Tissue Viability

NHS Quality Improvement Scotland

Best Practice Statement

March 2009

Prevention and management of pressure ulcers

NHS Quality Improvement Scotland is committed to equality and diversity. We have assessed this Best Practice Statement for likely impact on the six equality groups defined by age, disability, gender, race, religion/belief and sexual orientation. For a summary of the equality and diversity impact assessment, please see our website (www.nhshealthquality.org). The full report in electronic or paper form is available on request from the NHS QIS Equality and Diversity Officer.

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www.nhshealthquality.org

Contents

Introduction

NHS Quality Improvement Scotland (NHS QIS) leads the use of knowledge to promote improvement in the quality of healthcare for the people of Scotland and performs three key functions:

- providing advice and guidance on effective clinical practice, including setting standards
- driving and supporting implementation of improvements in quality, and
- assessing the performance of the NHS, reporting and publishing the findings.

In addition, NHS QIS also has central responsibility for patient safety and clinical governance across NHSScotland.

Key principles of best practice statements

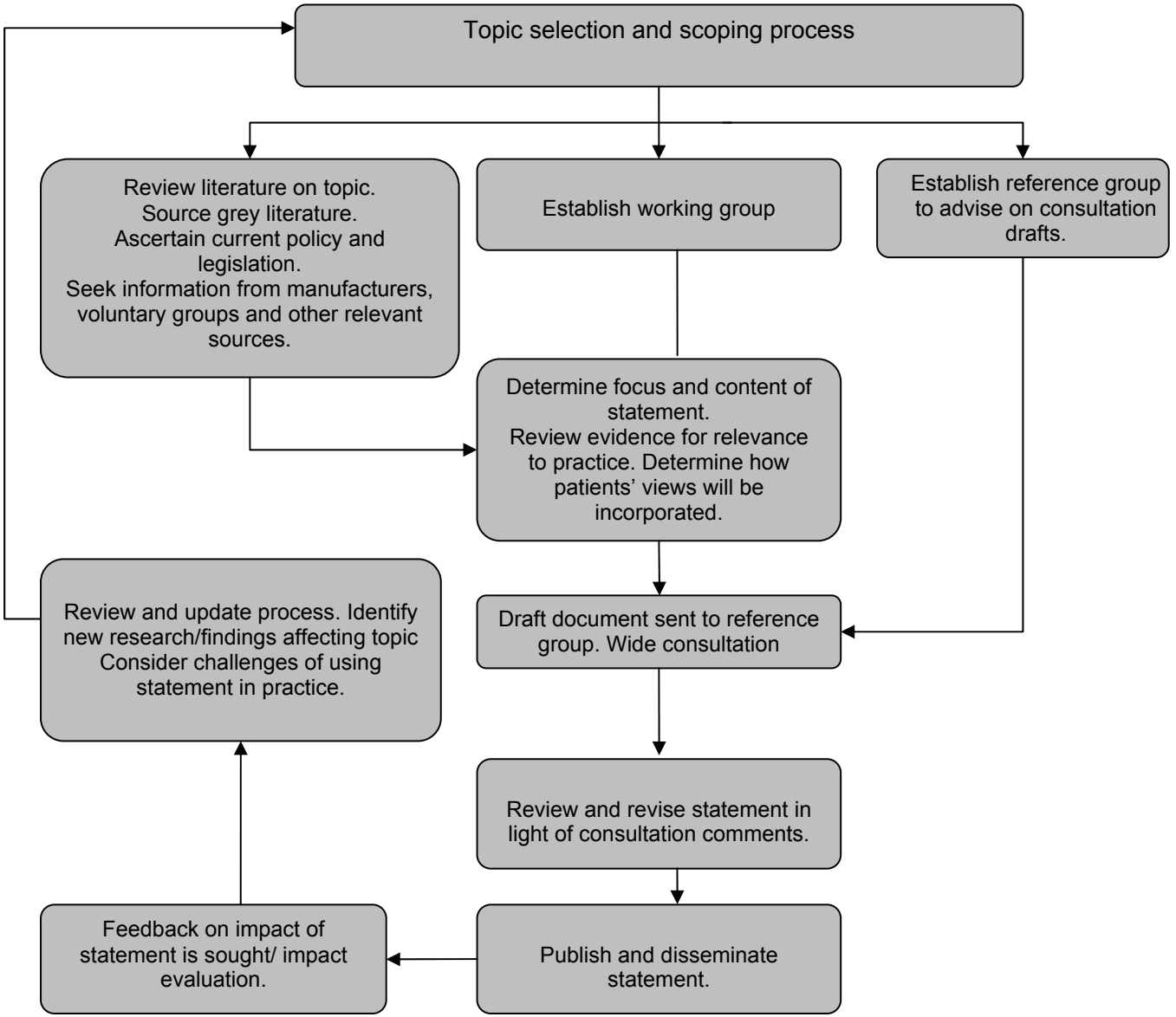
A series of best practice statements has been produced within the Practice Development Unit of NHS QIS, designed to offer guidance on best and achievable practice in a specific area of care. These statements reflect the current emphasis on delivering care that is person-centred, cost-effective and fair. They reflect the commitment of NHS QIS to sharing local excellence at a national level.

Best practice statements are produced by a systematic process, outlined overleaf, and underpinned by a number of key principles.

- They are intended to guide practice and promote a consistent, cohesive and achievable approach to care. Their aims are realistic but challenging.
- They are primarily intended for use by registered nurses, midwives, allied health professionals, and the staff who support them.
- They are developed where variation in practice exists and seek to establish an agreed approach for practitioners.
- Responsibility for implementation of these statements rests at local level.

Best practice statements are reviewed, and, if necessary, updated in order to ensure the statements continue to reflect current thinking with regard to best practice.

Key stages in the development of best practice statements



Best practice statement: Prevention and management of pressure ulcers

Pressure ulcers (also called pressure sores, bed sores and decubitus ulcers) are areas of tissue damage that occur in people who cannot reposition themselves, the acutely ill, the older person, and the malnourished. Pressure ulcers negatively affect quality of life and impose a significant financial burden on healthcare systems [1].

This best practice statement combines two previously separate documents originally drafted by the National Association of Tissue Viability Nurses in Scotland (NATVNS) and endorsed by NHS Quality Improvement Scotland (NHS QIS). These were best practice statements on The Prevention of Pressure Ulcers [4], and on The Treatment and Management of Pressure Ulcers [5]. Like all best practice statements, they are underpinned by a series of principles, outlined on page 2.

In June 2008, a National Integrated Tissue Viability Programme was introduced, sponsored by the Scottish Government, with a practice development programme identified as the responsibility of NHS QIS, and an educational resource to be developed by NHS Education for Scotland (NES). It was considered worthwhile to combine and review the two statements, incorporating new largely secondary literature that had been published since 2005 and republish them, as foundation documents to the practice development programme. To accommodate tight timescales a compressed project plan was followed.

National consultation events and consultation with tissue viability experts identified that the two statements had become embedded in health and social care practice across Scotland and were a valued foundation to local policies and practices. The expert group convened to undertake the review process therefore considered that minimal change to the structure and the wording of the combined document was most appropriate for users, many of whom were already familiar with the original documents. Research published in the early 1990s suggested that many clinicians believe that pressure ulcers are not a problem in the paediatric population, identifying this as a risk since the skin may not be assessed and prevention measures may not be implemented [2]. Pressure ulcer prevalence studies in the paediatric population show that neonates and children also acquire pressure ulcers [3]. Specific reference to paediatric concerns has therefore been made. In addition new secondary literature and policy, most notably on infection control has been incorporated. There has also been a shift to a primarily electronic format. This is in keeping with the trend with all reviewed best practice statements, and allows hyperlinks to the new web-based practice development tool kit and the education resource provided by NES to be incorporated.

The programme has strong links to the work undertaken by the Scottish Patient Safety Programme (SPSP), and the work on Clinical Quality Indicators, and uses terminology common to these programmes. It is also linked to significant work on Health Acquired Infection (HAI). Since pressure ulcers are connected to issues of nutrition, mobility, continence, pain, and infection control, links to parallel guidance by NHS QIS and other sources are identified.

Section 1: Skin examination, assessment and care

Key points:

1 *All individuals should have their skin assessed. If changes are observed, preventative strategies should be initiated.*

2 *Darkly pigmented skin requires particular vigilance. Discolouration of the skin, warmth, oedema, induration or hardness may also be used as indicators.*

Statement	Reasons for statement	How to demonstrate statement is being achieved
As part of the holistic assessment, all patients/clients have their skin examined regularly, with special attention being paid to bony prominences. In children and neonates, particular attention is paid to the occiput, ears and areas under equipment and devices, eg nasogastric tubes, splints and casts, that may be pressing or rubbing on the skin [6,7].	Early identification of skin changes and intervention can prevent skin deterioration. The majority of pressure ulcers are located on the sacrum and heels [8]. In children and neonates, the occiput and ears are the most common site of damage as well as the sacrum and heels [2]. Ulceration is also common secondary to perinenal dermatitis or 'nappy rash' [6].	Each skin examination is documented in the individual's health record. Findings from skin inspection which indicate that further action is required, along with the subsequent action taken, are documented in the health record.
Regular skin examination takes place at opportune times, for example during assistance with personal hygiene.	Early identification of skin changes and intervention can prevent skin deterioration.	Identification of any skin changes and associated treatments are documented in the health record.
Where an area of redness (erythema) or discolouration is noted, further examination is carried out.	Further examination may help in the identification of the early stages of pressure ulcer development.	Erythema/discolouration and subsequent examination is documented.

Statement	Reasons for statement	How to demonstrate statement is being achieved
Factors that increase the likelihood of pressure ulcer development are identified and addressed by being incorporated into the care plan. These include • incontinence • lack of mobility • poor nutrition • pain *(See also Section 3: Significant contributing factors).*	A range of factors, including altered mobility and incontinence, can increase risk of pressure ulcers developing [9].	The health records contain evidence of ongoing assessment, treatment rationale and interventions taken.
Patients/clients with incontinence have their skin assessed regularly, according to the individual's condition. (*See Excoriation tool in Toolkit*.)	Incontinence can increase an individual's risk of pressure ulcer development due to chemical irritation and/or the inappropriate cleansing regime adopted [10].	The individual's health record contains evidence that the advice of a continence advisor is sought where continence management products are compromised by pressure ulcer prevention strategies.
Soap and water are not used when cleansing following episodes of incontinence.	Cleansing with soap and water can contribute to the development of pressure ulcers [10].	There is evidence that cleansers, as opposed to soap and water, are used to cleanse the skin of those individuals who are incontinent [10, 11].
Products which promote a moist wound environment are used unless contraindicated by the individual's condition. In children and neonates, dressings are low adherent.	Evidence suggests hydrocolloid wound dressings are preferable to gauze dressings [12] as they create a moist wound healing environment. Children and neonates are at risk of epidermal stripping. Low adherent dressings are the gold standard in paediatrics as they cause minimal physical trauma and emotional upset at dressing changes.	The health records contain evidence of ongoing assessment, treatment rationale and interventions taken.

Statement	Reasons for statement	How to demonstrate statement is being achieved
For patients/clients with superficial pressure ulcers (broken skin) due to incontinence, the principles of moist wound healing are followed. *(See Section 7: Promoting healing).* *(See Excoriation tool in Toolkit)*	Barrier creams are used appropriately on vulnerable skin. Superficial pressure ulcers (broken skin) should be managed by moist wound healing.	Health records contain evidence of ongoing assessment, treatment rationale and interventions taken.
Non-perfumed moisturisers are used at least twice daily on individuals with dry skin.	This ensures maximum hydration of the skin [13].	Health records contain evidence of ongoing skin care.

Key challenges: Primary care and care homes:

1 *The majority of those cared for in primary care and care home settings will have altered skin integrity due to age eg the skin is thin, has bruising and age spots. These individuals require regular skin assessment.*
2 *Involving the individual and/or carer in skin management if at all possible, and encouraging the individual to apply non perfumed moisturisers regularly.*
3 *Ensuring individuals and/or carers involved in the management and delivery of skin care receive training and education.*

Key challenges: Children and neonates

1 *Assessing skin in the nappy area at each nappy change especially in neonates.*
2 *Considering alternatives to baby wipes.*
3 *Referring to local guidelines regarding neonatal skin care.*
4 *Involving the parents/carers in skin management if possible and encouraging them to follow the advised skin care regime.*
5 *Ensuring parents/carers who are involved in the management and delivery of skin care receive education and training.*

Section 2: Risk assessment

Key points:

1 All individuals should be assessed using both formal and informal risk assessment methods.

2 The risk assessment informs subsequent action. The correct preventative strategies are initiated and maintained.

Statement	Reasons for statement	How to demonstrate statement is being achieved
All patients/clients are assessed to determine their level of risk of pressure ulcer development. Both formal and informal assessment methods are used. In children and neonates, the formal risk assessment tools used are age appropriate. *(See Assessment tools in Toolkit)*	Acting on risk assessment, both formal and informal, enables correct and suitable preventative measures to be initiated and maintained.	The health records of all patients/clients include evidence of pressure ulcer risk assessment.
Risk assessment takes place within 6 hours of admission, which includes time in an Emergency department, or following a change in condition or treatment. Patients/clients in the community are assessed at the first visit. If the person is acutely ill, assessment happens sooner.	There is a lack of evidence whether formal or informal risk assessment is more successful at predicting vulnerability. Formal risk assessment involves the use of a recognised risk assessment tool. Formal combined with informal risk assessment, or clinical judgement is a useful way of predicting risk [14]. Clinical judgement includes understanding the client group and the patient's/client's environment and physical condition.	The health records of all individuals admitted to a care setting include evidence of pressure ulcer risk assessment within 6 hours of admission. The choice of assessment tool reflects the care setting.

Statement	Reasons for statement	How to demonstrate statement is being achieved
Formal assessment combined with clinical judgement and decision-making guides staff to identify individuals at highest risk of tissue damage.	It is considered best practice that a combination of clinical judgement and decision-making with a formal assessment tool is employed. The tool is chosen on the basis of its suitability for a particular care setting or population group, as well as the research evidence demonstration of its predictive validity [15].	Health records show that an action is based on the outcome of both a formal assessment and the clinical judgments and decisions that are made.
Patients/clients are re-assessed at regular intervals, and if their condition or treatment alters. The Scottish Adapted European Pressure Ulcer Advisory Panel (EPUAP) Grading Tool is used in the assessment and grading of pressure ulcers. *(See Section 4: Assessment, grading and history)*.	The skin can change rapidly if other conditions change.	There is evidence that all patients/clients identified as being at risk receive preventative interventions and that they are re-assessed in response to changes in their physical or mental condition. There is evidence that all patients/clients with existing non-blanching erythema (see glossary) or existing pressure ulcers receive preventative interventions.
Careful attention is paid to those individuals with darkly pigmented skin in order to identify early skin damage.	Evidence suggests that early signs of pressure damage are not identified in individuals with darker skin [16].	The Scottish adapted EPUAP Grading Tool is used in the grading of pressure ulcers and the health record indicates this.
Staff act on individual components of the risk assessment process, eg poor dietary intake.	Risk assessment is effective only if it leads to action.	The health record reflects the action/intervention taken.
Staff involved in risk assessment receive training and update sessions on risk assessment.	Risk assessment is a clinical skill which can be developed and sustained.	Records of staff training in assessment and prevention are available.

Key challenge:

1 With demographic changes, more individuals will be identified as being 'at risk.'

Section 3: Significant contributing factors

Key points:

1 *Adequate dietary intake for patients/clients with pressure ulcers must be ensured.*
2 *Incontinence can increase the risk of pressure ulcer development.*
3 *Cleansing with soap and water can contribute to the development of pressure ulcers.*
4 *Barrier creams should not be used with superficial pressure ulcers.*
5 *Patients/clients with reduced mobility are at higher risk of developing a pressure ulcer.*
6 *When the patient/client is in pain, reluctance to move can increase the risk of the development of a pressure ulcer.*

Statement	Reasons for statement	How to demonstrate statement is being achieved
All patients/clients are assessed regularly for adequate dietary intake.	Regular assessment of patients'/clients' dietary intake enables timely interventions [17].	The health record of all patients/clients includes: • evidence of assessment and/or interventions • the results of nutritional review and any changes made, and • evidence if the advice of a dietitian is sought, where dietary review and supplements may be indicated.
Adequate dietary intake for patients/clients with evidence of pressure ulcer(s) is ensured.	Evidence suggests that individuals who are malnourished may have delayed or altered healing rates due to the lack of calorific value of their diet [18, 19].	The health records of all individuals with altered nutritional intake include evidence of assessment and/or interventions.
Patients/clients with incontinence have their skin assessed regularly or according to their condition.	Incontinence can increase an individual's risk of pressure ulcer development due to chemical irritation [10, 20]. *(See excoriation tool in Toolkit.)*	Health records include evidence that regular skin examination takes place at opportune times, for example, during assistance with personal hygiene. Findings from skin examination which indicate that further action is required, along with the subsequent

Statement	Reasons for statement	How to demonstrate statement is being achieved
		action taken, are recorded in the individual's health record.
Continence management is regularly reviewed.	Changes in continence (eg incontinence pattern, cleansing regime used) can contribute to the development of pressure ulcers.	The health record documents episodes of incontinence and indicates action taken, including skin cleansing products used.
Patients/clients with reduced mobility eg having had a stroke, in labour suites, or post-surgery, have their skin examined regularly.	Patients/clients with reduced mobility and/or sensation are more likely to develop pressure ulcers.	There is documented evidence that all patients/clients with reduced mobility have frequent skin inspection to detect any adverse effects from their reduced mobility/sensation.
Patients/clients at risk of pain are assessed and appropriate analgesia given.	Patients who are immobilised due to unrelieved pain (eg post-surgery or with a terminal illness) are at increased risk of developing a pressure ulcer [21].	The health record documents pain assessment and medication or other methods of pain relief, along with outcome measures.

Section 4: Assessment, grading and history

Key points:

1 *All patients/clients with pressure ulcers should have the ulcers assessed using the* Scottish Adapted EPUAP Grading Tool.
2 *Treatment of pressure ulcers can commence only once a full assessment of the ulcer has been carried out.*
3 *Pressure ulcers and the patient's/client's physical condition are very closely related and the two should be assessed together.*
4 *Staff involved in assessing the pressure ulcer(s) should receive training and regular updates.*

Statement	Reasons for statement	How to demonstrate statement is being achieved
All patients/clients identified with existing pressure ulcers have their ulcer(s) assessed to determine the level of tissue damage, using the Scottish Adapted EPUAP Grading Tool.* *See Grading tool in Toolkit*	Grading of pressure ulcer damage enables the correct treatment and intervention to be initiated and maintained. * Note that a healing pressure ulcer cannot be regraded to a lower grade.	The health records of all individuals identified as having an existing pressure ulcer(s) include evidence of pressure ulcer grading from onset. There is documented evidence that all individuals with existing pressure ulcers receive treatment and interventions appropriate to their condition.
The pressure ulcer is assessed initially for • location • cause • grade • dimensions • wound bed appearance • exudate • odour • surrounding skin condition • presence or absence of infection, and • pain.	Early identification and treatment of underlying tissue involvement and/or sinus formation reduces the risk of complications and enables appropriate rationale and associated treatment interventions to be determined. Evidence suggests that treatment can commence only once a full assessment of the pressure ulcer has been achieved.	The health records of all individuals identified with a graded pressure ulcer include documented evidence of pressure ulcer wound assessment and any interventions carried out or adopted. The health records of all individuals identified with a pressure ulcer show evidence of assessment and a rationale for treatment aims and objectives.

Statement	Reasons for statement	How to demonstrate statement is being achieved
The pressure ulcer(s) should be re-assessed regularly, at every dressing change, or at least weekly, according to the patient's/client's condition, or if the patient's/client's condition changes. *See Wound assessment in Toolkit.*	Assessment and re-assessment allow for an accurate and individualised treatment plan to be devised. The pressure ulcer(s) require re-assessment to observe for alteration in pressure ulcer condition.	There is documented evidence that the patient's/client's condition and pressure ulcer is re-assessed regularly, weekly, or more frequently according to the individual's condition.
If the condition of the patient/client or the wound deteriorates, the situation is re-evaluated and a new or updated treatment rationale and plan identified.	Deterioration in either the patient's/client's physical condition or in the pressure ulcer(s) are closely related and therefore should be assessed together.	Identified deterioration in either the patient's/client's physical condition or pressure ulcer(s) is recorded in the health record, along with any subsequent action taken.
All staff involved in assessing pressure ulcer(s) receive training and regular update sessions on all aspects of pressure ulcer prevention, grading and treatment. *Link to NES education pack.*	It is a professional obligation for practitioners to ensure they have the appropriate training, knowledge and skills for safe and effective practice, recognise and work within their level of competence and ensure that competency is maintained in the work they are to perform [22, 23].	Records of staff training in assessing risk, prevention, assessment and treatment are available.

Section 5: Positioning

Statement	Reasons for statement	How to demonstrate statement is being achieved
Patients/clients at risk of pressure ulcer development are suitably positioned to minimise pressure, friction and shear and the potential for further tissue damage.	Pressure is the main factor in the development of pressure ulcers; friction and shear can also play a part in their development. Individuals at risk should not be positioned in a seat for more than 2 hours without some form of re-positioning [24]. The time period between position changes is dependent on individual assessment. Devices to assist with the re-positioning of individuals in bed such as profiling beds, and electric and non-electric bed frames hoists and sliding sheets are of benefit.	Health records include an indication of how frequently position changes are to be carried out. Health records indicate that: • patients/clients at risk are not seated for more than 2 hours without being re-positioned • acutely ill individuals are returned to bed for no less than one hour [25] • patients/clients who use a wheelchair or static chair on a long-term basis are educated to re-distribute their weight regularly • for patients/clients in bed, differing positions such as the thirty degree tilt* [26] are used • hoist slings and sliding sheets are not left under individuals after use** • skin inspection is carried out after each positional change • these inspections help to guide decisions on the length of time between positional changes, and • children and neonates are correctly positioned in moulded seating, since it can cause additional pressure leading to skin breakdown. The result of skin inspection and any changes made to the re-positioning regime are documented.
Patients/clients who can move independently are encouraged and enabled to do so.	Patients/clients who move often are less likely to develop pressure ulcers. Patients/clients who are informed of	Independent movement is encouraged and education of the patient/client is documented in the health record.

Statement	Reasons for statement	How to demonstrate statement is being achieved
	the risk will be more aware of the need to move [27].	
Patients/clients who require assistance with movement are educated along with associated carers in the benefits and techniques of weight distribution.	Individuals with a pressure ulcer should not be positioned in a seat for more than 2 hours without some form of re-positioning [24]. In the community setting, this can only be advised.	Independent movement is encouraged and education of the patient/client is documented in the health record. The result of skin inspection and any changes made to the re-positioning regime are documented.
Patients/clients with specific moving and handling requirements (eg with spinal injuries, or who are obese) have their needs assessed by those with relevant skills and in relation to their whole physical condition.	Devices to assist with the re-positioning of individuals in bed, such as profiling beds, and electric and non-electric bed frames, are of value. Moving and handling aids such as hoists and slings can also be used to reposition the individual.	Health records show evidence of referral to a physiotherapist and /or an occupational therapist to assist with mobility or position changing where appropriate.

* When the person is placed in the laterally inclined position, supported by pillow with the pelvis making a 30 degree angle with the support surface.

**Where there are associated manual handling issues concerning the removal of a hoist sling, a joint assessment by tissue viability and manual handling staff should be documented.

Section 6: Mattresses, chairs and cushions

Key points:

1 Patients/clients with pressure ulcers must not be cared for on a standard NHS mattress or on a basic divan.*

2 Delay in the provision of pressure-reducing equipment may result in further tissue damage.

*A standard NHS mattress is classified as: a standard foam mattress, block or cut foam, but which is not classified as a pressure reducing mattress.

Statement	Reasons for statement	How to demonstrate statement is being achieved
Patients/clients assessed as being at risk of pressure ulcer development are not cared for on a standard NHS mattress or on basic divan mattress.* As a minimum they are provided with a pressure redistributing foam mattress or overlay.	There is clear evidence that individuals at risk benefit from products which are different from the standard NHS provision, eg pressure redistributing mattresses or fibre, foam, air, static or dynamic overlays [28].	There is a clear organisational policy concerning the provision of specialist equipment for individuals at risk. The decision to use any product beyond a standard NHS mattress* is documented in the individual's health record.
The decision to provide any specialist mattress or overlay is taken as part of a comprehensive assessment and prevention strategy, never the sole intervention.	There is no clear evidence as to the best pressure redistributing mattresses to use [28].	The date of first use of specialist equipment is documented in the health record. Measures being implemented in addition to the use of mattresses and overlays are documented in the health record.
Patients/clients at risk of pressure ulcer development are provided with appropriate pressure redistributing equipment when sitting in a chair or wheelchair, in addition to when they are being cared for in bed.	Further tissue damage may occur when patients/clients are sitting in chairs [24]. Chairs and/or cushions designed to reduce the risk of pressure ulcer	Health records demonstrate that the patient/client has been placed on the appropriate equipment.

Statement	Reasons for statement	How to demonstrate statement is being achieved
	development must be suited to individual needs in relation to the individual's height, weight, postural alignment and foot support.	
Long-term wheelchair or static seat users have their needs assessed by those with relevant specialist skills.	The safety of static seats can be compromised by the use of inappropriate cushions which may cause changes in height, balance and lumbar support [29]. Patients/clients have individual requirements based on their overall condition and skin condition and their own previous experience.	The patient's/client's health record documents the assessment of their needs in relation to their wheelchair/static seat use.
Patients/clients being cared for on specialist equipment have their skin inspected frequently to assess the suitability of the equipment. Equipment requirements may change with changes in the patient's/client's condition. Growth in children and neonates may require frequent re-assessments.	Each patient/client has different requirements based on the individual's overall condition, skin condition and their previous experience.	Regular skin inspection and any subsequent decisions or actions taken are documented in the health record.
Factors taken into account when deciding on which pressure redistributing mattress or overlay to purchase or hire include: • efficacy	There is no clear evidence as to the best products to use [28]. Individuals identified as requiring pressure-reducing equipment (mattresses, seating and cushions)	The date of first use of specialist equipment is documented in the individual's health record.

Statement	Reasons for statement	How to demonstrate statement is being achieved
• weight and size appropriate • ease of use and maintenance • impact on nursing procedures • acceptability to the person, and • cost.	receive it as soon as possible, since delay may result in tissue damage.	

Key challenge ~ All settings:

1 Maintaining a record, giving the rationale if the patient/client cannot be repositioned regularly. The very ill do not physiologically tolerate 2 hourly position changes.

Key challenges ~ Primary care:

1 Encouraging carers to maintain a record of any positional changes between visits by staff.
2 Maintaining records of education of both carer and the person being cared for.

Key challenges~ Children and neonates

1 *Ensuring that if specialist equipment is required, it is appropriate for the person's size and weight. Many adult devices are unsuitable for children as the buttocks, feet, elbows, etc may sink in between cushion/mattress* cells [6].
2 *Ensuring that children with reduced sensation, eg in spina bifida have, if it is required, a cushion for use at school which is light and portable for taking between different areas.*
3 *Educating parents and carers in re-positioning and how to use equipment appropriately and safely.*

Section 7: Promoting healing

Statement	Reasons for statement	How to demonstrate statement is being achieved
There is a clear plan of management to promote wound healing in the health record of each patient/client with a pressure ulcer.	Pressure ulcers are likely to require a number of weeks or months to heal depending on their severity and the individual's co-morbidity.	Health records include evidence that patients/clients with a pressure ulcer(s) have a full assessment of the ulcer(s) and their management plan is documented. This incorporates steps taken to ensure continuity between different care settings. Health records include all formal referrals or informal discussions with specialists regarding the management of the pressure ulcer. Evidence of initial and ongoing management to prevent further tissue damage should be evident.
Patients/clients with extensive superficial pressure ulcers, grade 3 or 4 pressure ulcers or those that are deteriorating are referred to a specialist service such as a tissue viability service.	The management of individuals with large areas of superficial ulcers, any severe or deteriorating ulcers requires specialist input due to the potential for the development of life threatening complications (eg septicaemia).	Health records show that the patient/client with extensive superficial pressure ulceration, grade 3 or 4 or deteriorating ulcers is referred to a specialist service, unless the individual's condition dictates otherwise. The health record of the patient/client referred to a specialist service shows means of communication, eg telephone or letter, and the outcome of the referral, eg telephone advice or direct consultation.
The principles of moist wound healing are applied to pressure ulcer management, unless the patient's/client's condition dictates otherwise.	Moist wound management can result in improved healing [12].	There is documented evidence of wound management products used, with an appropriate rationale.

Statement	Reasons for statement	How to demonstrate statement is being achieved
The patient's/client's overall psychosocial health is assessed to determine causes of pain.	Pain due to the presence of pressure ulcers may occur [30].	The health record documents measures to identify pain.
Pain related to the pressure ulcer(s) or their treatment is assessed using an appropriate pain assessment tool, and appropriate interventions undertaken. The advice of specialist(s) is sought if necessary.	There is best practice on the management of pain [31, 32].	The health record documents measures to eliminate or control the source of pain by appropriate interventions, eg covering wound, adjusting support surfaces, repositioning and analgesia, if required.

Section 8: Wound cleansing

Statement	Reasons for statement	How to demonstrate statement is being achieved
Wounds are cleansed with warm tap water or warm saline to remove visible debris and to aid assessment. Irrigation of the wound or showering is recommended [33]. In neonates below 35/40 weeks gestation saline is not used to clean wounds and antimicrobial alcohol-based biguinides such as chlorhexidine are not used. Silver and iodine impregnated products are used with caution and blood serum levels checked if used for prolonged periods.	Wound cleansing is advised to remove excess exudate, loose slough or debris to aid wound assessment, but does not remove bacteria present [34]. Neonates below 35-40 weeks gestation are at risk from percutaneous absorption due to their immature skin.	The health records of individuals who require their wound cleansed include cleansing method used. There is a clear local policy for wound cleansing. There is evidence that staff select and document the appropriate method of cleansing to best meet the needs of the individual and the wound.
Excess loose slough and exudate is removed prior to assessment and/or dressing change.	Removal of excess loose slough and exudate may reduce any associated odour, but will also permit a more accurate assessment of the wound [35].	The health records of individuals with pressure ulcers with excess exudate, slough or debris document that these are cleansed.

Section 9: Wound infection: prevention and control

Key points:

1 *All pressure ulcers are colonised with bacteria.*
2 *Most local infection can be managed using antimicrobial wound products.*
3 *Systemic antibiotics should not be used routinely for local infection.*
4 *Assessment and regular review of local infection is documented.*

Statement	Reasons for statement	How to demonstrate statement is being achieved
The risk of infection in patients/clients with existing pressure ulcers is reduced. *Link to Education section on infection.*	Avoiding local infection becoming systemic reduces the risk to the individual of delayed healing and, in extreme cases, death [36].	All local infection control policies are applied, with particular attention to hand hygiene and appropriate personal protective equipment (PPE).
Routine wound swabs are not taken unless clinically indicated.	All pressure ulcers will be colonised with bacteria therefore wound swabs should only be taken when clinically indicated, according to local policy.	Records indicate when and why wound swabs have been taken, and the results of the swabs.
Where local infection is suspected, the use of topical antimicrobial/dressings and wound management products is considered.	Local infection can be managed using topical antimicrobial wound management products appropriately without the use of systemic antibiotics unless the individual's overall condition dictates otherwise.	The health record of the individual demonstrates a rationale for product choice and a clear process of review.
Topical antibiotic ointments and creams are used only following specialist advice from the antimicrobial pharmacist /microbiologist/infection nurse.	Evidence suggests that the effects of topical antibiotics are limited and sensitisation commonly occurs.	The health record of the individual indicates when and why topical antibiotics have been prescribed and that advice has also been sought from microbiology and/or infection control team, where required.

Statement	Reasons for statement	How to demonstrate statement is being achieved
Systemic antibiotics are not used routinely where local infection is present, although may be indicated for particular conditions. Advice is sought from the antimicrobial pharmacist/microbiologist.	Spreading infection, bacteraemia, sepsis or osteomyelitis will require the appropriate systemic antibiotic. Individuals not responding to systemic antibiotic treatment may require radiological examination to exclude the presence of osteomyelitis or joint infection.	Health records demonstrate that assessment of the local infection has been undertaken and that regular reviews are also undertaken. Health records demonstrate that all systemic antibiotic therapy complies with the local antibiotic prescribing policy. Health records indicate when and why systemic antibiotics have been prescribed and that advice has also been sought from microbiologist/antimicrobial pharmacist where required. Health records demonstrate that there is an ongoing assessment of the patient's/client's response to antibiotic treatment.
Referral to the appropriate medical staff is made for spreading cellulitis or sepsis.	Spreading cellulitis and/or sepsis will require urgent medical attention in order to treat the patient with correct antibiotics and to minimise the risk of further complications.	Health records demonstrate that appropriate referrals are made.

Section 10: Debridement

Key Points:

1 The presence of devitalised tissue delays the healing process.

Statement	Reasons for statement	How to demonstrate statement is being achieved
Devitalised tissue in pressure ulcer(s) is removed where appropriate for the patient's/client's condition. Superficial (broken skin) pressure ulcers may benefit from autolytic debridement techniques. For individuals who are terminally ill or with other co-morbidities, overall quality of life is considered prior to deciding whether and how to debride.	The presence of devitalised tissue delays the healing process by keeping the wound in the inflammatory phase of wound healing; removal of devitalised tissue helps prevent the spread of infection [35].	Records indicate that the patient's/client's condition has been assessed prior to any decision being taken to remove devitalised tissue, as well as demonstrating the rationale for product choice and a clear process for review.
Where there is devitalised tissue present its removal is facilitated by using debridement techniques unless the individual's overall condition contraindicates debridement.	The presence of devitalised tissue in the wound bed can delay healing and increase the risk of infection. There is a variety of wound healing products available which can revitalise tissue.	Records demonstrate that, where the patient's condition allows, the removal of devitalised tissue has been considered. There is documented evidence that sharp debridement is undertaken where appropriate, by a person deemed competent to do so (usually a nurse, surgeon or podiatrist).

Section 11: Managing bacterial colonisation and infection (see also Section 9)

Key Points:

1 Evidence-based local infection control policies are followed.

Statement	Reasons for statement	How to demonstrate statement is being achieved
All practitioners in NHSScotland consult and are guided by their NHS Board's Infection Control team for advice, local arrangements, and evidence-based infection control policies.	Infection control is everyone's responsibility in every care sector. Within NHSScotland it is the responsibility of each NHS board to ensure that there is effective communication between the infection control team, senior management and that lines of accountability are clearly defined. Health Protection Scotland (HPS) Infection Control Model Policies • Standard Infection Control Precautions 37 • Transmission Based Precautions 38.	There are evidence based policies, procedures and guidelines which reflect the level and quality of content set in the model infection control policies produced by Health Protection Scotland (HPS) [37, 38].
Contact Precautions, which form part of Transmission Based Precautions [38] and are an addition to Standard Infection Control Precautions [37], are used for all patient/client care activities when there is bacterial colonisation or infection present. (This is due to the risk of environmental contamination.)	This helps to prevent cross-infection.	There is a prevention and control of infection manual accessible to all staff which is evidence based and reviewed on a 3-year rolling programme and as required. HPS model infection control policies can be used as a benchmark for quality and content.

Statement	Reasons for statement	How to demonstrate statement is being achieved
Contact precautions include use of PPE, hand hygiene, management of care equipment, etc.		
Items of care equipment are managed to reduce the chance of cross transmission of infection. The frequencies of equipment cleaning meet the recommendations in Appendix 1 of the NHSScotland Code of Practice for the Local Management of Hygiene and Healthcare Associated Infection [39] also HPS Model Policy on Standard Infection Control on Management of Care Equipment [40]	Instructions are given within local and national infection control procedures/protocols [39, 41].	There is documented evidence to show that all staff involved in decontamination procedures are trained properly in executing these correctly.
Consideration is given on how equipment is to be decontaminated in compliance with the manufacturer's guidelines and local infection control measures, before it is procured.	It is good practice to anticipate decontamination procedures and processes, in conjunction with local factors, to inform the choice of equipment procured [39].	Local procurement protocols reflect this consideration.
All reusable equipment is cleaned/decontaminated after use, in compliance with the manufacturer's guidelines and local infection control precautions.	This helps prevent health care associated/ infection [39, 41].	Local procedures or protocols outlining the requirements are accessible to all staff. All procedures or protocols are audited.

Glossary

30 degree tilt	When the patient is placed in the sideways tilted position supported by a pillow, with the pelvis (hips) at a 30 degree angle with the support surface. See tool kit for diagrams.
antibiotic	A chemical substance produced by a micro organism, which has the capacity, in dilute solutions, to inhibit selectively the growth (static) of micro/organisms or to kill (cidal) them.
autolysis	The body's ability to remove dead or de-vitalised tissue using its own enzymes. In wound care this can be encouraged through the use of 'moist wound' dressings such as hydrocolloids or hydrogel.
bacteraemia	The presence of bacteria in the blood.
barrier cream/film	A preparation to protect the outermost layer of the skin from contaminants.
cellulitis	Inflammation and infection of the cells, associated with redness, heat, swelling and pain.
colonisation	Multiplication of organisms in a wound where there is no immune reaction from the patient.
co-morbidity	The presence of coexisting or additional diseases with reference to either an initial diagnosis or to the index condition that is the subject of study. Co-morbidity may affect the ability of affected individuals to function, and also their survival; it may be used as a prognostic indicator for length of hospital stay, cost factors, and outcome or survival.
critical colonisation	Where a patient's immune system cannot maintain the balance of organisms in a wound.
debridement	The removal of dead or contaminated tissue by surgical (scalpel, scissors), chemical or enzymatic debridement, larval therapy, or through autolysis.
deroof	Remove the uppermost layer of a blister.
de-vitalised	Tissue that is no longer viable.
erythema	Non-specific redness of the skin that can be localised or general in nature, as seen in inflammation surrounding wounds, or in areas where prolonged pressure has closed off the local blood supply resulting in inflammatory changes. It may be associated with cellulites or reactive hyperanaemia.
exudate	Clear fluid that has passed through the walls of a damaged or overextended vein and which varies from a thin watery to a thick sticky fluid, depending upon the condition of the wound. Often contains growth factors when a wound is acute, and may contain bacteria, dead white cells, etc, when the wound is chronic. Worse when abnormal fluid collection in tissues (oedema) or hydrostatic pressure is present. Bacteria indirectly cause permeability of the vein wall and this results in increased exudate production.
holistic	Dealing with wholes or complete systems rather than focusing on parts. Holistic medicine attempts to treat both the mind and the body

incidence	The number of individuals developing pressure ulcers over a period of time within a defined population, who were first admitted to the care setting with no visible signs of pressure damage.
infection	The presence of multiplying bacteria in body tissues, resulting in the spread of cellular injury which can be seen in any one or more of the classical signs of inflammation: erythema, heat, swelling, and pain. The accepted diagnostic criteria for wound infection are those defined by Cutting and Harding (1994).
neonate	Infant in the first four weeks after birth.
non-blanching erythema	Where there is no skin colour change when light finger pressure is applied.
non-perfumed moisturiser	A preparation to hydrate (moisten) the skin with reduced irritant effects from fragrance and additives.
occiput	The back part of the head or skull.
osteomyelitis	Inflammation starting in the marrow of bone.
period prevalence	The proportion of people in a population who have a disease over some period of time.
point prevalence	The proportion of people in a population who have a disease at a point in time.
pressure ulcer risk assessment tool	Pressure ulcer risk assessment tools are based on a range of risk factors which are understood to be important to contributing to a patient's/client's risk of developing a pressure ulcer
pressure redistributing mattress	A specialist mattress used in the treatment of individuals at risk of pressure ulcer development, and for prevention. The filling can be air, fibre or foam, and the mattress either static or dynamic, a replacement or an overlay.
prevalence (pressure ulcers)	This is a measure of the proportion of people in a defined population who have pressure ulcers at a point in time, (point prevalence) or over some period of time (period prevalence).
psychological	Involving behaviour and its related mental processes.
psychosocial	Involving both psychological and social aspects.
reactive hyperaemia	The characteristic bright flush of the skin associated with the release of pressure – a direct response of incoming arterial blood.
sensitisation	When the skin becomes sensitive to ingredients of, creams or dressings.
sepsis	The state of being infected with pus-producing organisms.
systemic	Referring to the whole of the body rather than one part.

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