A systematic approach helped to reduce the incidence of pressure ulcers at a health board in Wales, and changed staff views that they were inevitable in some patients

Using the SKIN Bundle to prevent pressure ulcers

In this article...
- Cost and prevalence of pressure ulcers
- Development of the SKIN Bundle and how it can be used to help prevent pressure ulcers
- How the SKIN Bundle was implemented at Cardiff and Vale University Health Board

Keywords: Pressure ulcer/SKIN Bundle/Prevention

This article has been double-blind peer reviewed

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Abstract

Every year up to 20% of patients in acute care in England and Wales are affected by pressure ulcers every year, and older people in intensive care units who develop pressure ulcers have a two- to four-fold increased risk of early death (NPSA, 2010; Vanderwee et al, 2007).

The cost to the NHS of treating pressure ulcers and related conditions is up to £4bn a year, with the most severe cases ranging from £11,000 to £40,000 per person. Since 2005, the NPSA has received around 75,000 reports of patient safety incidents relating to pressure ulcers, yet a growing body of evidence suggests these are largely preventable (NPSA, 2010).

Box 1 outlines some key facts about pressure damage; reducing such damage is a high priority across Wales.

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Nursing Practice
Innovation
Pressure ulcers

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Using the SKIN Bundle to prevent pressure ulcers

This article describes the implementation of the SKIN (Surface, Keep moving, Incontinence, Nutrition) Bundle assessment tool – an initiative to reduce the incidence of pressure ulcers – at University Llandough Hospital, Cardiff and Vale University Health Board (C&V UHB). The SKIN Bundle was piloted on the hospital’s critical care unit between May 2009 and April 2010.

Background
The SKIN Bundle was developed in 2004 at St Vincent’s Medical Centre, a 528-bed hospital in Florida, US. It was introduced in Wales in 2009 through Transforming Care, a ward-based programme for Wales that aimed to improve patient care by reducing

Press...
Innovation

5 key points

1 Up to one in five inpatients have pressure ulcers, which costs the NHS up to £4bn a year to treat

2 Risk factors include age, immobility, incontinence and poor nutrition

3 The SKIN Bundle can help prevent minor skin problems from becoming major pressure ulcers

4 Its aims include identifying all patients at risk and significantly reducing pressure ulcers acquired in hospital

5 The Model for Improvement can help the spread and sustainability of the SKIN Bundle

pressure ulcers, among other things. After the initiative was implemented successfully at Abertawe Bro Morganwg University Health Board, learning was shared across all health boards in Wales through the All Wales 1,000 Lives Campaign.

C&V UHB used the Institute for Healthcare Improvement’s (IHI) Model for Improvement – plan, do, study, act – to test and implement the bundle through face-to-face collaboration and through sharing and learning across the organisation. After training in “virtual mentoring” from the Safer Patients Network (tinyurl.com/safer-patients), web and telephone conferencing technology was also used to mentor staff at six sites implementing the SKIN Bundle across the UK.

Implementing the SKIN Bundle

A faculty was established to develop and deliver the pressure ulcer reduction programme, with personal coaching and mentoring provided by the IHI. The programme used a “mini collaborative” model of three learning events:

» **Session 1** introduced the SKIN Bundle and model for improvement methodology, including measurement;

» **Session 2** was about sharing progress and increasing learning about pressure damage and nutrition, and introducing what reliability means and how it can be achieved;

» **Session 3** was an opportunity for everyone to share, learn and celebrate success, and learn about sustainability and spreading the model more widely. The model provided face-to-face learning events at the health board, and virtual technology to six organisations across the UK. It helped teams who attended the collaborative learning events:

- Establish a reduction in pressure damage as a main organisational priority;
- Appoint an executive lead to ensure ward teams are released to attend collaborative events, and to address any barriers promptly;
- Involve other experts, such as dietitians and tissue viability nurses, in the learning;
- Use the model for improvement and underpin the learning with improvement science;
- Get the balance right between what to do and how to do it;
- Establish a local clinical team – this includes a team leader, a champion to start the improvement programme as well as dietitians, physiotherapists and tissue viability nurses;
- Bring together the acute, community and independent sectors of the health board. All teams established a baseline of pressure ulcer incidents at the start of the initiative, and a pressure ulcer safety cross was used to measure the number of days between incidents (NHS Wales, 2010).

The aims of the SKIN Bundle are outlined in Box 2. Using the IHI Model for Improvement, the elements of the Bundle were tested, compliance was measured and the data reviewed. Changes continued to be made until compliance reached 95%.

**SKIN Bundle assessment tool**

A SKIN Bundle assessment tool (Fig 1) was developed to help critical care staff achieve reliability in:

» Evaluating and documenting risk assessments;

» Ensuring all patients receive the most appropriate care;

» Documenting deviations from best practice, for example when patients withhold consent to interventions.

By using the tool to audit practice, staff were also able to monitor what they were doing well and what they needed to improve. Other visual cues, communication tools and decision aids have been developed throughout the organisation to ensure the SKIN Bundle is delivered effectively.

**Discussion**

Eighteen clinical teams have attended the internal mini collaborative sessions; a further six have received virtual mentoring. All teams are using the IHI Model for Improvement to test and implement changes, and are displaying the pressure ulcer safety cross to measure and monitor days between events. Tips, tools and techniques have been shared among collaborative members.

More than 95% compliance with the SKIN Bundle is now being achieved in an increasing number of areas (Fig 2), and the number of days between pressure ulcer events has also increased (Fig 3).
The bed selection decision algorithm to help acquire the correct mattress and bed for patients has been simplified, leading to more appropriate selection and use of less expensive beds; in addition, the use of barrier cream has been standardised to ensure consistent practice and to reduce waste.

Due to staff enthusiasm and belief in the value of the SKIN Bundle in the pilot area, the tool was spread more widely before we had achieved reliability. Fig 3 shows the delay in improvement days between pressure ulcers where the SKIN Bundle was spread too quickly (month 9). Spreading a tool before good compliance is achieved in the testing phase can lead to the implementation of something that is not yet fit for purpose and, therefore, likely to fail. We learnt from this experience, and have reinforced the need to ensure reliability before implementation and spread of an initiative.

**Conclusion**
The SKIN Bundle is a simple, holistic approach to ensuring all patients receive the appropriate care to prevent pressure damage. Using the pressure ulcer safety cross to measure incidents of pressure damage transformed attitudes – staff went from accepting pressure damage as inevitable for some patients to scrutinising care to ensure everything was being done to prevent pressure ulcers from occurring. The IHI Model for Improvement is a simple and reusable model for introducing rapid change, resulting in sustained improvement. NT

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**References**