THE MANAGEMENT OF PRESSURE ULCERS

Jackie Stephen-Haynes, Rosie Callaghan, Fiona Downie, Heidi Guy, Jacqui Fletcher
# CONTENTS

Wound digest

*A look at the latest research on pressure ulcers* $4

A new debridement technique tested on pressure ulcers

*Jackie Stephen-Haynes, Rosie Callaghan* $6

Latest developments in the grading of pressure ulcers

*Fiona Downie, Heidi Guy* $13

Surveying national pressure ulcer occurrence

*Jacqui Fletcher* $18

---

## INTRODUCTION

It seems that, despite all the recent effort and resources that have gone into preventing pressure ulcers, we still have many issues that require discussion, debate and standardisation. The articles in this supplement highlight the discrepancies in practice and the complexity of reaching consensus about pressure ulcers, as well as taking this forward into day-to-day practice.

As our knowledge increases, it can appear that what we are dealing with becomes more complex and bewildering. When a wound on a bottom was just called a bed sore, it was fairly straightforward — now not only do we need to be sure that it constitutes pressure-related damage, but we also have to ascertain the full extent of that damage so that we can correctly categorise it, thereby avoiding mountains of paperwork and possible financial penalties. I am not saying that we should abandon all that we know — that would be foolish. I am simply suggesting that we need to get some fundamental principles in place, which allow clinicians who work with patients on a daily basis to be able to deliver and record pressure damage in a simple way.

This supplement precedes the annual Wounds UK conference in Harrogate (12–14 November) where the Wounds UK Great Debate will this year focus on the question: ‘Should all pressure ulcers be reported?’ This provides a great opportunity for these issues to be discussed and fed back to both individual organisations and the Department of Health. It is almost a year now since the consensus meeting held by the Tissue Viability Society (TVS) in Birmingham and while some things have changed, other challenges have emerged in their place — so let’s take the opportunity to revisit some of the issues.

*Jacqui Fletcher, September 2012*
SELECTED PAPERS OF INTEREST

1. Using Temperature of Pressure-related Intact Discolored Areas of Skin to Detect Deep Tissue Injury: An Observational, Retrospective, Correlational Study

2. Potentially modifiable risk factors among veterans with spinal cord injury hospitalized for severe pressure ulcers: a descriptive study

Wound Digest

In each Wounds UK supplement, the digest summarises, in turn, recent key papers in the areas of leg ulcers, moisture lesions, pressure ulcers and complex wounds.

1. Using Temperature of Pressure-related Intact Discolored Areas of Skin to Detect Deep Tissue Injury: An Observational, Retrospective, Correlational Study

Readability ✔ ✔ ✔ ✔  
Relevance to daily practice ✔ ✔ ✔ ✔  
Novelty factor ✔ ✔ ✔ ✔  

Although the validity of the definitions are not established, pressure-related intact discoloured areas of skin (PRIDAS) are generally described as an area of non-blanching erythema (Stage 1 pressure ulcer) or deep tissue injury (DTI). 

Studies and forensic observations have shown that skin temperature may be an indicator of nonviable tissue. 

This observational, retrospective, correlational study investigated the significance of temperature differences between PRIDAS, adjacent intact skin and the development of necrosis in 85 patients. 

Data from all acute care hospital patients with an observed PRIDAS who had received a skin integrity consultation, were abstracted to ascertain if PRIDAS temperature correlated with skin necrosis after 7–14 days.

Skin temperatures were measured using a commercial, hand-held, infrared thermography camera, and the presence or absence of capillary refill was documented.

After adjusting for patient age, skin colour, and PRIDAS site, the cool PRIDAS were 31.8 times more likely to progress to necrosis than the warm PRIDAS. 

The current NPUAP definition of a stage 1 pressure ulcer needs to be amended to reflect the strong relationship to development of deep tissue injury.


2. Potentially modifiable risk factors among veterans with spinal cord injury hospitalized for severe pressure ulcers: a descriptive study

Readability ✔ ✔ ✔ ✔  
Relevance to daily practice ✔ ✔ ✔ ✔  
Novelty factor ✔ ✔ ✔ ✔  

Pressure ulcers (PUs) are a complication of spinal cord injury. Co-morbid conditions increase PU risk. 

Little is known about co-morbidities, health beliefs, risk, protective behaviors, and readiness to improve skin care in people with spinal cord injury (SCI). 

This study looked at the potentially modifiable medical and behavioural risk factors among military veterans with SCI and severe (grade 3 or 4) PUs.

This was a cross-sectional observational design study in six Veterans Affairs spinal cord injury centres with 148 veterans hospitalised for PUs.

Outcome measures included PU risk, skin protection behaviors, health beliefs, locus of control and skin worsening.

The results showed that most patients’ ulcers were grade 4 (73%) and that approximately half had more than two. Participants displayed a mean of 6.7 co-morbid conditions (respiratory, gastrointestinal, renal disease/urinary tract infection, autonomic dysreflexia, diabetes, bowel/bladder incontinence).

Intervention opportunities included assistance with multiple chronic conditions, substance abuse, nutrition, skin protective behaviors.

Overall PU knowledge was low, especially for how to prevent PUs and what to do if skin breakdown occurs.


To compile the digest a Medline search was performed for the three months ending in September 2012 using the search term ‘pressure ulcers’. Papers have been chosen on the basis of their potential interest to practitioners involved in day-to-day wound care. The papers were rated according to readability, applicability to daily practice and novelty factor.
Debrisoft® allows the gentle removal of necrotic material, slough and debris for fast and accurate wound assessment - saving you time and money...

...make Debrisoft® a part of your assessment procedure.

See how Debrisoft® can debride in minutes on YouTube
The NHS faces the challenge of delivering high quality care and improving efficiency, arising from the increasing demand for healthcare resources due to changing demographics. In England, a recent White Paper outlined the government’s strategy, which is centered upon efficiency improvements (Department of Health [DH], 2010a).

Despite the difficulties of extrapolating the true cost of maintaining skin integrity — in terms of prevention, treatment and management — from the literature, the cost of wound care, especially in relation to the impact on patients’ quality of life, is significant. Estimates factoring in 2005/6 prices put the cost at £2.3–£3.1bn per year, which accounts for 3% of the annual NHS expenditure (Posnett and Franks, 2007). The majority of these wounds are chronic in nature and are managed in the community setting by GPs and community nurses (Drew et al, 2007). Pressure ulcer prevention has risen up the political agenda as a result of a raft of guidance, including NICE guidelines (NICE, 2005), European Pressure Ulcer Advisory Panel guidelines (EPUAP, 2009) and the DH’s high impact actions (DH, 2010b) and QIPP (DH, 2010a).

Wound assessment

An accurate and timely wound assessment underpins effective clinical decision-making and enables appropriate objectives to be set, thus reducing morbidity and cost (Posnett et al, 2009).

This is essential for the provision of clinical and cost-effective wound care as it identifies the causative or contributory factors that may delay healing and helps to develop an appropriate management plan (World Union of Wound Healing Societies [WUWHS], 2007). The management of wounds is complex and frequently complicated due to diverse aetiologies and differential diagnoses, the intricacy of the healing process, the diversity of factors affecting healing and the array of treatment options available.

While clinical decision making is underpinned by holistic assessment, ongoing wound assessment and appropriate evaluations of patient wellbeing (Harding, 2000; Wounds International, 2012) can identify variations in practice and inequalities in the care provided to patients. The Nursing and Midwifery Council (NMC, 2009) identifies the importance of documentation and communication in helping to improve accountability, demonstrating how decisions related to patient care are made, supporting the delivery of services and effective clinical judgements, aiding patient care and making continuity of care easier.

Wound bed

An important aspect of wound assessment is the assessment of the wound bed. Greater visibility of the wound bed may be achieved when devitalised tissue is debrided. Non-viable tissue has a variety of clinical presentations, e.g. slough, necrotic tissue or eschar, which differ in their content.

A variety of debridement methods exist and all have their own advantages and limitations, however, the importance of appropriate debridement is widely recognised (Gray...
Debrisoft® allows the gentle removal of necrotic material, slough and debris for fast and accurate wound assessment - saving you time and money...

...make Debrisoft a part of your assessment procedure.

See how Debrisoft can debride in minutes on YouTube
Debridement is generally accepted as a necessary precondition for the formation of new tissue and an important part of the healing process (Vowden and Vowden, 1999). The choice of method depends on the general goals of patient care and the aetiology and nature of the wound and eschar present. Other considerations include social and environmental factors, debridement frequency, access to skilled practitioners, complete patient assessment and cost.

**THE STUDY**

**Aim**

The primary aim of this study was whether Debrisoft could assist an experienced group of tissue viability link nurses to undertake an assessment and determine appropriate wound management objectives using a qualitative and quantitative approach. The secondary aim was to undertake a trust-wide evaluation of an active debridement system, which will be reported at a later date.

**Methods**

All of the qualified nurses (n=40) had undertaken an accredited tissue viability course and received tissue viability and supplementary debridement training within the last six months. This project was undertaken over a 12-week period and followed the existing process for evaluation of new products within the healthcare trust, with an agreed audit tool, clinical governance approval and the provision of products by the manufacturer. Advice was given to the participants regarding wound type, with the nurses asked to undertake debridement of the wound or hyperkeratosis, and to evaluate the effectiveness of the debridement and the condition of the wound bed.

They were also asked to comment on whether the product assisted with their clinical assessment and provision of care. The areas to be evaluated were:

- Rapid debridement
- Improved skin condition
- Enhanced, rapid clinical visual assessment
- Did it assist in assessing and defining clearer wound management objectives?
- Did it reduce time to achieve wound management objectives?

The nurses were asked to categorise the product’s performance as follows:

- Hyperkeratosis/wound remains the same
- Hyperkeratosis/wound fully debrided
- Hyperkeratosis/wound partially debrided.

**Results**

**Rapid debridement**

Debrisoft was used for debridement by 25 nurses (62.5%), for hyperkeratosis by four nurses (10%), and for both by 11 nurses (27.5%). The audit forms allowed for comments in relation to debridement outcomes, which were collected and anonymised. In this section, nurses’ comments included:

- ‘Exposed a wound bed that normally takes weeks or a hospital admission’
- ‘Sloughy tissue reduced by 20%’
- ‘Removing slough meant the next stages of wound healing were effectively reached.’

**Improved skin condition**

In the skin condition evaluation, 38 (95%) nurses said that patients’ skin condition improved, while two (5%) said that it remained the same. Nurses’ comments included:
Debrisoft® allows the gentle removal of necrotic material, slough and debris for fast and accurate wound assessment - saving you time and money...

...make Debrisoft® a part of your assessment procedure.

See how Debrisoft® can debride in minutes on YouTube
'General skin condition improved and the emollient was more effective'
'Skin condition improved greatly'
'Improves skin condition and appears to slow down the build up of dry skin.'

Enhanced, rapid clinical visual assessment
In the visual assessment of the wound bed, nurses were asked to include photos and comments. Of the nurses, 32 (80%) reported the positive impact of the clinical visual assessment. Comments included:

'Most of the dead skin came away and I was able to measure the wound accurately'
'Results seen immediately'
'Instant visible results and less visits needed to address the condition.'

One nurse used Debrisoft to debride and remove a haematoma and commented:

'Gently peeled away skin layer over the haematoma exposing it then lifted it out. This would have taken 1–2 weeks with gels.'

Assistance to assess and define clearer wound management objectives
Of the respondents, 34 (85%) identified that following debridement they were able to identify clearer wound management objectives, due to the removal of debris, slough or hyperkeratosis from the wound bed or surrounding skin, allowing for clearer visibility of the wound bed. Six out of 40 (15%) said there was no improvement. Nurses’ comments included:

'It makes the wound bed more visible, moved impermeable layer of slough'
'Wound bed cleaner and also skin condition improved greatly.'

Reduced time to achieve wound management objectives
The time taken to undertake debridement using Debrisoft was 0–2 minutes in eight patients (20%); 3–5 minutes in 21 patients (52.5%) and 6–10 minutes in nine patients (22.5%). Comments included:

'Instant visible results, less visits needed to address condition'

Figure 1–2: The wound in Case Study 1, before (top) and after the use of Debrisoft to debride the wound.

OVERALL PERFORMANCE
The overall performance of the product was rated as ‘Very good’ by 24 (60%) nurses, ‘Good’ by 10 nurses (25%), ‘Fairly good’ by five nurses (12.5%) and ‘Poor’ by one nurse (2.5%).

CASE STUDIES
Case study 1
Mrs A was a mobile and independent 74-year-old woman who experienced a cerebrovascular accident but continued to use her existing method of re-positioning, resulting in the development of a category 3 pressure ulcer to her right heel. The ulcer encompassed the whole heel area and was 9cm in length and 6cm in width.

Following a period of rehabilitation in hospital, she was discharged to a nursing home with a necrotic heel ulcer. Mrs A was no longer mobile and felt more comfortable in bed, with only a few hours a day sat in her chair. The correct type of pressure-relieving equipment was in place in the care home, however, several attempts at debridement with conventional methods, such as hydrogels, were unsuccessful — while they initially appeared to debride the necrosis by softening it, within a week the necrosis had become hard again and would increase in size.

A pain assessment was undertaken using a numerical pain assessment tool. This should always form part of a holistic wound assessment and the need to establish Mrs A’s level of pain was important as Debrisoft’s application involves touching the wound bed, which could potentially increase pain.

The team reviewed the options available to debride the wound, including techniques used in the past, and the appropriateness of Debrisoft was checked by studying manufacturer’s instructions.

It was decided that in this case there were no contraindications and the product could be used to remove the slough and necrosis, enabling the next stage of wound healing — granulation of the wound bed.

Debrisoft worked effectively, removing the soft necrosis and sloughy tissue and

References


appearing to stimulate the wound bed, as well as promoting signs of healing that had not been present previously.

Following debridement, epithelialisation could be seen at the wound margin within one week. Debridement also allowed for greater visibility of the wound bed.

A dressing regimen using a Hydrofiber® (Convatec) dressing with an absorbent pad and bandage was put in place following the debridement. The wound started to granulate well with healthy tissue and epithelial cells could be seen at the wound margins.

**Case study 2**

Mrs B was an 82-year-old woman who lived in a nursing home and had a medical history of diabetes, Parkinson’s disease and heart failure. She had taken to bed with a chest infection and despite the appropriate use of pressure-reducing equipment, had developed a sacral pressure ulcer. This was measured as 4cm by 3cm with a necrotic area, which the nursing home staff had started to debride using a hydrogel. However, this technique was proving slow in softening the necrosis and was changed to a honey dressing following advice from the tissue viability nurse.

The honey dressing softened the ulcerated necrosis, but the skin over this area remained intact. The nursing home staff were concerned about the time it was taking to remove the necrosis, which was a focus for infection, and were unsure of the extent of this damage.

Following debridement with Debrisoft, the roof from this ulcer was lifted exposing a cavity and enabling accurate wound assessment using a probe to ascertain any bone involvement. Following this assessment, the team were able to pack the cavity with an alginate dressing and use a foam as a secondary dressing.

The use of Debrisoft enabled us to reduce the time it would normally have taken us to debride this wound.

**DISCUSSION**

This audit has identified that appropriate rapid debridement allows for clearer visualisation of the wound. This is particularly important in relation to the categorisation of pressure ulceration, where prompt and accurate action is required to enable clinicians to prevent further deterioration of the wound and prevent infection. The speed of healing is also important as it can patients’ quality of life. However, in order to achieve prompt healing, the wound first needs to be debrided quickly and effectively.

This study showed that 85% of the clinicians found the overall performance of the Debrisoft to be good or very good. The study showed that clinicians found this product easy to use and in some instances, where appropriate, the client was able to use this product themselves. Debrisoft enabled clinicians to debride a wound that would normally have taken 2–3 weeks with other methods.

The categorisation of pressure ulcers (EPUAP/NPUAP, 2009) relies on clinicians being able to identify structures within the wound bed and may be obscured by the presence of necrotic tissue. Therefore, rapid debridement is an important aspect of wound management. This study has demonstrated that this effective quick debridement method can help clinicians visualise the wound bed and develop appropriate plans of care quicker than with other conventional methods, thereby speeding up the healing process.

**CONCLUSION**

The competence of the individual undertaking the debridement is crucial and is a key consideration along with availability of the necessary equipment and provision of the optimal environment. Patient choice and involvement are also paramount in the debridement process.

While the focus should be on appropriate debridement methods to achieve timely optimal pain-free removal of non-viable tissue, these results clearly demonstrate that the primary aims of the study were achieved. Debrisoft has the additional benefit of ease of use — meaning no specialist training is required — as well as allowing for prompt assessment and clearer wound management objectives.

While in wound healing there are always different perspectives, debridement can assist in achieving the overall goal of wound healing.

References


In 2009, the NPUAP and EPUAP came together to attempt to produce a universal tool for the grading of pressure ulcers. However, due to international differences with regard to reimbursement for healthcare costs, the two advisory panels produced slightly different tools — one for the US market, another for Europe. It appears, therefore, that grading is not straightforward and consensus is not easily achieved.

Compared with the EPUAP version, the NPUAP tool included two additional definitions:
- Suspected deep tissue injury, depth unknown
- Unstageable/unclassified — full thickness skin or tissue loss, depth unknown.

Donnelly (2005) discussed the difficulties of the inclusion of deep tissue injury in pressure ulcer grading, for example, not being able to visualise the wound bed. In her article, Donnelly discusses the potential for having only two grades of pressure ulcers, such as ‘superficial’ and ‘deep’. In 2012, clinicians are no further forward with this concept. To have such a grading system would simplify the process for busy practitioners who have to diagnose pressure ulcers and attribute a grade.

This diagnosis is often based on limited knowledge/exposure in the area of deep tissue injury. The management of a grade one or two pressure ulcer is the same, apart from the fact that a grade two may require dressings, so is it necessary to provide a grade, other than superficial pressure ulcer?

Likewise, for grades three and four, or unstageable pressure ulcers, this would include how to manage the wound based on individual assessment of the wound bed, whatever the grade. If the approach of ‘superficial’ and ‘deep’ grading was to be employed it may go some way towards solving how deep tissue injury/unstageable skin damage is classified.

RECENT INITIATIVES

The DH, in 2010, began to pay serious attention to pressure ulcers within the patient safety directives (Stephen-Haynes, 2011). For 2012, the DH has set the target of eliminating pressure ulcers in 95% of patients (DH, 2012a). Some regional health authorities have stretched this ambition further to eliminate all avoidable grade two to four pressure ulcers by the end of 2012 (NHS Midlands and East, 2012).

Local commissioners in some areas, under the Commissioning for Quality and Innovation (CQUIN) initiative (DH, 2012a), have set targets for their reduction, with financial incentives attached. Tissue viability nurses (TVNs), while delighted that this level of interest in the prevention of pressure ulcers is finally being shown,
have mobilised to ensure that the complex aetiology of pressure damage is understood by senior NHS personnel (Chief Nursing Officer [CNO], 2012).

TVN networks began communicating and realised they were all answering the same questions and facing the same challenges in the areas of grading, the reporting of pressure ulcers, for example. A meeting at the DH was held to discuss whether pressure ulcer incidence could be used as a nursing outcome indicator, i.e., when a pressure ulcer develops, it is a measure of poor nursing care. Once again, this puts the onus of preventing PUs entirely onto the nursing profession.

However, multidisciplinary involvement in preventing pressure ulcers has been proven to reduce incidence (Bales and Padwojski, 2011). The Tissue Viability Society (TVS) held a national consensus meeting, attended by the deputy chief nurse, in order to produce a consensus document (TVS, 2012), which it is hoped will help form DH policy with regard to the prevention of pressure ulcers and their measurement.

REPORTING OF PRESSURE ULCERS
The current situation means pressure ulcers in NHS Midlands and East are being reported in several ways:

- Monthly prevalence of old and newly acquired grade two to four pressure ulcers collected nationally (safety thermometer)
- All grade two to four pressure ulcers are reported
- Locally, all grade three and four pressure ulcers are reported as a serious incident with an associated root cause analysis
- The care quality commission and patient safety both have pressure ulcer incidents reported to them.

All this counting and reporting of pressure ulcer activity has meant that skin damage needs to be considered in a diagnostic manner. With financial incentives set against reductions in numbers, it is essential that the following are not reported as avoidable pressure ulcers:

- Unavoidable pressure ulcers – various definitions have been produced to help distinguish between avoidable and unavoidable (DH, 2010; NHS Midlands and East, 2012; TVS, 2012)
- Leg ulcers, diabetic foot ulcers, perianal abscesses, pilonidal sinuses
- Lesions on buttocks/sacrum that are not caused by pressure and were probably misdiagnosed as grade two PUs in the past, such as moisture lesions.

Therefore, in this time of increased spotlight on pressure ulcer development in healthcare, it is necessary that the reported grades are accurate. It is also time to look at superficial and deep grades, in order to make the process easier. Once reported, it can be cumbersome, in the present grading system, to down or upgrade the severity of an ulcer.

Classification within the current grading system
It has been shown that staff have difficulty determining the grade and cause of damage (Defloor et al, 2005). TVNs are the best-placed experts to distinguish between grades and causes of lesions thought to be pressure ulcers. However, assessing all suspected pressure ulcers will seriously affect the workload of any tissue viability team, assuming that an organisation actually has a TVN, while in the community setting this may be impossible to achieve, even with a TVN in post. Support will be needed to help ensure that the reporting is accurate.

If the damage presents as a purple/black injury or blood-filled blister with surrounding bruising it is difficult to classify until the progression of damage has been observed (Figure 1). In some instances, these go on to present as grade four once eschar has been debrided, but in others they may resolve without demonstrating any more than superficial dermal damage. Sometimes an open ulcer does not form at all. This fuels the need for a review of the present system, where downgrading is not acceptable.

It appears that there are two systems in place to address the difficulty in classification issue. One includes the ‘unstageable’ category, which could be particularly useful in today’s reporting climate to prevent inaccurate penalties.

The TVS (2012) have recommended that the unstageable definition (NPUAP/EPUAP, 2009) is included in the grading system, but that more education is needed before the ‘suspected deep tissue injury’ category is included. It could be argued that unstageable covers both of these options. The issue remains that
if the unstageable category is included in a grading system, how do healthcare organisations investigate this category? For example, if it is deep tissue damage, does it go down the SI/RCA (serious incident with a root cause analysis) route? If it does not, there is potential that deep tissue damage is not recorded as such, and subsequent investigation for its root cause does not happen.

The second system is to classify the unstageable pressure ulcer as grade three until proven otherwise. This system has been adopted by NHS Midlands and East in their ambition to eliminate all avoidable grade two, three and four pressure ulcers by December 2012. This was adopted after it had been in use locally (in both the acute and community settings) for 18 months prior to the launch of the target. In this period of time, very few of these unstageable pressure ulcers were found to have superficial damage, while most were deep tissue damage.

This system gives the pressure ulcer a grade to guide the management, and subsequent investigation, of the root cause. With the increased surveillance of PUs at present, there is an opportunity to investigate and count how many unstageable pressure ulcers actually constitute deep tissue damage. However, both systems do require the training of staff in identifying such damage.

When is damage not due to pressure?
Lesions on the buttocks/sacral area are quite frequently reported as pressure damage when they may actually be due to other causes. The commonest misdiagnosis is damage due to moisture or friction. Moisture damage can occur because of sweat, buttock shape and skin elasticity. Deep tissue damage is not recorded as such, and if it does not, there is potential that deep tissue damage is not recorded as such, and subsequent investigation for its root cause does not happen.

The fact remains that this ‘other’ skin damage requires further investigation and the following questions are pertinent:

- If it is not due to pressure, is it not, therefore, preventable in the same way? How can this be done?
- How can the amount of sweat be reduced?
- The size and shape of the patient’s bottom — how can this be managed?
- What protective barriers do we need to apply to the patient’s skin to prevent this breakdown?

In reality, clinicians have not managed to eradicate nappy rash in infants. So can clinicians really hope to prevent this in adults? Locally, it has been found that most lesions in the sacral area are due to causes that are not related to pressure.

CONCLUSION
In summary, there is a grading system currently in use in the UK. However, clinicians have work to do in the area of deep tissue injury/unstageable skin damage. The debate around adopting a grading system that only includes superficial and deep continues. These very important areas need to be investigated, debated and consensus reached.

Tissue viability organisations/networks and the DH need to work together in this important area. It is known that pressure ulcers impact on the patient physically, emotionally and socially (Gorecki et al, 2012). In addition, they place a large financial burden on the health and social care system in the UK (Dealey et al, 2012). Those in the speciality have a responsibility to address the issues in this important area around the grading of pressure ulcers.
Surveying national pressure ulcer occurrence

In November 2011, a survey was carried out across England to determine how pressure ulcer occurrence data were collected and reported. An electronic survey tool was used to design the survey and it was circulated via the regional tissue viability groups. A total of 145 responses were received and the results demonstrated considerable differences in both what was collected and reported. These data were used to underpin a consensus meeting held in Birmingham where tissue viability nurses debated the issues.

During 2011, the issue of pressure ulcers rose up the political and NHS agenda with several documents suggesting that they were a valid indicator of an organisation’s general quality of care and that their occurrence should be monitored and prevented (Department of Health [DH] 2010; National Institute for Innovation and Improvement [NII], 2010).

However, many of the tissue viability nurses who were to be tasked with implementing any data collection, as well as enforcing a zero tolerance to pressure ulcer development, had grave concerns — namely that the data on pressure ulcer occurrence that were being used, both to illustrate the local picture and to compare the situation with other organisations, were not as straightforward or as easily comparable as NHS managers believed.

However, the author only had personal experience and anecdotal views to support this opinion, therefore, in February 2011, a survey was carried out among the 27 organisations within the then East of England Strategic Health Authority. Twenty-three from a possible 27 organisations completed the survey and results indicated that while most trusts collected prevalence data, there was no standard way of doing this. Nor were standard definitions used — for example, 14 of the trusts did not use a definition of ‘unavoidable’; two had a locally agreed definition and others used NPUAP/Bedfordshire and Hertfordshire Tissue Viability Nurses Forum definitions.

These results provided the impetus for an all-England survey by illustrating to other areas of the country the discrepancies that had been highlighted — namely that different organisations were counting and categorising pressure ulcers in different ways, which made it impossible to benchmark.

Minor changes were made to the electronic survey used in the East of England, for instance, increasing the number of descriptors available for a ‘serious incident’ (see Table 1) as it appeared that there were different versions in use around the country, and including a question about the respondents’ location. The survey was then widely publicised via the regional tissue viability nurse networks and at the annual Wounds UK conference in Harrogate.

A tight deadline of two weeks was set for completion of the survey to encourage participation and it was launched at the 2011 Harrogate Wounds UK conference to ensure maximum exposure and encourage as many tissue viability nurses as possible to participate.

It was impossible to identify how many organisations within England had a tissue viability nurse in post as there is no reliable database and the numbers of nurses cannot simply be implied from the numbers of services — some organisations have as many as 12 tissue viability nurses, while others may have only one.

The timing of the survey also coincided with many organisations changing...
Table 1
Questions that featured in the national pressure ulcer survey

- When collecting information on pressure ulcer occurrence which terms do you use? Please tick all that apply:
  - EPUAP 1–4 (old version)
  - EPUAP 1–4 (new version)
  - Deep tissue injury (DTI)
  - Unstageable
  - Moisture lesion
  - Other (please specify):

- The EPUAP/NPUAP (2009) (categories 1–4) is the grading tool currently included in the National Nursing Quality Indicators. Do you believe the following terms should be included?
  - No changes required
  - Yes to unstageable
  - Yes to DTI
  - Yes to unstageable and DTI
  - Other (please specify):

- Would you prefer to use a simpler grading system?

- Do you measure pressure ulcer prevalence?

- How often do you measure prevalence?

- If you do collect prevalence, how do you collect the data?

- Do you measure pressure ulcer incidents as serious incidents?

- What grade/category do you report as a serious incident?

- Which grades do you report to the SHA as serious incident requiring investigation/serious untoward incident (SiRi/SUI)?

- Do you follow a root cause analysis (RCA) procedure to investigate the incident?

- Which grade/category would you carry out an RCA for?

- Are you required to raise a safeguarding alert if a patient has
  - Multiple grade 2s
  - A grade 3
  - Multiple Grade 3s
  - A grade 4
  - Multiple Grade 4s
  - DTI
  - Multiple ulcers of different stages
  - Other (please specify)

- Do you have a standard definition to denote at which point it is said a pressure ulcer occurred in your care?

- Do you use a standard definition of ‘unavoidable’ pressure ulcers?

Three questions regarding the area of care:

- What care setting do you work in?

- What region are you based in?

- How many beds do you have (acute)/what is your population size (primary care)?

( optional field allowed the respondent to name their organisation)

THE SURVEY
The questions included in the survey can be seen in Table 1. All were presented as closed questions with a fixed number of options apart from the last question regarding population size in community. A total of 145 responses were received.

RESULTS
The areas that demonstrated the most...
There was even greater disparity in how organisations attributed responsibility for where and when damage occurred, with time scales ranging from ‘damage not present on admission’ through to ‘damage not noted within the first 72 hours’ (Figure 4). Some organisations would only determine attribution after a root cause analysis had been carried out.

Almost two-thirds of organisations said they used a definition of ‘unavoidable’ when classifying pressure ulcers — although two standard definitions (NPUAP, 2011 [n=26]; The Bedfordshire and Hertfordshire Tissue Viability Nurses Forum, 2010 [n=22]) were in use — the remaining group of organisations who said they did use a standard definition (n=30) worked to a locally agreed definition (n=30) (Figure 5).

DISCUSSION

From the small amount of information discrepancy centred around grading, prevalence, definition of what constitutes unavoidable pressure ulcer and timescale for attribution of damage. Any of these alone could skew any information gathered, for example, it is possible to reduce the number of pressure ulcers deemed to have occurred in an organisation by broadening the parameters of what would be regarded as unavoidable. With the changes being made to how care is commissioned and reimbursed, defining where pressure damage occurred and, therefore, where to attribute the cost may have significant effects on funding.

Figure 1 shows the spread of different grading — while the majority of organisations were using one of the EPUAP systems, which use four different categories, some were counting up to seven categories in their prevalence surveys (additional categories included ‘deep tissue injury,’ ‘unstageable’ and ‘moisture lesion’).

It is apparent, therefore, that the percentage of pressure ulcers in any one category could vary considerably throughout different areas, depending on whether the local tissue viability nurses were using four, seven or a different number of classifications.

Almost three-quarters of organisations measured prevalence (70%), however, the frequency with which this was done and way in which data were collected varied considerably (Figure 2). Forty-six organisations collected prevalence data on an annual basis, however, thirty-two did not collect prevalence data at all. The frequency of collection varied from monthly to every three years.

The mechanism of data collection obviously has a significant impact on the thoroughness and reliability of any conclusions that can be drawn, however, only four organisations suggested that they cross-checked the data in any way.

There were also considerable discrepancies in the reporting of pressure ulcer occurrence again with organisations including ‘moisture lesions,’ ‘unstageable’ or ‘deep tissue injury’ in their serious incident reporting systems (Figure 3). Perhaps of greater concern in terms of workload for tissue viability teams was that some organisations required category 1 damage to be reported as a serious incident.

There was even greater disparity in how organisations attributed responsibility for where and when damage occurred, with time scales ranging from ‘damage not present on admission’ through to ‘damage not noted within the first 72 hours’ (Figure 4). Some organisations would only determine attribution after a root cause analysis had been carried out.

Almost two-thirds of organisations said they used a definition of ‘unavoidable’ when classifying pressure ulcers — although two standard definitions (NPUAP, 2011 [n=26]; The Bedfordshire and Hertfordshire Tissue Viability Nurses Forum, 2010 [n=22]) were in use — the remaining group of organisations who said they did use a standard definition (n=30) worked to a locally agreed definition (n=30) (Figure 5).

DISCUSSION

From the small amount of information
Figure 3: What grade/category is reported as a serious incident?

Figure 4: Do you have a standard definition to denote at which point it is accepted that a pressure ulcer occurred in your care?

Figure 5: Do you use a standard definition of ‘unavoidable’ pressure ulcers?

Presented here it can be seen that there are major inconsistencies in the information generated and collected around pressure ulcer occurrence. Therefore, attempting to make any comparisons between organisations is futile at present.

There is a large amount of work being carried out in an attempt to try to bring some standardisation to this data collection (for example www.stopthepressure.com), but again, there is no strategy to unify this, which is unfortunate.

It is hoped that the National Institute for Health and Clinical Excellence (NICE, 2005) guidance, which is currently being updated may help by agreeing standard terms and timescales, a workable definition of ‘unavoidable’, which grades/categories to use, and a standardised method for attributing responsibility. However this is unlikely as guidelines rarely contain this level of detail and even then it is unlikely to be available until 2014.

Until there is a system of standard definitions, confusion may result in tissue viability nurses being unfairly penalised or lauded for results based on non-uniform data and many are already experiencing significant increases in their workload in an attempt to reduce or eliminate pressure ulcers.

CONCLUSION

It seems it is necessary to continue to ask questions about methodologies when reading, interpreting and applying pressure ulcer occurrence data, otherwise the situation remains as confusing as it has always been.

Future policy needs to focus not just on collecting data, but also on what is collected and more importantly why it is collected. Only when the purpose for which the information will be used is clear, can we start to make informed choices about what we collect and how we collect it.

The triangulation of data using prevalence and incidence needs to be explored, to determine if it is beneficial. However, if there is no benefit, then prevalence should not be collected without a clear aim as it is wasteful of time and resources. Clinicians need to review why they are collecting information and what they are doing with it when they have it.
How do you achieve fast and accurate assessment of this wound...

...just turn over!
Debrisoft®
Active Debridement

Fast* and accurate wound assessment...

...make Debrisoft® a part of your assessment procedure.

See how Debrisoft® can debride in minutes on YouTube