

Best Practice Statement:

Care of the Older Person's Skin

CONTENTS

Foreword	2
Development team	3
Review panel	3
Introduction	4
<i>Dry, vulnerable tissue</i>	4
<i>Pressure ulcers</i>	5
<i>Incontinence</i>	7
<i>Maceration</i>	8
<i>Skin tears</i>	8
Section 1: Management of dry, vulnerable tissue	9
Section 2a: Pressure ulcers — risk assessment	10
Section 2b: Pressure ulcers — skin inspection	11
Section 2c: Pressure ulcers — classification	12
Section 2d: Pressure ulcers — stabilisation, positioning	13
Section 2e: Pressure ulcers — stabilisation, mattresses, chairs and cushions	14
Section 2f: Pressure ulcers — promoting healing	15
Section 3a: Skin care — incontinence	16
Section 3b: Skin care — maceration	17
Section 4: Skin tears	18
Appendix 1: Definitions of topical skin applications	19
Table 1: Quantities of dermatological preparations prescribed for specific areas of the body	19
Appendix 2: Skin examination	20
Appendix 3: Formal risk assessment scales, examples	20
Appendix 4: Pressure ulcer classification scales, examples	21
Appendix 5: Skin tear classification system	21
References	22

FOREWORD

Those charged with caring for the sick and vulnerable in the UK are faced with the challenge of ensuring that their practice is of the highest standards, while often working with heavy workloads which can be a barrier to reviewing research literature on a regular basis. Where practitioners can access the latest published research, it can often be difficult to establish what changes, if any, a practitioner should make to their practice to ensure that it is optimal. Frequently, research papers call for further research to be conducted, or arrive at conclusions which can leave the practitioner unclear as to how practice should be developed.

In view of these challenges, there is a need for clear and concise guidance as to how to deliver the optimal care. One method of supporting clinicians in this aim is the provision of Best Practice Statements. These types of statements were pioneered in the area of pressure ulcers by Quality Improvement Scotland, and we are grateful to them for their permission to reproduce the relevant sections of their statements in this document. In Best Practice Statements, the relevant research is reviewed, and expert opinion and clinical guidance is provided in clear, accessible table form.

The key principles of best practice (listed below) ensure that due care and process is followed to promote the delivery of the highest standards of care across all care settings, and by all care professionals.

- ❖ Best Practice Statements (BPS) are intended to guide practice and promote a consistent and cohesive approach to care.
- ❖ BPS are primarily intended for use by registered nurses, midwives and the staff who support them, but they may also contribute to multidisciplinary working and be of guidance to other members of the healthcare team.
- ❖ Statements are derived from the best available evidence, including expert opinion at the time they are produced, recognising that levels and types of evidence vary.
- ❖ Information is gathered from a broad range of sources to identify existing or previous initiatives at local and national level, incorporate work of a qualitative and quantitative nature, and establish consensus.
- ❖ Statements are targeted at practitioners, using language that is both accessible and meaningful.

The aim of this Best Practice Statement is to provide relevant and useful information to guide those active in the clinical area, who are responsible for the management of skin care in an ageing patient population. The *Best Practice Statement: Care of the Older Person's Skin* has been developed by a team of specialists, chaired by Pam Cooper. During the peer review process, practitioners from across the UK have been able to comment on the various drafts. Their expertise has been sought to cover the variety of skin issues found in the elderly. This has led to the development of a guideline to support clinicians in their decision-making, which is up-to-date at the time of printing.

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Wounds UK

3M™ Cavilon™ Range

For the treatment and protection
of damaged or at-risk skin

This statement is a Wounds UK initiative, sponsored by 3M Health Care

INTRODUCTION

As the largest organ of the body, comprising 15% of the body's weight, the skin reflects the individual's emotional and physical well-being. The skin varies in thickness from 0.5–4.0 mm, depending on which part of the body is involved (Stephen-Haynes, 2005). The skin consists of three main layers; the outer epidermis, the middle dermis and the subcutaneous tissue. Combined, these three layers of tissue provide the following functions:

- ❖ **Protection:** the skin acts as a protective barrier, preventing damage to internal tissues from trauma, ultraviolet (UV) light, temperature, toxins and bacteria (Butcher and White, 2005).
- ❖ **Barrier to infection:** part of this barrier function is the physical barrier of intact skin; the other is the presence of sebum, an antibacterial substance with an acidic pH which is produced by the skin (Günnewicht and Dunford, 2004).
- ❖ **Pain receptor:** nerve endings within the skin respond to painful stimuli. They also act as a protective mechanism.
- ❖ **Maintenance of body temperature:** to warm the body, the vessels vasoconstrict (become smaller), thus retaining heat. If the vessels vasodilate (become wider), this leads to cooling (Timmons, 2006).
- ❖ **Production of vitamin D in response to sunlight:** this is important in bone development (Butcher and White, 2005).
- ❖ **Production of melanin:** this is responsible for skin colouring and protection from sunlight radiation damage.
- ❖ **Communication, through touch and physical appearance:** this gives clues to the individual's state of physical well-being (Flanagan and Fletcher, 2003).

The changes in the skin that occur as an individual ages affect the integrity of the skin, making it more vulnerable to damage. The epidermis gradually becomes thinner; (Baranoski and Ayello, 2004) and thus more susceptible to the mild mechanical injury

forces of moisture, friction and trauma (*pp.* 6–7). In the dermis, there is a reduction in the number of sweat glands and in the production of sebum. These changes add vulnerability to the skin, and, when this is coupled with an increased necessity to cleanse the skin, damage will occur. Most soaps increase the skin's pH to an alkaline level, thus putting the skin's surface at risk of the effects of dehydration and altering the normal bacterial flora of the skin, which allows colonisation with more pathogenic species (Cooper and Gray, 2001).

As the skin sees a reduction in elastin fibres, it becomes more easily stretched, increasing the risk of tearing and trauma.

The most dramatic loss that the skin experiences during the ageing process is a 20% reduction in the thickness of the dermis (Bryant, 1992). This gives the skin its paper-thin appearance, commonly associated with the elderly (Kaminer and Gilchrist, 1994). This thinning of the dermis sees a reduction in the blood vessels, nerve endings and collagen, leading to a decrease in sensation, temperature control, rigidity and moisture retention (Baranoski and Ayello, 2004).

This document aims to provide clinicians with best practice guidance in five key areas of skin care for older persons, namely:

- ❖ dry, vulnerable tissue
- ❖ pressure ulcers
- ❖ incontinence
- ❖ maceration
- ❖ skin tears.

Dry, vulnerable tissue

As already said, with the ageing process, the skin undergoes a number of changes. Not only is there a significant reduction in the skin's thickness, but because of the changes within the epidermis and dermis, there is also a reduction in the number of sweat glands, leading to dryness of the skin. Once the

skin becomes dry, it is more vulnerable to splitting and cracking, exposing it to bacterial contamination, and further adding to the likelihood of breakdown from infection.



Figure 1: Dry skin

Pressure ulcers

A pressure ulcer is an area of localised damage to the skin and underlying tissue, due to the occlusion of blood vessels which leads to cell death (Collier, 1996). Pressure ulcers are believed to be caused by direct pressure, shear and friction (Allman, 1997; European Pressure Ulcer Advisory Panel [EPUAP] Review, 1999). The forces of pressure are further exacerbated by moisture, and factors relating to the individual's physical condition, such as altered mobility, poor nutritional status, medication, and underlying medical conditions. Pressure ulcers are also referred to as pressure sores, decubitus ulcers and bedsores (Beldon, 2006).

Pressure ulcers usually occur over a bony prominence, such as the sacrum, ischial tuberosity and heels. However, they can appear anywhere that tissue becomes compressed, such as under a plaster cast or splint.

Direct pressure is the major causative factor in the development of pressure ulcers. This occurs when the soft tissue of the body is compressed between a bony prominence and a hard surface. This occludes the blood supply, leading to ischaemia and tissue death.

Altering an individual's position, or nursing them on an appropriate support surface in conjunction with position changes can prevent pressure damage. If the pressure is unrelieved for a long period of time, the damage will extend to the bone. A cone-shaped ulcer is created, with the widest part of the cone close to the bone, and the narrowest on the body surface. This may be seen as a non-blanching red mark, or an area of superficial skin loss on examination (Dealey, 1994). The ulcer will then appear to deteriorate rapidly, often causing alarm — however, the damage has already been present for some time. In some situations, this deep damage may have occurred in the days prior to admission to health or social care, which is a good reason for inspection within the first six hours following admission (National Institute for Clinical Excellence [NICE], 2005). Inspection

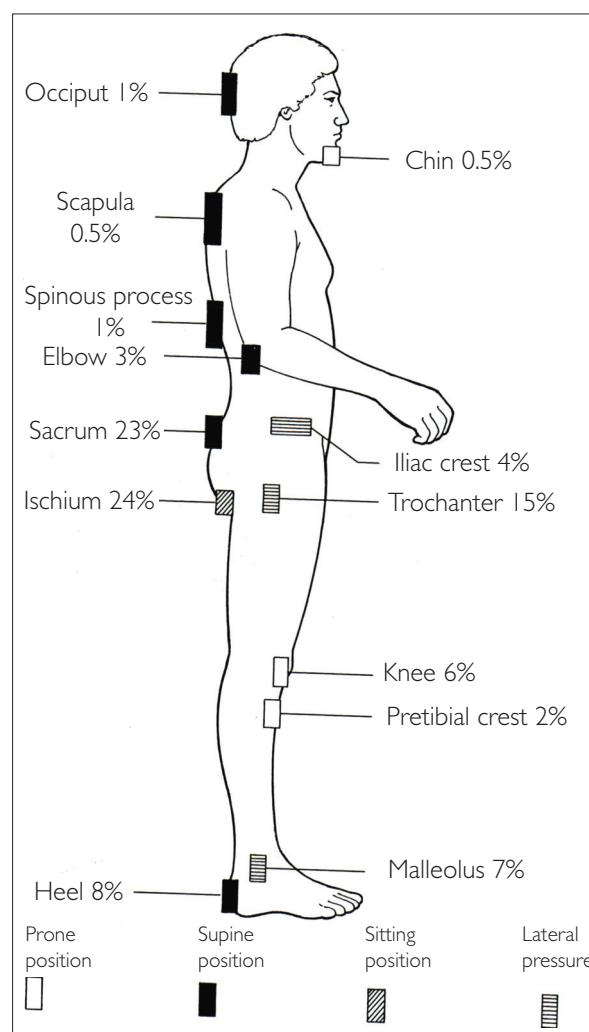


Figure 2: Pressure ulcer body map (Bryant, 1992)

is necessary to check for skin blemishes, and to initiate a risk assessment and start a pressure prevention care plan to prevent further damage.

Shear can also contribute to pressure ulcer development. This usually occurs when the skeleton and underlying tissue move down the bed under gravity, but the skin on the buttocks and back remain stuck to the same point on the mattress. This twisting and dragging effect occludes blood vessels which causes ischaemia, and usually leads to the development of more extensive tissue damage. Shear force can be further exacerbated by the presence of surface moisture through incontinence or sweating (Collier, 1996), and by friction when the skin slides over the surface with which it is in contact.

Friction occurs when two surfaces move or rub across one another, leading to superficial tissue loss. Prior to the use of lift aids, patients were manually lifted up the bed and, if the sacrum and heels were not clear of the surface, they would be dragged up causing friction to these areas. The majority of pressure ulcers to the heel are caused by a combination of both pressure and friction. Initially, they present as a blister (friction), with purple discoloration to the underlying tissue (pressure).

The effects of pressure, shear and friction can be further exacerbated by the individual's physical condition. These factors should be considered when carrying out a full assessment, including:

- ❖ general health
- ❖ age
- ❖ reduced mobility
- ❖ nutritional status
- ❖ incontinence
- ❖ certain medications.

Staff and carers involved in looking after individuals at risk, or with existing pressure ulcers may use this document to support

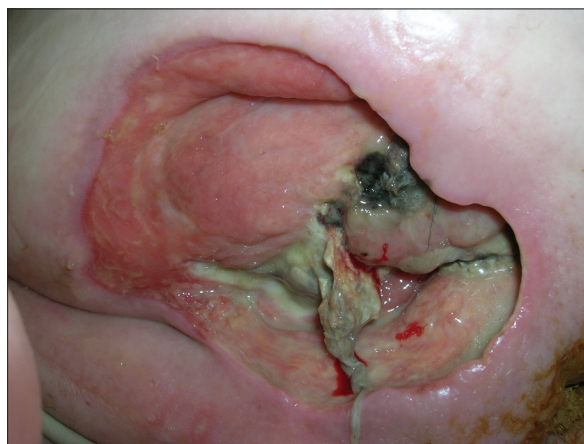


Figure 3: Pressure ulcer to the sacrum, which presents with exposed bone, slough and granulation tissue



Figure 4: Pressure ulcer to the sacrum, caused by the combined effects of pressure and shear



Figure 5: Pressure ulcer to the sacrum caused by pressure and friction. The effects of friction cause the removal of the epidermis

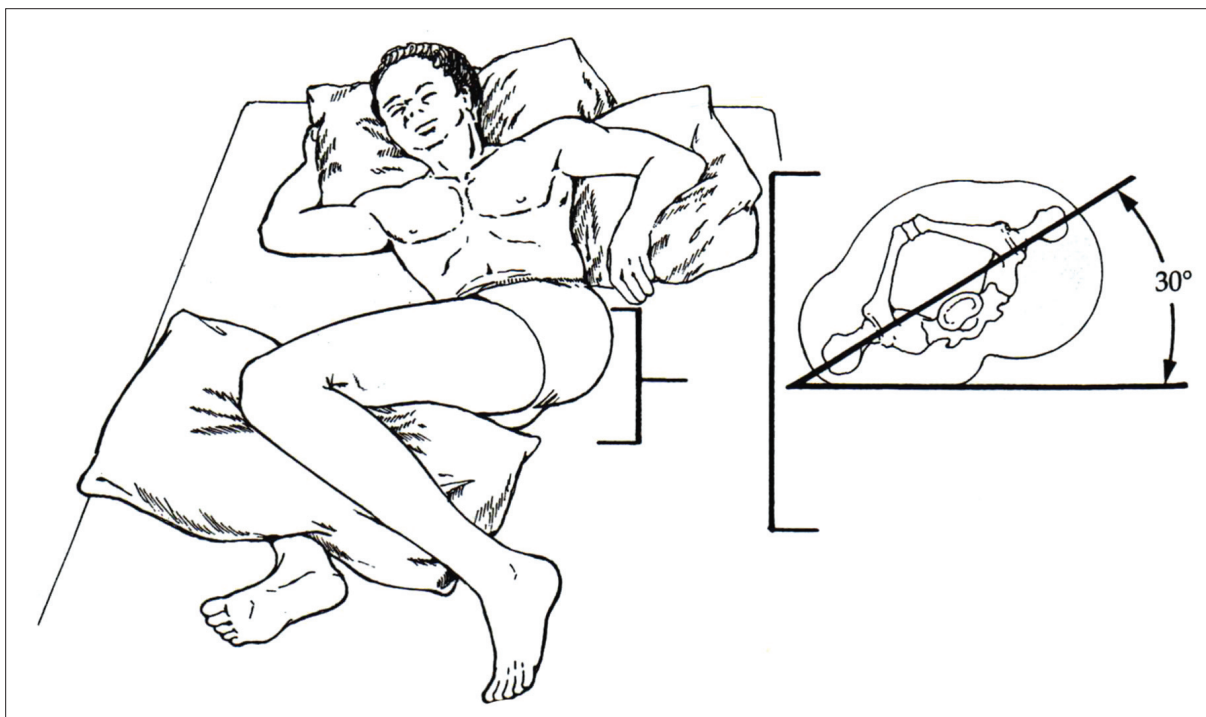


Figure 6: Thirty-degree lateral position at which pressure points are avoided (Bryant, 1992)

their decision-making to ensure that best practice is provided.

Sections relating to pressure ulcers have been amended from the BPS for the prevention and treatment/management of pressure ulcers by NHS Quality Improvement Scotland (*Best Practice Statement for the Prevention of Pressure Ulcers*, NHS Quality Improvement Scotland, 2003 updated 2005. *Best Practice statement for the Treatment/ Management of Pressure Ulcers*, NHS Quality Improvement Scotland, 2005).

Incontinence

Some studies have shown that older people are more prone to incontinence. In one study, 29% of older people cared for in a nursing home were incontinent of urine, 65% were doubly incontinent, and 6% were catheterised (Bale *et al*, 2004).

Skin has a mean pH of 5.5, which is slightly acidic. Both urine and faeces are alkaline in nature, therefore, if the individual is incontinent there is an immediate change in pH which affects the skin. Ammonia is produced when

microorganisms digest urea from the urine. Although urinary ammonia alone is not a primary irritant, urine and faeces together increase the pH around the perianal area, causing increased skin irritation (Berg, 1986; Le Lievre, 2000). This is responsible for the dermatitis excoriation seen in individuals with incontinence (Fiers, 1996).

The increase in moisture resulting from episodes of incontinence, combined with bacterial and enzymatic activity, can result in the breakdown of vulnerable skin, due to an increased friction co-efficient,



Figure 7: Incontinence skin reaction

particularly in those who are very young or elderly. For those individuals experiencing incontinence and the effects of irritation from incontinence, it is important to avoid exacerbating this further through inappropriate methods of cleansing the skin (Whittingham, 1998). A protective barrier spray or cream can be used to prevent sore skin from breaking down further. Advice on appropriate products to aid management of incontinence can be sought from your local continence advisor.

Maceration

It is accepted that a degree of moisture is essential for moist wound healing to occur (Winter, 1963). However, the correct moisture balance is difficult to define. The wound needs to be moist, but not too moist or too dry, as this may affect the rate of healing. Maceration of the skin may be due to any of the following factors:

- ❖ incontinence (see Section 3a, p. 16)
- ❖ excess moisture from sweating in hot environments and induced by waterproof chair and bed surfaces
- ❖ wound exudate
- ❖ peri-stomal exudate.

When the skin is in contact with fluid for sustained periods of time, it becomes



Figure 8: Pressure ulcer to the heel. The surrounding white tissue indicates the presence of maceration

soft and wrinkled allowing for breaks in the epidermis (White and Cutting, 2003). This softening of the tissue, along with attack from enzymes within urine, faeces and wound exudate, can cause the skin to become red, broken and painful. It is important that the skin is protected from these enzymatic onslaughts.

Skin tears

Skin tears are a common problem in the elderly because the skin becomes thin and fragile (Bryant, 1992). They usually occur on the shin and the arm, and are normally caused by trauma exacerbated by shear and friction (Morris, 2005). Due to the thin nature of the skin, skin tears tend to involve some damage to the epidermis and the dermis, and may take some time to heal. Therefore, to optimise healing, management of these wounds is best carried out at the time of injury.



Figure 9: Skin tear to a limb caused by trauma

Each of the sections that follow, contain a table showing:

- ❖ the optimum outcome
- ❖ the reason for, and how best to succeed in reaching this outcome
- ❖ how to demonstrate that best practice is being achieved.

In addition, each section identifies key points/challenges, and is supported by appendices, a table, and references (where available).

SECTION 1: MANAGEMENT OF DRY, VULNERABLE TISSUE

Key points:

- If identified as having dry, vulnerable skin, the skin should be frequently assessed.
- Regular treatment with a moisturiser will maintain skin integrity.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ All individuals are assessed to determine condition of skin (dry*, flaky, excoriated, discoloured, etc) 	<ul style="list-style-type: none"> ❖ Assessment enables the correct and suitable preventative measures to be initiated and maintained 	<ul style="list-style-type: none"> ❖ The health records of all individuals admitted to, or resident in a facility must include evidence of skin condition assessment
<ul style="list-style-type: none"> ❖ Emollient soap substitutes should be used in individuals with dry, vulnerable skin, or skin determined to be vulnerable when washing/cleansing during routine personal hygiene 	<ul style="list-style-type: none"> ❖ Washing skin with an emollient soap substitute reduces the drying effects associated with soap and water (Calianno, 2002) 	<ul style="list-style-type: none"> ❖ Health records include evidence that the appropriate emollient is used
<ul style="list-style-type: none"> ❖ Skin should be thoroughly dried to prevent further dehydration. Drying should involve a light patting and not rubbing, as rubbing may lead to abrasion and/or weakening of the skin (Britton, 2003) 	<ul style="list-style-type: none"> ❖ If the skin is left damp, it is vulnerable to excess drying from the environment and at risk from bacterial and fungal contamination 	<ul style="list-style-type: none"> ❖ Health records have evidence that all individual's skin is dried in an appropriate manner
<ul style="list-style-type: none"> ❖ All individuals with dry, vulnerable skin should have a bland moisturiser or barrier cream applied at least twice daily to prevent the adverse effects of dry skin (Appendix 1, p. 19) 	<ul style="list-style-type: none"> ❖ Application of a bland moisturiser or barrier cream rehydrates the skin and reduces the irritant effects from perfumes and additives (Bale, 2004) 	<ul style="list-style-type: none"> ❖ There is evidence within the health records that the appropriate moisturiser and amount is used (see Appendix 1, p. 19)
<ul style="list-style-type: none"> ❖ Application of the moisturiser or barrier cream should follow the direction of the body hair, and be gently smoothed into the skin (amounts recommended by the British National Formulary [BNF] are outlined in Table 1, p. 19) 	<ul style="list-style-type: none"> ❖ Rubbing the moisturiser or barrier cream into the skin can lead to irritation 	

* Dry skin in the elderly is different to underlying dermatological conditions such as eczema, psoriasis and underlying skin sensitivities. Individuals with eczema, psoriasis and underlying skin sensitivities are likely to benefit from the above guidance but should be referred for specific, appropriate treatments

SECTION 2A: PRESSURE ULCERS — RISK ASSESSMENT

Key points:

- All individuals 'at risk', or with existing pressure ulcers should be assessed.
- Inspection of identified individuals should be carried out regularly and, in between assessments, if health status changes for better or worse.
- Those individuals considered 'at risk', or those with pressure ulcers, should receive appropriate interventions.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ All individuals are assessed using both formal* (Appendix 3, p. 20) and informal** assessment tools to determine their level of risk of pressure ulcer development 	<ul style="list-style-type: none"> ❖ Risk assessment enables the correct and suitable preventative measures to be initiated and maintained ❖ Combining both formal and informal risk assessment provides early identification of the individual's level of risk 	<ul style="list-style-type: none"> ❖ The health records of all individuals admitted to, or resident in a facility must include evidence of pressure ulcer risk assessment ❖ There is evidence that all individuals with existing non-blanching erythema (Appendix 2, p. 20), or existing pressure ulcers, receive preventative interventions. This is recorded in the individual's health records ❖ Choice of assessment tool used, as this reflects the care setting ❖ There is evidence within the individual's health record that staff act on individual components of the risk assessment process, eg. poor dietary intake, incontinence
<ul style="list-style-type: none"> ❖ Individuals are reassessed at regular intervals and if their condition or treatment alters 	<ul style="list-style-type: none"> ❖ Changes within the individual's physical or mental condition can lead to an increased risk of pressure ulcer development 	<ul style="list-style-type: none"> ❖ There is evidence that individuals are reassessed in response to changes in their physical and/or mental condition ❖ There is evidence that individuals identified as being at risk receive preventative interventions which is recorded within the health records

* Formal risk assessment is the use of a recognised risk assessment tool (refer to Appendix 3, p. 20)

** Informal risk assessment, or clinical judgement, is the clinician's or carer's own clinical experience, their understanding of the client group, as well as the individual's environment and physical condition

SECTION 2B: PRESSURE ULCERS — SKIN INSPECTION

Key points:

- All individuals 'at risk', or with existing pressure ulcers should be assessed.
- Inspection of identified individuals should be carried out regularly and, in between assessments, if health status changes for better or worse.
- Those individuals identified should receive appropriate interventions.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ All individuals at risk of pressure ulcer development, or with existing pressure ulcers, will have their skin assessed as part of the whole assessment process. For those with existing pressure ulcers, a classification score will be used (see Section 2c on 'Classification', p. 12) 	<ul style="list-style-type: none"> ❖ The majority of pressure ulcers that occur are superficial in nature. Early identification of skin changes may prevent further deterioration 	<ul style="list-style-type: none"> ❖ Following assessment of risk, inspection of the skin is documented within the individual's health records
<ul style="list-style-type: none"> ❖ General visual inspection of all areas of the skin forms part of the assessment process, with special attention being paid to bony prominences (see Figure 2, p. 5). 	<ul style="list-style-type: none"> ❖ The majority of pressure ulcers that occur are located on the sacrum and heels (Clark and Watts, 1994) 	<ul style="list-style-type: none"> ❖ Findings from skin inspection indicate that further intervention is required. This, along with the subsequent action taken, is recorded in the health records ❖ Any interventions undertaken, eg. mattress, cushion, heel protectors, specialist referral must be recorded in the health records
<ul style="list-style-type: none"> ❖ Where an area of redness or skin discoloration (erythema/hyperraemia) is noted, further examination is required. See Appendix 2 (p.20) if dealing with dark skin pigmentation 	<ul style="list-style-type: none"> ❖ Further examination will indicate if the skin changes are the early stage of pressure ulcer development (Appendix 2, p. 20) 	<ul style="list-style-type: none"> ❖ Skin condition and subsequent examination is documented within the individual's health records

SECTION 2C: PRESSURE ULCERS — CLASSIFICATION

Key points:

- All individuals with pressure ulcers should have the ulcer assessed using a recognised grading scale.
- Assessment of the pressure ulcer enables appropriate treatment and intervention.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ All individuals identified with existing pressure ulcers should have their ulcer(s) assessed to determine level of tissue damage using a recognised classification tool, such as; the EPUAP Guide to Pressure Ulcer Grading (1999), the Stirling Pressure Sore Severity Scale (SPSSS) (Reid and Morrison, 1994), and the Pressure Ulcer Scale for Healing (PUSH) tool (Stotts <i>et al</i>, 2001) 	<ul style="list-style-type: none"> ❖ Grading of pressure ulcer damage enables correct and suitable treatment and intervention to be initiated and maintained 	<ul style="list-style-type: none"> ❖ The health records of all individuals identified as having an existing pressure ulcer(s) will include evidence of pressure ulcer grading from the initial identification ❖ Documented evidence within the health records of all those with existing pressure ulcers of ongoing assessment, treatment rationale and interventions taken
<ul style="list-style-type: none"> ❖ The pressure ulcer(s) should be reassessed regularly, at least weekly, or according to the individual's condition and/or if the individual's condition changes for better or worse 	<ul style="list-style-type: none"> ❖ Ongoing assessment enables an accurate and individualised treatment plan to be devised 	<ul style="list-style-type: none"> ❖ Documented evidence that the individual's condition and pressure ulcer is reassessed regularly, at least weekly, or more frequently according to the individual's condition
<ul style="list-style-type: none"> ❖ When assessing pressure ulcers, the following should be considered: cause, location, grade (according to classification tool), dimensions, wound bed appearance, exudate, pain, surrounding skin condition, and, if infection is present ❖ A complete history and physical examination of the individual should be undertaken 	<ul style="list-style-type: none"> ❖ Early identification of skin changes and/or thorough assessment of the pressure ulcer(s) should lead to appropriate treatments and interventions ❖ A pressure ulcer should be assessed considering the individual's overall physical and psychosocial health 	<ul style="list-style-type: none"> ❖ Evidence within the individual's health records that the interventions taken are based on factors identified by the history and physical examination of the individual
<ul style="list-style-type: none"> ❖ Pressure ulcers should be assessed at least weekly, or more frequently according to the individual's condition 	<ul style="list-style-type: none"> ❖ The pressure ulcer requires regular assessment to observe for improvement or deterioration in condition 	<ul style="list-style-type: none"> ❖ Health records contain evidence of regular reassessment, at least weekly, or more often according to the individual's condition

SECTION 2D: PRESSURE ULCERS — STABILISATION, POSITIONING

Key points:

- Individuals 'at risk', or with existing pressure ulcers are not left out of bed sitting for long periods.
- Acutely ill patients are returned to bed for at least one hour.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ Individuals at risk of pressure ulcer development, or with existing pressure ulcers should be suitably positioned while in bed, or up sitting, to minimise pressure, friction and shear, and the potential for further tissue damage ❖ Individuals who can move independently should be encouraged to do so ❖ Individuals who require assistance with movement should, along with associated carers, be educated in the benefits and techniques of weight distribution 	<ul style="list-style-type: none"> ❖ Short periods (up to two hours) of sustained pressure can be as damaging to the skin as long periods of sitting ❖ The time period between position changes is based on assessment of each individual and their condition ❖ Evidence suggests that individuals at risk of pressure ulcer development should not be positioned in a sitting position for more than two hours without some form of repositioning (DeFloor, 2000) ❖ Devices to assist with the repositioning of individuals are available, such as electric and non-electric profiling beds, specialist seating. Benefits from these have been recorded 	<ul style="list-style-type: none"> ❖ Health records show evidence of how frequently position changes are being carried out. ❖ Health records indicate that: <ul style="list-style-type: none"> • individuals at risk of pressure ulcer development, or with existing pressure ulcers are not positioned in a seat for more than two hours, without being repositioned. <p>Individuals who are acutely ill must be returned to bed for no less than one hour (Gebhardt and Bliss, 1994)</p> <ul style="list-style-type: none"> • when possible, the individual and/or carer are involved in the management • for individuals in bed, differing positions such as the 30-degree tilt* (Young, 2004) are used (Figure 6, p. 7) • hoist slings and sliding sheets are not left under individuals after use** • skin inspection should be carried out when altering the individual's position: these inspections can help guide decisions on the length of time between position changes
<ul style="list-style-type: none"> ❖ Individuals with specific moving and handling requirements (eg. spinal injuries) should have their needs assessed by the professional with the most relevant skills 	<ul style="list-style-type: none"> ❖ Moving and handling aids can help reposition individuals ❖ Devices to alter an individual's position, such as electric profiling beds, are of value 	<ul style="list-style-type: none"> ❖ Document the results of skin inspection and any changes made to the repositioning regime within the individual's health records ❖ Health records show referral to the appropriate individual, ie. physiotherapist, occupational therapist, specialist mobility services

* The 30-degree tilt is when the individual is placed in the laterally-inclined position, supported by pillows, with their back making a 30-degree angle with the support surface

** With associated manual handling issues concerning the removal of a hoist or sling eg. pain management, or comfort for terminally ill patients, a joint assessment by tissue viability and manual handling advisors may be appropriate

SECTION 2E: PRESSURE ULCERS — STABILISATION, MATTRESSES, CHAIRS AND CUSHIONS

Key points:

- Individuals 'at risk', or with a pressure ulcer must be cared for on an appropriate mattress.
- Individual requirements may change, based upon the condition and assessment.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ Individuals at risk of pressure ulcer development, or with a pressure ulcer(s) are not cared for solely on standard NHS mattresses*, or on basic divan mattresses; at a minimum, they are provided with a pressure-reducing foam mattress or overlay ❖ Factors to consider when deciding on which pressure-reducing equipment to purchase or hire include: <ul style="list-style-type: none"> • clinical efficacy • ease of maintenance • impact on care procedures • patient acceptability • cost • ease of use ❖ The decision to provide any pressure-reducing equipment is taken as part of a comprehensive treatment/management strategy, never as a sole intervention ❖ Individuals 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 condition ❖ Individuals at risk, or with pressure ulcers, are provided with appropriate pressure-reducing equipment when sitting in a chair or wheelchair, in addition to when they are being cared for in bed ❖ Long-term wheelchair or static seat users have their needs assessed by those with relevant specialist skills 	<ul style="list-style-type: none"> ❖ There is clear evidence that individuals at risk, or with pressure ulcers benefit from the provision of different/additional products from the standard NHS provision (Cullum <i>et al.</i> 2001; McInnes, 2004). Individuals with an existing pressure ulcer who are acutely ill, or who have restricted mobility in bed, are likely to require an air-filled mattress or overlay (which is commonly, though not exclusively, alternating) ❖ There is no clear evidence to determine which type of products are best to use in any particular situation (Cullum, 2001) ❖ Individuals identified as requiring pressure-reducing equipment (mattresses, seating and cushions) receive it as soon as possible, as delay may result in further tissue damage ❖ Further tissue damage may occur when patients are sitting in chairs (Defloor, 2000) ❖ Chairs and/or cushions designed to reduce the risk of pressure ulcer development must be suited to individual needs, in relation to height, weight, postural alignment and foot support ❖ The safety of static seats can be compromised due to changes in height, balance and lumbar support with the use of cushions (Collins, 2000) ❖ These individuals have specific requirements based on their overall physical condition, including the condition of their skin 	<ul style="list-style-type: none"> ❖ There is a clear organisational policy concerning the provision of specialist equipment for individuals at risk, or with existing pressure ulcers ❖ The policy includes guidance on when to seek advice from a specialist in the field of tissue viability ❖ The decision to use any product beyond a basic NHS mattress or divan is documented in the individual's health record ❖ Chairs and/or cushions designed to reduce the risk of pressure ulcer development must be suited to individual needs, in relation to the individual's height, weight, postural alignment and foot support ❖ The safety of static seats can be compromised due to changes in height, balance and lumbar support with the use of cushions (Collins, 2000) ❖ Document any measures being implemented in addition to the use of special mattresses and overlays ❖ Document the date of first use of specialist equipment ❖ Regular skin inspections, at least weekly or according to the individual's condition, and any subsequent actions taken/decisions made are documented in the health record ❖ The individual's health record documents the assessment of their needs in relation to wheelchair/static seat use ❖ Long-term wheelchair and static seat users' health records carry assessment records by a suitably trained specialist

* A standard NHS mattress is one without any particular pressure-reducing qualities mentioned in the product literature. In general, it is less than 15 cms thick, has a single density foam that is not castellated or cut to enhance pressure distribution, and does not have a semi-permeable two-way stretch cover

SECTION 2F: PRESSURE ULCERS — PROMOTING HEALING

Key points:

- Extensive superficial pressure ulcers, or any severe pressure ulcers, require specialist referral.
- Pressure ulcers can be life-threatening.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ Extensive superficial pressure ulcers, or any severe pressure ulcers, should be considered for referral onto specialist services, ie. tissue viability specialist nurses (TVNs) or plastic surgeon ❖ Always ensure that the medical staff in charge of an individual's care are notified of the existence and extent of pressure damage 	<ul style="list-style-type: none"> ❖ The management of individuals with large areas of superficial ulcers, or any severe ulcers, requires specialist input due to the potential for the development of life-threatening complications, eg. septicæmia 	<ul style="list-style-type: none"> ❖ Health records show that individuals with extensive superficial pressure ulceration have been referred for a specialist review, unless the individual's condition dictates otherwise ❖ Health records show that individuals with severe pressure ulceration have been referred for a specialist review unless the individual's condition dictates otherwise
<ul style="list-style-type: none"> ❖ Each individual with a pressure ulcer should have a clear plan of management outlined in their health record, including: <ul style="list-style-type: none"> ● full individual assessment ● any interventions, eg. specialist mattresses, cushions or other devices ● full assessment of the pressure ulcer, cause, location, classification, description of the wound, treatment aims and objectives, review date 	<ul style="list-style-type: none"> ❖ Pressure ulcers are likely to require a number of weeks or months to heal, depending on their severity and the individual's core morbidity, particularly ambulatory capacity and their ability to change their own position 	<ul style="list-style-type: none"> ❖ Health records include evidence that a full assessment of the pressure ulcer has been undertaken, along with a plan of management: this should include steps to ensure continuity of care between care settings. The health record should include all formal referrals, or informal discussions with specialists regarding the management of the individual
<ul style="list-style-type: none"> ❖ The management of the wound bed of a pressure ulcer should adhere to the principles of moist wound management unless the individual's condition dictates otherwise (this may be contraindicated when an individual is terminal and debridement of the pressure ulcer is not appropriate). The dressings used will not cause trauma to the wound bed 	<ul style="list-style-type: none"> ❖ Wounds managed using products which promote moist wound healing result in enhanced healing rates and reduced infection 	<ul style="list-style-type: none"> ❖ Evidence of initial and ongoing management to prevent further tissue damage should be evident ❖ Using products which promote a moist wound environment, unless contraindicated by the individual's condition, and then documenting them in the health records ❖ Do not use dressing materials which adhere to the wound bed and/or cause trauma to the wound bed

SECTION 3A: SKIN CARE — INCONTINENCE

Key points:

- Incontinence can increase the risk of skin breakdown.
- Cleansing with soap and water can increase the risk of skin breakdown.
- Appropriate measures should be taken to prevent skin breakdown.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ Individuals with incontinence should undergo a holistic nursing assessment, which includes questions regarding bladder and/or bowel function/habit ❖ Individuals with incontinence have their continence status reassessed regularly, or according to the individual's condition ❖ Continence management should be reviewed regularly ❖ Soap and water should not be used when cleansing following episodes of incontinence ❖ The use of foam cleansers is recognised as a cleansing regime for individuals with incontinence ❖ If skin is excoriated or broken, products which promote a moist wound environment should be used. Unless contraindicated by the individual's physical condition, a full assessment to ascertain the cause of the incontinence is required 	<ul style="list-style-type: none"> ❖ Urinary incontinence is a common problem affecting up to 10% of the population (Roe <i>et al.</i>, 1996). Incontinence is a symptom, not a diagnosis. Assessment is crucial, as effective management is determined by accurate diagnosis of the type of incontinence (Cheater <i>et al.</i>, 1992) ❖ Incontinence can increase an individual's risk of skin damage due to chemical irritation from both urine, and faeces and/or the inappropriate skin cleansing regime ❖ Changes in incontinence (incontinence pattern, cleansing regime used, continence aids) can contribute to the development of skin breakdown ❖ Cleansing with soap and water can contribute to the development of pressure ulcers (Cooper and Gray, 2001) ❖ Barrier creams and barrier films can be used on intact and/or broken skin to act as a barrier against further irritation from incontinence. Reapplication and use should be in accordance with manufacturers' instructions 	<ul style="list-style-type: none"> ❖ Records of all holistic nursing assessments include reference to continence status and any current treatment ❖ All nurses have access to information on assessing incontinence and associated continence care planning ❖ All nurses have access to an assessment tool ❖ Health records include evidence that regular skin inspection takes place at opportune times, eg. during assistance with personal hygiene ❖ Findings from skin inspection indicating that further action is required, along with subsequent action taken, are recorded in the individual's health records ❖ The health records document episodes of incontinence and indicate action taken, including skin cleansing products used ❖ The advice of a continence advisor is sought where continence management products are compromised by the individual's condition, or other interventions affecting quality of life, ie. pressure-reducing mattresses ❖ The individual's health records contain evidence of ongoing assessment, treatment rationale and interventions taken

SECTION 3B: SKIN CARE — MACERATION

Key points:

- Maceration of the skin can cause skin breakdown.
- Appropriate measures should be taken to prevent skin breakdown.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ Assessment should be carried out to determine the cause of maceration of skin as it may be due to any of the following factors: incontinence (see Section 3a), excess moisture, wound exudate, peri-stomal exudate 	<ul style="list-style-type: none"> ❖ Early detection of skin maceration through identification of the cause may prevent skin breakdown 	<ul style="list-style-type: none"> ❖ Health records have evidence that assessment has been carried out to determine cause of maceration
<ul style="list-style-type: none"> ❖ Areas of maceration may benefit from the application of a barrier film or cream to prevent further deterioration of skin condition 	<ul style="list-style-type: none"> ❖ Maceration is likely to occur around wounds and within skin folds which are in contact with each other ❖ Application of a barrier agent, eg. barrier film or cream may help reduce the irritant effects of maceration of healthy tissue (Bale, 2004) 	<ul style="list-style-type: none"> ❖ Assessment should include examination of areas at risk of maceration which is recorded in the individual's health records
<ul style="list-style-type: none"> ❖ When selecting a barrier film or cream, ensure that it does not affect the properties of other interventions, eg. the sticking ability of an adhesive dressing 	<ul style="list-style-type: none"> ❖ Some barrier creams will reduce the adhesion of adhesive dressings, or reduce the absorbency of continence aids 	<ul style="list-style-type: none"> ❖ Health records show which barrier agent has been used and record frequency of reapplication
<ul style="list-style-type: none"> ❖ The management of the wound should be based on a full assessment to determine why exudate is present, ie. part of normal healing or an infection is present 	<ul style="list-style-type: none"> ❖ Treatment interventions will be based upon early identification of the cause of wound exudate 	<ul style="list-style-type: none"> ❖ Evidence of initial and ongoing management to prevent further tissue damage should be present, and recorded within the individual's health records ❖ Record of the volume and viscosity of exudate and its quality, eg. haemopurulent, serosanguinous, etc., along with notes to indicate the reason for its presence, eg. infection, cardiac failure, limb swelling, etc. are recorded in the notes of patients with maceration

SECTION 4: SKIN TEARS

Key points:

- If treated quickly, re-laying a skin tear flap can encourage wound healing.
- Appropriate measures should be taken to manage skin tears.

Statement	Reason for statement	How to demonstrate statement is being achieved
<ul style="list-style-type: none"> ❖ Assessment should be carried out to determine the cause of the skin tear and this should be removed to prevent further injury 	<ul style="list-style-type: none"> ❖ Early detection of skin trauma through identification of the cause may prevent further skin breakdown (Baronoski, 2003) 	<ul style="list-style-type: none"> ❖ Health records have evidence that assessment has been carried out to determine the cause of the skin tear, and that this has been removed
<ul style="list-style-type: none"> ❖ The skin tear should be classified (Appendix 4, p. 21) according to the degree of tissue damage 	<ul style="list-style-type: none"> ❖ Classification of the damage enables correct and suitable treatment and intervention to be initiated and maintained 	<ul style="list-style-type: none"> ❖ Health records show that individuals with a skin tear have had a full assessment and that a plan of management has been developed, which incorporates review of the wound and continuity of care between different care settings
<ul style="list-style-type: none"> ❖ Management of skin tears should consider: <ul style="list-style-type: none"> • stopping bleeding if it is persistent • preventing infection • minimising pain and discomfort • recovering skin integrity 	<ul style="list-style-type: none"> ❖ Wounds which are managed following the principles of moist wound healing, result in enhanced healing rates and reduced infection rates 	<ul style="list-style-type: none"> ❖ Evidence of initial and ongoing management to prevent further tissue damage should be recorded within the individual's health records
<ul style="list-style-type: none"> ❖ Management of wounds involves maintaining skin integrity: <ul style="list-style-type: none"> • if the skin tear has dried out, it should be removed using a sterile technique • if the skin flap is still viable, cleanse with warm, saline or tap water, and roll the flap back into place to obtain optimum skin cover • if the skin tear is viable, secure using one of the suggested methods: adhesive wound closure strips, skin glue, silicone on-adhesive dressings. However, the method of skin application will still require the application of an appropriate secondary dressing to provide further protection 		<ul style="list-style-type: none"> ❖ Treatment interventions and a plan of care should be evident within the individual's health records

APPENDIX 1: DEFINITIONS OF TOPICAL SKIN APPLICATIONS

Emollients: also known as moisturisers. These are grease-based substances which, when applied to the skin, either trap water in or allow water to be pulled from the dermis to the epidermis (Loden, 2003). Emollients can be used as wash products in the form of soap substitutes and bath oils. Once washing is complete, emollients can be applied to the skin in the form of lotions, creams or ointments to seal water into the skin (Penzer and Burr, 2005).

Lotions: these are the lightest and least greasy emollients. They are less effective as they contain less oil.

Creams: these have a higher oil content than lotions, allowing the oil to sink into the skin. They are good for daytime use.

Ointments: these have the highest oil content and are very greasy. They can leave the skin looking shiny and clothes greasy. However, if the skin is very dry, ointments should be used and may be best applied at night.

TABLE 1: QUANTITIES OF DERMATOLOGICAL PREPARATIONS PRESCRIBED FOR SPECIFIC AREAS OF THE BODY

	Creams and ointments	Lotions
Face	15–30 g	100 ml
Both hands	25–5 g	200 ml
Scalp	50–100 g	200 ml
Both arms or legs	100–200 g	200 ml
Trunk	400 g	500 ml
Groins and genitalia	15–25 g	100 ml

APPENDIX 2: SKIN EXAMINATION

Further examination of erythema or skin discoloration should include the following steps:

- ❖ Apply light finger pressure to the area of erythema or discoloration for 10 seconds.
- ❖ Release the pressure. If the area is white and then returns to its original colour, the area probably has an adequate blood supply. Observation should continue and preventative strategies should be employed.
- ❖ If, on release of pressure, the area remains the same colour as before pressure was applied, it is an indication of the beginning of pressure ulcer development and preventative strategies should be employed immediately.
- ❖ If there is an alteration in the skin colour (redness, purple or black), increased heat or swelling, it may imply underlying tissue breakdown. Frequency of assessment should be increased and preventative strategies should be employed.
- ❖ With dark skin pigmentation, pressure ulcer development will be indicated by areas where there is localised heat, or where there is damage, coolness, purple/black discoloration, localised oedema and induration.

APPENDIX 3: FORMAL RISK ASSESSMENT SCALES, EXAMPLES

Braden Scale	Bergstrom N, Braden BJ, Laguzza A, Holman V (1987) The Braden scale for predicting pressure sore risk. <i>Nurs Res</i> 36 (4): 205–10
Knoll scale	Towey AP, Erland SM (1988) Validity and reliability of an assessment tool for pressure ulcer risk. <i>Decubitus</i> 1 (2): 40–8
Norton Scale	Norton D, McLaren R, Exton-Smith AN (1962) <i>An investigation of geriatric nursing problems in hospital</i> . The National Corporation for the Care of Old People, London
Pressure Sore Prediction Score	Lowthian P (1989) Identifying and protecting patients who may get pressure sores. <i>Nurs Standard</i> 4 (4): 26–9
Waterlow Risk Assessment Score	Waterlow J (1988) The Waterlow card for the prevention and management of pressure sores: towards a pocket policy. <i>Care Science and Practice</i> 6 (1): 8–12
Pressure Ulcer Risk Assessment Tool (PURAT)	Wicks G (2006) PURAT: is clinical judgement an effective alternative? <i>Wounds UK</i> 2 (2): 14–24
Pressure ulcer risk assessment scales for children: Bedi, Cockett, Garvin, Braden Q, Pickersgill, the Pattoid pressure scoring system, the paediatric pressure sore/skin damage risk assessment (Waterlow)	Wilcock J (2006) Pressure ulcer risk assessment in children. In: White R, Denyer J, eds. <i>Paediatric Skin and Wound Care</i> . Wounds UK, Aberdeen: 79–86

APPENDIX 4: PRESSURE ULCER CLASSIFICATION SCALES, EXAMPLES

European Pressure Ulcer Advisory Panel (EPUAP)	The management of pressure ulcers in primary and secondary care. NICE Clinical Guidelines, September 2005
Pressure ulcers	<i>Best Practice Statement for Treatment/ Management of Pressure Ulcers.</i> NHS Quality Improvement Scotland, March 2005
Stirling Pressure Sore Severity Scale (SPSSS)	Reid J, Morrison M (1994) Towards a consensus classification of pressure sores. <i>J Wound Care</i> 3 (3): 157–60
Pressure Ulcer Scale for Healing (PUSH)	Stotts NA, Rodeheaver GT, Thomas DR, Frantz RA et al (2001) An instrument to measure healing in pressure ulcers: development and validation of the pressure ulcer scale for healing (PUSH). <i>Journals of Gerontology Series: A Biological Sciences and Medical Sciences</i> 56 (12): 795

APPENDIX 5: SKIN TEAR CLASSIFICATION SYSTEM

Category I	Without tissue loss	In a linear or flap type skin tear. The epidermis and dermis have been pulled apart, as if an incision has been made
Category II	Partial skin loss 25% or less 25% or more	Where part of the epidermis is lost. This can be categorised as less than 25% or more than 25% tissue loss
Category III	Full-thickness skin loss	The epidermal flap or tissue is absent in this type of skin tear

(Source: Payne and Martin, 1993)

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NOTES