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Innovation

Pressure ulcer prevention

Nursing Practice

Nurses have a role to play in monitoring the success of strategies to reduce avoidable pressure ulcers and to provide accountability and maintain motivation

A strategy to reduce avoidable pressure ulcers

In this article...

- The economic cost of pressure ulcers
- How one region is working to eliminate pressure ulcers
- Nurses’ role in pressure ulcer prevention

Safety Express is a national programme based on the principles of improving patients’ experience of care by minimising the four main avoidable harms in healthcare: pressure ulcers; falls; catheter-acquired urinary tract infections; and venous thromboembolism.

Safety Express is a workstream in the Quality, Innovation, Productivity and Prevention (QIPP) initiative. It was designed to improve health outcomes and the quality of care, as well as reduce costs associated with the above four harms.

Strategic health authorities (SHAs) are responsible for establishing their own programmes for avoiding these harms.

The NHS Management Board established four SHA clusters across England in October 2011. One of these was NHS Midlands and East, comprising three separate SHAs (NHS East of England, NHS East Midlands and NHS West Midlands).

This new cluster SHA identified a number of “ambitions”, particularly in the areas of ensuring patient safety and enhancing quality (NHS Midlands and East, 2011). It consulted on these “ambitions” in September 2011 and refined them; one related to eliminating pressure ulcers.

Before this cluster was created, the three separate SHAs had started work on pressure ulcer management and reduction. The formation of NHS Midlands and East led to the workstreams being combined into one comprehensive approach to managing and reducing pressure ulcers, under its “ambitions” programme.

This article outlines how these three programmes were brought together to form a plan for eliminating grade 2, 3 and 4 pressure ulcers by December 2012, and discusses the role that nurses play.

Background

As well as having a detrimental effect on patients’ health and wellbeing, pressure ulcers are also a significant economic burden to healthcare in the NHS and other countries.

In the US, for example, Bales and Padwojski (2009) suggested that the estimated cost to the hospital sector is $11bn a year, a figure that is considered to be both unsustainable and unacceptable. The two national insurers in the US [Medicare and Medicaid] have decided they will no longer reimburse hospitals for treating a range of

5 key points

1. Safety Express is a national programme to minimise the four main avoidable harms in healthcare, one of which is pressure ulcers
2. Treating pressure ulcers is costly and eliminating them could save the NHS over £150m a year
3. Pressure ulcers are more likely to occur in patients who are elderly, malnourished, dehydrated, obese and/or with underlying medical conditions
4. The NHS Safety Thermometer and serious incident reporting can be used to measure the incidence and prevalence of pressure ulcers
5. Nurses have a role in monitoring the incidence of pressure ulcers

Ulcers develop in 20% of inpatients
hospital-acquired conditions, including pressure ulcers (Bergquist-Beringer et al, 2009).

Europe shows a similar prevalence, incidence and cost of pressure ulcers. Vanderwee et al (2007) suggested that, across Europe, 20% of patients in acute care settings would develop a pressure ulcer, although prevalence across the continent varies.

The cost of treating pressure ulcers in the UK varies from study to study. For example, Bennett et al (2004) found that the cost of treating a pressure ulcer varied from £1,064 (grade/stage 1) to £10,551 (grade/stage 4). Costs increase with ulcer grade/stage because the time to heal is longer and the incidence of complications is higher in more severe cases. The total cost in the UK was estimated at £1.4–£2.1bn each year – 4% of total NHS expenditure (Bennett et al, 2004). This study also showed that most of the associated cost was related to nurse time.

The Department of Health (2009) suggested that an average district general hospital spends an estimated £600,000–£3m each year on pressure ulcers. The DH outlined an ambition to eliminate all avoidable pressure ulcers and significantly reduce the amount hospitals spend on treating them.

Ross (2009) suggested that the minimum cost of a grade 2 pressure ulcer is £3,948 per episode in one trust and that a 50% reduction in this grade would save £323,736 (82 patients). Chambers (2009) indicated that pressure ulcers cost the NHS between £1.9bn and £2.8bn each year, slightly higher than the figure suggested by Bennett et al (2004). Chambers (2009) suggested that a grade 4 pressure ulcer could cost up to £40,000 to treat, with the average expected cost estimated at £14,000 per episode. A reduction of 25% in pressure ulcers would save trusts an average of £510,000 each year (DH, 2010).

In 2009 and based on 10.2% prevalence, the estimated incidence of pressure ulcers in the UK equated to 29,800 acquired in hospital and 20,700 in the community (DH, 2010). This amounts to an estimated cost of £2.838 in hospital care per patient and £2.386 in follow-on community care costs. These figures suggest that reducing/eliminating pressure ulcers could lead to annual savings of £154m.

The majority of cases are avoidable if preventive action is implemented.

Pressure ulcer management and reduction is a huge and complex policy area that is important for patient safety, patient experience and outcomes.

BOX 1. AREAS OF CARE IDENTIFIED AS PART OF PATIENT EXPERIENCE

- Bladder and bowel care
- Safety
- Personal and oral hygiene
- Nutrition and hydration
- Pressure area care
- Cleanliness and infection control
- Privacy and dignity
- Record keeping
- Diagnosis and treatment
- Communication
- Discharge management

Source: Mid Staffordshire NHS Foundation Trust Inquiry (2010)

Care failings

A number of reports have highlighted the care failings that patients have experienced from healthcare services.

The Mid Staffordshire NHS Foundation Trust Inquiry (2010) identified eight key themes, including patient experience. Box 1 lists the areas of care that were included under the heading of “patient experience”.

The Parliamentary and Health Service Ombudsman (2011) reported on 10 case studies of the care of older people in the NHS that raised a number of issues for boards, leaders, individual professionals and healthcare teams. The case studies reported unmet clinical needs, dismissive attitudes from professional staff and disregard for process and procedure – all of which contributed to poor standards of care and have an influence, therefore, on pressure ulcers.

The issues raised confirmed those highlighted by the Mid Staffordshire NHS Foundation Trust Inquiry (2010) and Age Concern (2006), which led to instances of unnecessary pain, dehydration, indignity and distress, malnutrition, poorly managed medication and lack of dignified end-of-life care. Many of these issues are known factors that contribute to pressure ulceration and these reports highlighted the need for healthcare services to take action to improve the care provided to patients.

Defining pressure ulcers

One of the first tasks was to agree a definition of pressure ulcer. We agreed to use the elimination of avoidable grade 2, 3 and 4 pressure ulcers as an outcome measure for nursing care that includes:

- Hydration;
- Nutrition;
- Pressure area care;
- Medication management;
- Individualised care.

The rationale was that pressure ulcers are more likely to occur in patients who are malnourished, elderly, dehydrated and/or obese, and in those with underlying medical conditions. The assumption was that to achieve the ambition, it is essential that fundamental aspects of high-quality nursing care are in place.

Preventing pressure ulcers

The ambition programme builds on and integrates QIPP Safe Care programmes that have already delivered improvements in harm-free care across the cluster.

The QIPP Safe Care (Safety Express) programme, which started in January 2011, sought to reduce hospital-acquired pressure ulcers by 80% and community-acquired ones by 30% by December 2012, with potential national annual savings of £154m. This has been developed into the “harm-free” care concept, which aims to deliver patient care effectively and ensure that interventions delivered in one area such as pressure ulcers do not inadvertently affect another adversely.

The former East of England SHA had already agreed to support a system-wide approach by establishing an intensive pressure ulcer support team. At the same time, the then West and East Midlands SHAs were also running a number of focused pieces of work to reduce the prevalence and incidence of pressure ulcers. With the clustering of the three SHAs, and the creation of NHS Midlands and East, a new programme started, called Ambition 1: Elimination of Avoidable Grade 2, 3 and 4 Pressure Ulcers by December 2012.

We felt that pressure ulcers were a recognisable proxy measure for quality and safety and therefore for standards of nursing care.

The aim is to use the elimination of avoidable grade 2, 3, and 4 pressure ulcers as an outcome measure for nursing care that includes:

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Defining pressure ulcers

One of the first tasks was to agree a definition of pressure ulcer. We agreed to use the definition posed by the European Pressure Ulcer Advisory Panel (EPUAP) and the National Pressure Ulcer Advisory Panel (NPUAP) as follows:

“A pressure ulcer is a localised injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear” (EPUAP and NPUAP, 2009).

Although the EPUAP and NPUAP (2009) identified four categories of pressure ulcers, for the purposes of the ambition programme, the SHA cluster focused on eliminating grades 2, 3 and 4. Table 1 gives a brief description of these.
TABLE 1. CATEGORIES/STAGES OF PRESSURE ULCERS

<table>
<thead>
<tr>
<th>Category/stage</th>
<th>Description</th>
<th>Additional information</th>
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<tbody>
<tr>
<td>2</td>
<td>Partial-thickness skin loss or blister - partial thickness loss of dermis presenting as a shallow open ulcer with a red-pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled or a blood/serum-filled blister.</td>
<td>Presents as a shiny or dry shallow ulcer without slough or bruising. This category/stage should not be used to describe skin tears, tape burns, incontinence-associated dermatitis, maceration or excoriations.</td>
</tr>
<tr>
<td>3</td>
<td>Full-thickness skin loss (fat visible) - full-thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Some slough may be present. May include undermining and tunnelling.</td>
<td>The depth varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and category/stage 3 ulcers can be shallow. In contrast, areas of significant adiposity can develop extremely deep category/stage 3 pressure ulcers. Bone/tendon is not visible or directly palpable.</td>
</tr>
<tr>
<td>4</td>
<td>Full-thickness tissue loss (muscle/bone visible) - full-thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present. Often includes undermining and tunnelling.</td>
<td>The depth varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and these ulcers can be shallow. Category/stage 4 ulcers can extend into muscle and/or supporting structures (such as fascia, tendon or joint capsule) making osteomyelitis or osteitis likely to occur. Exposed bone/muscle is visible or directly palpable.</td>
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Source: adapted from EPUAP and NPUAP (2009)

**Monitoring pressure ulcers**

In line with the national Safety Express programme, we are using the NHS Safety Thermometer for data collection (NHS Information Centre for Health and Social Care, undated).

A single measurement gives limited information so data is most useful when a number of samples are repeatedly measured to track progress over time. The safety thermometer can be used to do this, is relatively inexpensive and easy to use and has the added advantage of making information available immediately to clinical staff who can begin working to improve specific problems.

Safety thermometers measure incidence. The NHS Safety Thermometer is a minimum data set that provides the opportunity to measure each of the four harms at individual patient level while patients are still in the care setting. In short, it is a local improvement tool for measuring, monitoring and analysing patient harms and harm-free care, and is therefore ideally suited for measuring the incidence of pressure ulcers.

Nurses collect and record incidence of pressure ulcers in their patients on a daily basis, and the safety thermometer monthly figures are collected and recorded on one day each month, forming a point prevalence study. Nurses also collect data on all four key harms identified earlier, to ensure that improvements in one area of care do not have a detrimental effect on another.

Once collected, data is sent to the NHS Information Centre for collation and sent back to the quality observatory and the SHA so improvement can be tracked at a provider and system level.

The organisations in each region taking part in the QIPP Safe Care workstream have already used the NHS Safety Thermometer, although most have only collected data on 2-4 pilot wards.

The data collected through the safety thermometer is being triangulated against data collected through serious incident reporting. This follows the aims of the national QIPP Safe Care programme and builds on the assumption that by putting in place systems and practices to reduce avoidable grade 2, 3 and 4 pressure ulcers, grade 1 ulcers will also be reduced.

Pressure ulcers are also being graded as “avoidable” and “unavoidable”. The assumption is that the majority of cases are avoidable if certain measures are in place. “Avoidable” concerns patients who developed a pressure ulcer because care providers did not do one of the following:

» Evaluate patients’ clinical condition and pressure ulcer risk factors;

» Plan and implement interventions that are consistent with their needs and goals, and recognised standards of practice;

» Monitor and evaluate the impact of the interventions;

» Revise the interventions as appropriate (DH, 2011a).

Before NHS Midlands and East was created, in the East of England the primary care trust (PCT) quality leads had already agreed a regional system-wide protocol for reporting grade 2, 3 and 4 pressure ulcers as part of a regional approach to improve reporting and care across the primary and acute care boundaries. This system-wide approach ensures greater partnership across the patient pathway. Because of the work carried out in the region, there was already increased awareness and reporting of pressure ulcers.

**PCT cluster pilot project**

A PCT cluster pilot took place in November 2011 in NHS Suffolk to test the processes and systems for 100% data collection, supported by the NHS Safety Thermometer. This was repeated in December 2011 when a PCT cluster from East Midlands and West Midlands also undertook data collection. This increase in data collection has continued month on month. Data collection for March 2012 included all 17 PCT clusters as a baseline measurement and acted as a pilot for the Commissioning for Quality
and Innovation (CQUIN) target from April 2012 (DH, 2011b).

The system of reporting all grade 3 and 4 pressure ulcers via the serious incident reporting process is being retained to ensure organisational accountability, system learning and triangulation of data.

The pressure ulcer intensive support team is supporting the monitoring approach for the pilot. The team’s aim is to visit each system, to explore processes and standards, and share best practice across the cluster. After each visit, a system plan will be developed to monitor performance and ensure the programme’s overall aims are achieved.

Nurse involvement
Nurses play a lead role as champions. There are 12 champions per PCT. Their role is to provide community support across the 17 PCT clusters to share best practice and ideas, to coach each other, to provide accountability for personal actions and development, to create opportunities to challenge organisations and cultural assumptions, and to work through challenges together. They also have a role in ensuring that motivation and enthusiasm is maintained and, importantly, support and celebrate each others’ successes and jointly create a “can do” culture.

Engaging all nurses is essential for the success of the ambition programme. The project to eliminate pressure ulcers is building on the success of the QIPP Safe Care programme, which has been working with 10 host organisations and their healthcare partners in each region to reduce all of the four key harms.

QIPP Safe Care networks, PCT cluster directors of nursing and medical directors, tissue viability specialist nurses, and associated networks and organisational champions are being involved to drive the ambition forward.

The programme was formally launched in January 2012 with a number of engagement events. Supporting material is also being launched along with a communication strategy to continuously engage all nurses in the ambition.

NHS Midlands and East believes that the success of the ambition to eliminate all grade 2, 3 and 4 pressure ulcers by December 2012 depends on community and engagement, especially with nurses, who are the frontline carers.

The programme needs to support both cultural and behavioural changes, both of which are essential to delivering high-quality and harm-free care across NHS Midlands and East.

Conclusion
The aim to eliminate grade 2, 3 and 4 pressure ulcers by December 2012 is an ambitious programme that has been planned and implemented through a careful process of consultation, communication and engagement.

Nurses are at the forefront of the ambition programme which combines the use of the NHS Safety Thermometer with serious incident reporting and a robust communication and staff engagement plan.

References
NHS Information Centre for Health and Social Care (undated) NHS Safety Thermometer. tinyurl.com/IC-thermometer

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