Pressure ulcer prevention in care home settings

Abstract
Pressure ulcer prevention in the care home setting can be challenging and is often compromised by a lack of access to education and resources. There are measures that have been shown to consistently improve outcomes in pressure ulcer prevention including assessment of the patient and their individual risks, delivery of a consistent plan of care that meets patients’ needs, and regular evaluation to identify shortfalls. In addition, there should be a robust approach to investigating events that lead to a person developing a pressure ulcer and that information should be used to improve future practice. Pressure ulcer prevention in care homes is achievable and nurses should all be aware of the necessary measures detailed in this article.

Keywords
care homes, older people, pressure ulcers, pressure ulcer prevention, tissue viability

Aim and intended learning outcomes
The aim of this article is to support readers to make judgements about risk and evidence-based decisions about pressure ulcer prevention.

After reading this article and completing the time out activities, you should be able to:
» Describe how patients develop a profile of risks associated with pressure ulcer formation.
» Understand the international classification system used for pressure ulcer identification.
» Discuss how pressure ulcer prevention activities can be integrated into your practice.
» Describe the mechanisms for monitoring the effectiveness of pressure ulcer prevention in your organisation.

Introduction
Pressure ulcers are defined as an area of local tissue damage that may extend through all layers of soft tissue, usually over a bony prominence. They are caused by direct pressure, shear/friction or a combination of these forces (National Pressure Ulcer Advisory Panel (NPUAP) et al 2014). Over the past ten years, awareness of pressure ulcers and their effect on quality of life has increased (Gibbons et al 2006, Dealey et al 2012a). Literature has suggested that 95% of pressure ulcers are preventable (Hibbs 1998).

More recently, clinical audit and research have suggested that this statistic may be an overestimate, with a belief that perhaps only 50% of pressure ulcers can be avoided (Downie et al 2013).

Every pressure ulcer has a tangible effect on the patient, this could include pain, the need for additional nursing interventions, damage to their sense of self leading to depression, or social isolation due to wound symptoms such as odour. The drive to prevent harm is at the forefront of the argument for investment of time and money in pressure ulcer prevention.

Every setting where care is delivered, whether home, hospital or care home, faces challenges in delivering pressure ulcer prevention. There is increasing scrutiny of care homes and their pressure ulcer incidence (Social Care Institute for Excellence 2012). With this scrutiny comes a greater awareness of the need to have clear procedures for pressure ulcer prevention and management, and for documenting and reporting their incidence.

There is increasing evidence to show how the care home sector and NHS providers can work together to improve outcomes for people at risk of pressure ulcers. Love Great Skin (NHS Midlands and East 2013) and MI SKIN (Morris-Thompson 2014) are two examples of the campaigns and programmes of improvement that the care home sector has engaged in, many of which are multidisciplinary, multiagency and collaborative.
TIME OUT 1

Collaborative prevention
Are you aware of any collaborative projects that your organisation is involved in? Take some time to look at the acute and community NHS providers and clinical commissioning group websites in your local area to see what pressure ulcer prevention initiatives your organisation is already a part of or if there is one that it could sign up to.

Who is at risk?
Not every person is at significant risk of developing a pressure ulcer. This is because risk is made up of so many different elements. In older populations, there are some common characteristics that predispose people to higher pressure ulcer risk. Impaired mobility, diabetes, peripheral vascular disease and incontinence appear to be the most prevalent contributing factors (Coleman et al 2013).

A number of different risk assessment tools are available to help staff to identify people who are at greatest risk, but these must be used in conjunction with sound professional judgement (National Institute for Health and Care Excellence 2014). Moore and Cowman (2014) and Qaseem et al (2015) considered the available evidence for a range of assessment tools, three of which are highlighted in Table 1.

TIME OUT 2

Risk assessment tools
Do you use a pressure ulcer risk assessment tool in your setting? If so, use it to assess the patient in the following case study. If not, find out what tool is used most often in your locality and try to use that, examples may include Waterlow, Norton or Braden. How does the use of a tool compare to what you think about this patient’s risk? Are there any risks that you intuitively take into account that you think a tool should alert the practitioner to? Would you describe this patient as being at low or high risk of pressure ulcer development?

Mrs Johnson is 88 years old and has advanced dementia. She is unable to engage in any of her own care needs. She is calm and compliant but is unable to communicate. She has no other medical conditions but is doubly incontinent, immobile and had some small pressure ulcers on her buttocks in the past.

The SSKIN bundle has been widely adopted in the UK health and social care sectors and is increasingly used in social care settings. An additional component, skin assessment, can be added so the acronym becomes SSKIN as a reminder that ongoing assessment of a patient’s skin while delivering care will help to determine the required frequency of care delivery. For example, if a person’s skin is red or is marked after being moved at four-hourly intervals, they may need to have three-hourly position changes alongside delivery of all aspects of the SSKIN bundle on each occasion. The SSKIN bundle is available to help staff to identify people who are at greatest risk, but these must be used in conjunction with sound professional judgement (National Institute for Health and Care Excellence 2014). Moore and Cowman (2014) and Qaseem et al (2015) considered the available evidence for a range of assessment tools, three of which are highlighted in Table 1.

The most important point about any assessment tool is what you do with the information it helps you to gather. Moore and Cowman (2014) suggested that assessment tools might be no better than a health professional’s own judgement. This assertion relies on that member of staff having sufficient knowledge and skill to gather and interpret relevant information and understand its importance. Indeed, it is possible that overreliance on risk assessment tools may lead the professional to ignore risks that are not explicitly mentioned in the tool. This would fail to encourage more detailed enquiry as to the person’s needs. Just because a person has a high level of risk according to a tool, it does not mean that prevention of pressure ulcer development is impossible. Using outcomes from assessment activities to plan and deliver the care that a person needs is the most important use of risk assessment.

Care bundles in the care home
The care plan that follows a risk assessment should focus on four components associated with pressure ulcer prevention (Gibbons et al 2006):

» Surface.
» Keep moving.
» Incontinence.
» Nutrition.

This SSKIN acronym reminds staff what to consider as part of their care plan. An additional component, skin assessment, can be added so the acronym becomes SSKIN as a reminder that ongoing assessment of a patient’s skin while delivering care will help to determine the required frequency of care delivery. For example, if a person’s skin is red or is marked after being moved at four-hourly intervals, they may need to have three-hourly position changes alongside delivery of all aspects of the SSKIN bundle on each occasion. The SSKIN bundle has been widely adopted in the UK health and social care sectors and is increasingly used in social care settings.

### TABLE 1. Evidence for use of pressure ulcer risk assessment tools

<table>
<thead>
<tr>
<th>Risk assessment tool</th>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterlow (2005)</td>
<td>» Encourages detailed consideration of a person’s co-morbidities</td>
<td>» Increased complexity may lead to difficulty in completion</td>
</tr>
<tr>
<td></td>
<td>» Provides guidance on interventions</td>
<td>» Subjectivity in assignment of scores for some subscales</td>
</tr>
<tr>
<td>Braden (Braden and Bergstrom 1987)</td>
<td>» Descriptive statements in subscales to provide guidance on appropriate scores</td>
<td>» Subjectivity in how statements are interpreted</td>
</tr>
<tr>
<td></td>
<td>» Considers functional capability</td>
<td></td>
</tr>
<tr>
<td>Norton (Norton et al 1975)</td>
<td>» Simple format</td>
<td>» Subjectivity in assignment of scores</td>
</tr>
</tbody>
</table>

FURTHER RESOURCES
Free online resources for campaigns of improvement are available at: nhs.stopthepressure.co.uk/care-homes.html
care as services become more collaborative (McCoulough 2016).

**SSKIN bundle**

**Skin assessment**

There are a few common sites where pressure ulcers occur. These are related to the application of pressure and shear to the skin and soft tissues in a variety of different positions. Figure 1 illustrates these sites. Early signs of tissue damage may include marking or indentation in the skin, blanching areas of redness and localised warmth or pain (Gorecki et al 2009). If a pressure ulcer does develop, it should be categorised according to the NPUAP et al (2014) classification system (Table 2). The most superficial damage is considered to be Stage I and is identified by non-blanching redness of intact skin. The amount of tissue loss becomes deeper with every stage.

**TIME OUT 3**

**Pressure ulcer classification**

Match the following definition with the pressure ulcer stage as shown in Table 2:

A. Deep ulcer extending to muscle or bone.
B. Non-blanching erythema with unbroken skin.
C. Superficial skin loss that does not extend beyond the dermis.
D. Full thickness skin loss that does not extend into muscle tissue.

After you have noted down your responses check your answers on page 35.

**Surface**

It is important to pay attention to the surfaces that people are in regular contact with. Many of the people who are at risk of pressure ulcer development spend most of the time in a seated or lying position. The mattress, chair dimensions, seat cushions and foot stool they use can all cause pressure and shear in the skin and soft tissues generating tissue damage. Modern support surfaces for people with higher risk of pressure ulcer development may be helpful in reducing the effect of these forces (NPUAP et al 2014). These may include dynamic or static air systems or high specification foam or gel.

There is limited evidence that any one type of surface is better than another in all circumstances for all people (McInnes et al 2015). Instead, surfaces should be selected based on a person’s level of mobility, comfort, skin microclimate – perspiration, continence and heat – and any specific needs related to risks associated with amputation, diabetes, peripheral vascular disease, spinal deformity,
### TABLE 2. International pressure ulcer classification system

<table>
<thead>
<tr>
<th>Classification</th>
<th>Features</th>
</tr>
</thead>
</table>
| **Category/Stage I:** non-blanchable erythema | » Intact skin with non-blanchable redness of a localised area, usually over a bony prominence.  
» Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area.  
» The area may be painful, firm, soft, warmer or cooler than adjacent tissue.  
» This category/stage may be difficult to detect in individuals with dark skin tones.  
» This stage may indicate ‘at risk’ individuals. |
| **Category/Stage II:** partial-thickness skin loss | » Partial-thickness loss of dermis presenting as a shallow open ulcer with a red or pink wound bed, without slough.  
» The ulcer may also present as an intact, open or ruptured serum-filled or serosanguineous blister.  
» The ulcer presents as a shiny or dry shallow ulcer without slough or bruising (bruising indicates suspected deep tissue injury).  
» This category/stage should not be used to describe skin tears, tape burns, incontinence-associated dermatitis, maceration or excoriation. |
| **Category/Stage III:** full-thickness skin loss | » Subcutaneous fat may be visible but bone, tendon and muscle are not exposed.  
» Slough may be present but does not obscure the depth of tissue loss.  
» The pressure ulcer may include undermining and tunneling.  
» The depth of a Category/Stage III pressure ulcer varies by anatomical location.  
» The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and Category/Stage III ulcers in these areas can be shallow.  
» Areas of significant adiposity can develop extremely deep Category/Stage III pressure ulcers.  
» Bone and tendon are not directly palpable. |
| **Category/Stage IV:** full-thickness tissue loss | » Full-thickness tissue loss with exposed bone, tendon or muscle.  
» Slough or eschar may be present.  
» The pressure ulcer often includes undermining and tunneling.  
» The depth of a Category/Stage IV pressure ulcer varies by anatomical location.  
» The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and Category/Stage IV ulcers here can be shallow.  
» Category/Stage IV ulcers can extend into muscle and supporting structures (for example fascia, tendon or joint capsule), making osteomyelitis or osteitis likely to occur.  
» Exposed bone or muscle is visible or directly palpable. |
| Unstageable: full-thickness skin or tissue loss | » Full-thickness tissue loss in which the depth of the ulcer is completely obscured by slough (yellow, tan, grey, green or brown) and eschar (tan, brown or black) in the wound bed.  
» Until enough slough and eschar is removed to expose the base of the wound, its true depth cannot be determined, but it will be either a Category/Stage III or IV.  
» Stable (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as ‘the body’s natural (biological) cover’ and should not be removed. |
| Suspected deep tissue injury: depth unknown | » Purple or maroon localised area of discoloured, intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear.  
» The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler compared with adjacent tissue.  
» Deep tissue injury may be difficult to detect in individuals with dark skin tones.  
» Evolution may include a thin blister over a dark wound bed.  
» The wound may further evolve and become covered by thin eschar.  
» Evolution may be rapid, exposing additional layers of tissue even with optimal treatment. |

(National Pressure Ulcer Advisory Panel et al 2014)
body dimensions and weight (Gefen 2011). Considering the person’s needs will help determine what is most appropriate. For example, a person who spends most of the time in a chair without a specialist support surface or is independently mobile is unlikely to need a dynamic air mattress on their bed.

**TIME OUT 4**

**Surface audit**
For each person in your clinical setting identify which of the following are used routinely as part of their care:
- Pressure-relieving mattress.
- Pressure-relieving cushion.
- Pressure-relieving heel protectors.
How many people have a pressure-relieving mattress but not a cushion?
How many people have heel protectors that are not being used?
How many people have a piece of equipment that they do not find comfortable to use?

**Keep moving**
Regardless of the support surface a person is using, mobilisation and effective repositioning are central activities for relieving pressure and reducing shear forces. Where possible, a person should be prompted to reposition independently. This may require the use of aids and will require consideration of the ergonomic design features of support surfaces such as chairs, for example height, width, depth of the seat, presence of arms and the stability of the cushion. Where this is not possible, it is important that the person is moved in a way that limits shear, for example using slide sheets when repositioning someone in bed.

It is also important that their position is varied and that loading directly over any single bony prominence is limited over the course of the day. This means that people in bed could be supported in 30° tilts using cushions or wedges (Figure 2) as opposed to 90° tilts where body weight is concentrated over the hips (Sachse et al 1998, Defloor 2000).

The person should be able to maintain a good seated posture comfortably, although additional cushions may be required to achieve this or, alternatively, special seating such as reclining chairs could be used (Defloor and Grypdonck 1999).

**TIME OUT 5**

**Repositioning prompts**
Consider how you might be able to set a reminder to reposition people in a seated position every hour. This could be a reminder for people to reposition themselves or for staff to help them. It could be done using a mobile phone alarm or perhaps be connected with the timing of a regular television or radio programme. Try this and then consider how you might improve your approach.

**Figure 2. Repositioning**

- Supine
- 30° tilt using wedges or pillows
- 90° tilt with body weight over the hips

Online archive
For related information, visit nursingolderpeople.com and search using the keywords
Incontinence
While it does not cause pressure ulceration, incontinence may lead to impaired skin integrity, which makes a person more vulnerable to pressure ulcer development (NPUAP et al 2014). Effective continence management and prevention of incontinence-associated dermatitis and moisture lesions are, therefore, important for skin health. If a person has episodes of incontinence, effective skin cleansing using a soap substitute and application of a barrier film should be achieved (Beeckman et al 2009). However, skin care must form part of the continence management approach and must not be considered in isolation (Getliffe and Dolman 2007). This means that toileting regimens, continence management aids, for example continence pads, and, where appropriate, medications, should be incorporated into the person’s whole plan of care.

TIME OUT 6
Continence care
Answer the following questions by selecting true or false.
1. People who use continence pads should not be offered the opportunity to use a toilet. True ☐ False ☐
2. People should use soap and water to wash with after an episode of incontinence. True ☐ False ☐
3. If used appropriately, barrier films may protect skin that is vulnerable to incontinence-associated dermatitis. True ☐ False ☐

Having considered the answers to these questions, what is written in the plan of care for continence management for people you care for? Does it include these elements? Check your answers on page 35.

Nutrition
The guidelines from NPUAP et al (2014) highlight the essential role that nutritional management plays. Assessment of the person’s nutritional state should ensure that they have sufficient energy for metabolism as well as protein, fluid and micronutrients to be able to maintain and repair tissues.

Using nutritional supplements where a patient’s normal dietary intake is insufficient may be helpful to achieve an adequate supply of these nutrients (Stratton et al 2005). However, many people in care homes may simply need encouragement to eat (Simmons et al 2001), practical support with the mechanics of eating (Simmons et al 2008), or social engagement that would usually be accompanied with a meal or hot drink (Nijs et al 2006). It is also important to recognise that food and fluid intake patterns change as we age. Large meals are often not tolerable for older people. More frequent smaller meals and snacks that accompany smaller volumes of fluid intake are often more acceptable to people as they age (Barton et al 2000).

TIME OUT 7
Nutritional care
Consider the following case study:
Mrs Smith rarely finishes any of her three meals a day and often states that there is too much for her to eat. She worries...
Documenting care

Once the assessment of a person’s risk and plan of care have been decided, it is important that everyone providing care for the person understands their needs. Of equal importance is ensuring that the delivery of care is evidenced (NPUAP et al 2014). This helps to ensure that everyone is aware of what care was delivered and when. It also helps with organisational monitoring of care delivery and care quality outcomes. If a person develops a pressure ulcer while receiving care in your setting, good documentation will help you to investigate how and why that pressure ulcer developed and learn lessons to help prevent future incidents (Dealey et al 2012b).

TIME OUT 8

Pressure ulcer investigation

Review your local policies and procedures and write down the steps in reporting and investigating pressure ulcer incidents. If you have no local policy, look to your local clinical commissioning group to determine what expectations they have for people in care homes.

Conclusion

Pressure ulcer prevention for people in care homes is not impossible but it does require systematic care planning based on a sound understanding of risk. Some people in care home settings are at higher risk of developing pressure ulcers than others and only by regularly assessing each person is it possible to determine their needs. If their care can be planned with the SSKIN bundle in mind, it is more likely that the key components of good practice for pressure ulcer prevention will be achieved and the chance of developing a pressure ulcer will be reduced.

Teams that regularly reflect on their own practice and constantly strive for improvement will be able to identify potential shortfalls before people in their care ever develop a pressure ulcer.

TIME OUT 9

Reflection

Now that you have completed the article, you may want to complete the questionnaire on page 37 and write a reflective account as part of your revalidation.

Answers to time out 3
A. Stage IV, B. Stage I, C. Stage II, D. Stage III

Answers to time out 6
1. False, 2. False, 3. True


(Last accessed: 28 February 2017)


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Pressure ulcer prevention in care home settings

TEST YOUR KNOWLEDGE BY COMPLETING THIS SELF-ASSESSMENT QUESTIONNAIRE

1. According to research, what percentage of pressure ulcers is preventable?
   a) 25
   b) 50
   c) 70
   d) 90

2. Which of the following is not a risk factor for pressure ulcer development?
   a) Diabetes
   b) Peripheral vascular disease
   c) Incontinence
   d) Female gender

3. What does the ‘N’ in SSKIN stand for?
   a) Nurse
   b) Nutrition
   c) Notification
   d) Nursing home

4. Which category/stage in the International Pressure Ulcer Classification System represents partial thickness skin loss?
   a) Category/stage I
   b) Category/stage II
   c) Category/stage III
   d) Category/stage IV

5. Which of the following is a common site of pressure ulcer development in a person in the seated position?
   a) Ear
   b) Back of head
   c) Sacrum
   d) Toes

6. Which feature indicates a category/stage I pressure ulcer?
   a) Visible subcutaneous fat
   b) Intact skin with erythema
   c) Slough
   d) Eschar

7. Which of the following statements is true?
   a) Pressure ulcers have minimal effect on quality of life
   b) Pressure-relieving surfaces should be selected based on a one-size-fits-all approach
   c) Impaired mobility is a risk factor for pressure ulcer development
   d) Pressure ulcers are not preventable

8. To what angle could cushions or wedges be tilted to support people in bed?
   a) 30°
   b) 45°
   c) 60°
   d) 90°

9. In people with dark skin tone:
   a) Category/stage I pressure ulcers can be difficult to detect
   b) Deep tissue injury can be difficult to detect
   c) Skin blanching may not be visible
   d) All of the above

10. One strength of the Waterlow risk assessment tool is:
    a) Its simple format
    b) It encourages detailed consideration of co-morbidities
    c) Its subjectivity in assignment of scores
    d) Its complex format

This activity has taken me minutes/hours to complete. Now that I have read this article and completed this assessment, I think my knowledge is:

Excellent □ Good □ Satisfactory □ Unsatisfactory □ Poor □

As a result of this I intend to:
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________

How to complete this assessment

This self-assessment questionnaire will help to test your knowledge. It comprises ten multiple choice questions that are broadly linked to the previous article. There is one correct answer to each question.

- You can test your subject knowledge by attempting the questions before reading the article, and then go back over them to see if you would answer any differently.
- You might like to read the article before trying the questions. The answers will be published in the next issue. When you have completed the questionnaire, cut out this page and add it to your professional portfolio. You can record the amount of time it has taken you to complete it.

You may want to write a reflective account.
Visit journals.rcni.com/r/nop-reflective-account
Go online to do this self-assessment questionnaire and you can save it to your RCN portfolio to help meet your revalidation requirements.
Go to rcni.com/revalidation

This self-assessment questionnaire was compiled by Lisa Berry
The answers to this questionnaire will be published in the next issue
The answers to SAQ 1 on urinary tract infections in older people, which was published in the March issue, are:
1. b, 2, c, 3, d, 4, b, 5, c, 6, c, 7, a, 8, d, 9, d, 10, b.