. [C]

Use minimal mechanical force when cleansing or irrigating the ulcer. Showering is appropriate. Irrigation can be useful for cleaning a cavity ulcer. [C]

Antiseptics should not routinely be used to clean wounds but may be considered when bacterial load needs to be controlled (after clinical assessment). Ideally antiseptics should only be used for a limited period of time until the wound is clean and surrounding inflammation reduced. [C]

DRESSINGS

Use a dressing which maintains a moist environment at the wound/dressing interface. [A]

Determine the condition of the wound and establish treatment objectives before selecting dressing - e.g., grade, wound bed, infection, level of exudate, pain, surrounding skin, position and patients preference. [C]

Dressings should be maintained in situ as long as is clinically appropriate, and in line with manufacturers

recommendations. Frequent removal could damage the wound bed. Dressings that harden should not be used since they may cause pressure injuries. [B]

Dressings may need to be removed daily to ensure that the wound is not getting worse due to inadequate pressure relief. If there is leakage or strike through, it causes a break in the barrier that the dressing provides to external contamination, and so it should be changed. If this occurs frequently it may be appropriate to reconsider dressing choice. [C]

The use of wound protocols based on good evidence will avoid unnecessary changes of dressing. [C]

Regular observation will demonstrate the progress of healing and if there is a need to change treatment objectives. [C]

MANAGING BACTERIAL COLONISATION AND INFECTION

Pressure ulcer colonisation and infection

Reduce the risk of infection and enhance wound healing by hand washing, wound cleansing and debridement. [A]

If purulent material or foul odour is present, more frequent cleansing and possibly debridement are required. [C]

All pressure ulcers are colonised. Therefore do not routinely take a swab. If there are clinical signs of infection present cultures may be taken. Seek advice from the pathologist / microbiologist. [C]

When there are clinical signs of infection which do not respond to treatment, radiological examination should be undertaken to exclude osteomyelitis and joint infection. [C]

Institute, where appropriate, systemic antibiotic therapy for patients with bacteraemia, sepsis, advancing cellulitis or osteomyelitis. [A]

Systemic antibiotics are not required for pressure ulcers that exhibit only clinical signs of local infection. [C]

Protect pressure ulcers from exogenous sources of contamination (e.g., faeces) [C]

Infection control

Follow body substance isolation (BSI) precautions or an equivalent system appropriate for the health care setting and the patient's condition when treating pressure ulcers. [C]

Use clean gloves for each patient. When treating multiple ulcers on the same patient, attend to the most contaminated ulcer last (e.g., in the perianal region). Remove gloves and wash hands between patients. [C]

Use sterile instruments to debride pressure ulcers. [C]

ADJUNCTIVE THERAPIES

Such therapies include Electrotherapy and low laser irradiation. However, at present, insufficient research has been completed to recommend their general use. [C]

Further information on the European Pressure Ulcer Advisory Panel may be obtained from:

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