

Your skin matters



Introduction

The aim of the high impact action – Your skin matters is ‘no avoidable pressure ulcers in NHS provided care’ – but which ones are avoidable? We know that pressure ulcers represent a major burden of sickness and reduced quality of life for patients. They create significant difficulties for patients, carers and families, as well as increasing time in hospital and, therefore, cost to the NHS.

A practical summary

Most nurses will agree that the majority of pressure ulcers that develop in NHS provided care are avoidable. So why do they occur? Often it is the processes around their prevention that fail, for example not being able to get hold of the right equipment, or not finding the time to undertake an early assessment. Stopping pressure ulcers needs input from the multidisciplinary team that results in the creation of a simple process that works and that we all follow. As a nurse, why wouldn't you want to lead on the work to stop your patients from developing pressure ulcers?

The problem

Pressure ulcers are quite common and are estimated to occur in between 4% and 10% of patients admitted to hospital. Figures for their occurrence in the community are more difficult to obtain, but it has been estimated that 20% of people in nursing and residential homes may be affected and up to 30% of the population in general. (Clark M, Bours G, Defloor T; 2004).

Pressure ulcers can occur in any patient but are more likely in high risk groups, such as the elderly, people who are obese, malnourished or have continence problems, people with certain skin types and those

with particular underlying conditions. The presence of pressure ulcers has been associated with an increased risk of secondary infection and a two to four-fold increase in the risk of death in older people in intensive care units (Bo M, Massaia M et al, 2003).

The cost

The cost of treating all hospital acquired pressure ulcers in the UK is estimated to be between £1.4 – £2.1 billion each year, comprising 4% of total NHS expenditure (Bennett et al, 2004). Treatment costs vary depending on the grade of ulcer, from £1,064 for a grade one ulcer to between £10,551 and £24,214 for a grade four ulcer depending on complications. The same study estimated that the daily costs range from £38 to £196. Nurse or healthcare assistants time accounts for almost 90% of the costs, which increase with ulcer grade because the time to heal is longer and because the incidence of complications is higher in more severe cases.

What we can do

Prevention of pressure ulcers requires a collaborative inter-disciplinary approach requiring each member of the team to take responsibility for management, risk assessment and prevention of pressure ulcers.

Key areas to start with to help you to create the right processes and reduce pressure ulcers include:

- think about the high risk patients – we all know risk is predictable
- carry out timely skin assessments
- make sure the right equipment is available

Literature
review



Further information available
from the NHS Institute website

- improve nutrition and hydration and initiate and maintain suitable measures of how you are doing
- use the expertise that is available to you: tissue viability specialists, medical staff, dietitians, physiotherapy, OT and the patient
- make sure that education and training focuses on the prevention as well as the treatment of pressure ulcers.

Remember: **education is key; equipment can only do so much.**

It is about more than just a mattress; patients need pressure relief when sitting, as well as lying down.

Consider the four key elements make up the SKIN bundle:

- surface
- keep moving
- incontinence
- nutrition.

Culture change is vital for embedding change. Pressure ulcers should be seen as avoidable adverse events not an inevitable fact of life. Root cause analysis of adverse events is crucial. Investigating incidents and comparing to best practice is essential. Ownership of the problem cannot be stressed enough - all too often it falls to tissue viability nurses who may struggle for several reasons (their/others knowledge, level at which they work, influence, trust priorities, culture, time and other priorities). It truly needs to be cross organisational, with investigations and actions performed/owned by all.

Pressure ulcers don't just exist in acute hospital settings, but also within community, social care and home settings. A multi-organisational approach will help to reduce prevalence in the community and in hospital settings.

The case studies

East Kent Hospitals University NHS Foundation Trust – Ensuring the right equipment for the right patient led to a 9% reduction in the incidence of pressure ulcers.

Kettering General Hospital NHS Foundation Trust – focusing on continence care has helped reduce the incidence of skin damage by 80%.

Newham Primary Care Trust – working with nursing homes has reduced the number of pressure ulcers and saved £1.5m.

Abertawe Bro Morgannwg University Health Board (Wales) – a zero-tolerance approach to pressure ulcers has led to many wards having no pressure ulcers for several years.

"Quality is improved by empowering patients and empowering professionals. There must be a strong role for clinical leadership and management throughout the NHS."

High quality for all-NHS Next Stage Review Final Report 2008



Where are the best sources of information?



The Royal College of Nursing (RCN) and National Institute for Health and Clinical Excellence (NICE) collaborated to develop clinical guidance on the management of pressure ulcers in primary and secondary care.

http://www.rcn.org.uk/development/practice/clinical_guidelines/pressure_ulcers

Tissue Viability Nurses Association
www.tvna.org

NPSA 1000 lives campaign
<http://www.npsa.nhs.uk/corporate/news/npsa-encouraged-by-new-1000-lives-campaign-findings/>

Saving 1000 lives campaign Wales
<http://www.wales.nhs.uk/sites3/home.cfm?orgid=781>

European and American Pressure Ulcer Advisory Panel
<http://www.epuap.org/>

Essence of Care
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4005475

"Healthcare professionals should use their clinical judgment and consult with patients when applying the recommendations which aim at reducing the personal physical and social and financial impact of pressure ulcers."

The management of pressure ulcers: a clinical practice guideline

The Royal College of Nursing and National Institute for Health and Clinical Excellence

Case study: Newham PCT



Protecting our most vulnerable patients

Nursing homes were the focus for further improvement in reducing pressure ulcers in the community at Newham PCT, which recruited two specialist nurses to work with them on reducing the prevalence and impact of pressure ulcers among this vulnerable patient group.

Setting the scene

Newham PCT boasted a well-established and highly effective tissue viability service with an active education and training programme and a well-used wound formulary for routine care. But the service was receiving increasing numbers of calls from the eight nursing homes in its area for advice on tissue viability for residents. Referrals for nursing home patients were coming late, when pressure ulcers were advanced and often required hospital admission.

The approach

The tissue viability service appointed an additional nurse to tackle the increasing incidence of pressure ulcers in nursing home patients. This also helped to reduce hospital admissions. The service included an increased frequency of visits to review patients at risk of pressure ulcers and an education programme for all nursing home staff. The trust wound care formulary was introduced to the nursing homes to ensure dressing selection was appropriate for the wound type.

The team worked closely with staff in nursing homes to identify and acknowledge the extent of the problem and helped to audit the number of pressure ulcers in the nursing home population.

"You have this private sector area where problems impact on the work of the NHS and on the patients' lives I was finding quite horrendous pressure ulcers. By the time the referrals came in there was little choice but to admit them to hospital. I had to take a step back and think how could we change the culture?"

Caroline Dowsett

Nurse consultant for tissue viability



How they did it

Newham PCT felt the potential benefits of expanding its tissue viability support for nursing homes were clear, not only for the community health services, but across the health and social care economy. Developing the service would lead to better quality of life for patients by reducing the incidence and severity of pressure ulcers and, in turn, reducing the need for treatment, GP time and hospital admissions.

“Prevention is the most effective measure,” says George Souther, lead nurse. “Ultimately we are looking for a reduction in complex wounds – these are the patients that end up in hospital. This would mean we could pick up pressure ulcers at an early stage and work with the nursing home staff.”

Newham PCT had eight nursing homes in the area, with 480 beds, and Dr Caroline Dowsett, nurse consultant for tissue viability, recognised that providing real support would require more resources.

For Caroline, being a member of the professional executive committee was a critical enabler in securing support and, through a business case, the funding they needed. But it still took perseverance: Caroline lobbied commissioners over a three-month period.

“We knew we would need additional resources,” she said. “My success shows the importance of having clinical engagement in commissioning to drive up quality.”

In November 2008, practice nurse, Carole Taylor and district nurse, Bisi Oshinbolu were employed as clinical nurse specialists. Part of their role is to work closely with staff at the nursing homes. Routine monthly visits helped to establish trust and built up the skills of the workforce through training and education.

At times, the team has dealt with things head-on. *“There is a duty of care,” says Caroline. “There was one nursing home that I was very unhappy with and then relationships broke down. There was a huge amount of relationship management needed to get them to trust us, so that we could work together.”*

“The problem might not be lack of knowledge, it might be about time or equipment. It is vital we listen not lecture. We are a guest in the nursing home and have to act accordingly.”

Education has been key to their success. It has given nursing home staff the confidence to make decisions, to work in partnership, to detect and intervene. The rate of staff turnover within nursing homes among unqualified staff means there is always more training needed. As well as organising dedicated training events. Bisi and Carole offer on-the-spot training in wound care.

Within six months, the team had moved away from being suspicious and not wanting us around to a position where we received daily calls for advice from a workforce invigorated by its role in improving their residents' quality of life. The training is providing new skills to nursing home staff who are enthusiastic learners: an upcoming training course for healthcare assistants currently has a waiting list.

"The key to this is the education," says Bisi. "The staff now have the confidence to make decisions and we support and encourage them, telling them they did the right thing. When we first went in, the staff thought we were checking up on them, they didn't know how to take us. It's about building trust and relationships; we are there to help them."

"Support workers spend the most time with the residents, it's important that they are trained so that they know exactly what to look for, making sure the cushions are okay, look at where the pressure areas are and also when dressing an ulcer, assessing the colour so they can do simple dressings."

The role has provided its challenges, but Carole says it has tremendous job satisfaction. "We do impact more on people's lives. I remember seeing one particular patient improving, and saying to the staff, it was the best Christmas present I could have had."



"It was a very attractive outcome from a commissioning point of view. It improved quality of care, increased quality of life for patients and was cost effective by reducing incidence and severity and, with it, hospital admissions and treatment."

*George Souther
Lead nurse*

"Now they will come to us and ask for training. It's more of a partnership approach, not a doing 'to' but doing 'with'."

*Bisi Oshinbolu
Tissue viability nurse specialist*

Local results

Impact on quality of care

Data collection has shown a reduction in the number and severity of pressure ulcers in nursing homes.

Data from the acute providers has shown a decrease in the number of patients admitted from the community with pressure ulcers by 50% for the period April-August 2008/09.

The work has resulted in improved quality of care and improved quality of life through a reduction in incidence and severity (less category three and four) of pressure ulcers. The service has freed up GP time, and reduced costs through dressings and medicines. Caroline and her team are now able to concentrate on the more complex cases and provide more education which supports prevention.

The team carry out a root cause analysis for every patient admitted to hospital with a pressure ulcer, looking at what caused the admission and whether it could have been prevented. The local formulary for prescribing across the PCT has been rolled out voluntarily to nursing homes. Recent audits show 80% compliance.

Impact on patient experience

Patients remain in their own environment. Fewer patients developing pressure ulcers means less pain and a better quality of life.

Impact on staff experience

Nursing home staff feel empowered and their increased knowledge has improved their decision-making.

The tissue viability team has developed greater working relationships with local nursing homes.

Impact on cost reduction

In 2008 there were 25 to 45 admissions. In 2009 this reduced to between 0 and 12 admissions. Based on admission costs of £199 per night, with average stays of nine nights, the cost saving is £59,100 based on the highest number of admissions. Additional improvements in quality of life for patients who did not develop pressure ulcers.

Return on investment calculation

Costs of the following inputs were calculated for both the set up and roll out phases: dedicated time from the project lead to undertake the audit, develop the business case and provide ongoing management; employment of additional tissue viability nurses; delivery of education and support to the nursing homes; and travel costs. Impact costs were identified in terms of reductions in the number of patients being admitted to hospital for pressure ulcer care which, extrapolated over one year totalled 348. An average cost figure for treating pressure ulcers across the NHS at year 2000 prices was used to calculate cost savings. For every £1 spent Newham PCT generated £51.56 of benefits over a year. This calculation does not take into account the additional quality benefits that have not been monetised, nor any additional costs incurred by the nursing homes.



Key themes and methodology

Managing relationships

The additional resource has allowed the tissue viability team to work with nursing homes, offering routine visits and training sessions, rather than simply responding to immediate needs via referrals. The time invested in building up a relationship with staff has more than returned that investment for the PCT.

Change can provoke different emotions and reactions in people. Understanding the human dimensions of change, and specifically the impact that your own personal approach has on others, can be invaluable. Many change projects fail because of lack of insight into why people may be reacting negatively to a proposed change.

Improvement tip

A useful way to consider the different ends and attitudes of individuals, or groups, who are to be key stakeholders in your initiatives, is to carry out a 'what's in it for me' analysis.

Managing the Human Dimensions of Change (NHS Institute)



"I like to give praise, to let the staff know it's not me but they that have done it; giving them ownership is a great encouragement."

Carole Taylor

Tissue viability specialist nurse

"The key to this is the education. The staff now have the confidence to make decisions and we support and encourage them."

Bisi Oshinbolu

Tissue viability nurse specialist

"Quality improvement often takes longer than expected to take hold and longer still to become widely and firmly established within an organisation."

Ham, C. Kipping, R. McLeod, H. Meredith, P. (2002) *Capacity, Culture and Leadership: lessons from experience of improving access to hospital services*, Health Service Management Centre, University of Birmingham

Sustainability

Providing ongoing and informal on-the-spot training to staff as the need arose, combined with regular more formal sessions, has created a better knowledge base. If change is hard, then sustaining it can be even tougher. The knowledge and skills training in Newham has been sustained, keeping skills up-to-date and keeping tissue viability at the front of minds and by quickly identifying new staff during visits and delivering training. The high level of involvement and training of staff have resulted in cost savings and all three of these means that the service continues to be effective and sustainable.

How can you avoid wasting money and time during change initiatives? One of the primary reasons why quality improvement is difficult to integrate into an organisation is that many of the changes that are put in place fail to survive in the longer-term. The sustainability model is an easy-to-use tool, which aims to help healthcare improvement teams think about the likelihood of the change sustaining throughout and beyond a project.

Improvement tip

The likelihood of a project sustaining is dependant on:

- staff
- processes
- organisation.

The sustainability model consists of 10 questions that you can score your project against to see how likely it is to lead to sustainable change. The accompanying guide gives lots of practical advice on how you can make it more likely to sustain.

www.institute.nhs.uk/sustainability



Case study: Kettering General Hospital NHS Foundation Trust



Change that's not just skin deep

A programme of change focusing on continence care has helped reduce the incidence of skin damage by 80%. In the absence of a dedicated continence specialist, the tissue viability team worked differently to maximise the support they were able to give staff. A selection protocol for continence products was devised to ensure the right product is available and used.

Setting the scene

Kettering General Hospital had a high rate of Clostridium difficile infection (CDI) in 2006. A decision had been taken to open a new isolation ward to handle the high levels of infection and this prompted a request for ten extra air mattresses, each with a price tag of £3,000. The hospital believed that the mattresses were necessary to help combat the possibility of pressure ulcers, which is a constant risk in vulnerable patients with diarrhoea.

The approach

The tissue viability team recognised that moisture lesions are a preventable problem, primarily occurring secondary to incontinence, which leads to irritant dermatitis, maceration and excoriation. Avoiding compromised skin reduces the risk of pressure ulcers and potential subsequent infections.

The team worked on increasing their ability to recognise moisture lesions, and to select the best treatment options. This was first piloted in the isolation unit and then on three medical wards.

The team identified a range of products for skin care and protection and devised a selection protocol for their use, as well as providing staff education.

Improved access to a better range of incontinence management products, along with education on their selection and correct use, made a significant impact. The absence of a dedicated continence advisor meant that a different, collaborative approach was necessary to maximise the support available to staff.

"I was familiar with the High Impact Actions programme and knew that it was possible to make a huge difference by introducing small, but significant changes...this sort of programme is fundamental to effective nursing care."

Colin Iversen

Tissue viability specialist

How they did it

The hospital's tissue viability specialist, Colin Iverson identified that the potential skin damage in patients with CDI was caused by incontinence, rather than the type of mattress used.

"In my opinion, the solution was a human one, rather than something related to the equipment we were using," he says. "Rather than getting pressure ulcers, patients with CDI – many of whom are elderly – are at risk of developing moisture lesions, which are caused by the exposure of skin to an irritant, such as diarrhoea."

Colin campaigned for a return to the essentials of patient care. The key to preventing moisture lesions, or preventing pressure ulcers from becoming infected, is to keep fluid away from the patients' skin. This meant that for this group of patients, using the correct incontinence products was more important than using pressure mattresses.

Colin worked with the hospital's suppliers, reviewing available products and their suitability for different patients. Three different products were identified which would meet the needs of different categories of patient: velcro-based products for people who were immobile, integral pads with underwear for more mobile patients and lower absorbency products for those without acute diarrhoea. They also discussed barrier creams and products used for washing patients with compromised skin.

A training and education programme based on one-and-a-half hour drop-in sessions was designed for staff.

Colin and the product supplier took staff through the fundamentals of how to measure patients, how to fit the products and how to recognise when the products needed changing. Within two weeks, all staff on the ward had attended the training.

Becky Mould says: *"Nothing like this had been done before and it became part of the staff preparation for the new ward. Colin put together a skin guide, covering essentials like how to clean patients' skin, what barrier products to use and which incontinence products were suitable for which patients and the supplier showed them how to use the products properly."*

Colin then spearheaded phase II of the programme, to roll it out across the hospital, with the medical wards next to be involved. *"This time I was able to carry out an audit to give us a baseline figure to work from," says Colin. "The supplier and I liaised with ward managers to draw up a patient profile and identify the sort of products that they might need. Then, as before, we held drop-in training sessions for staff."*

Colin believes that getting the right staff on board was crucial. Ward managers played a significant role and, without their buy-in, the programme would have been far less effective. *"I have no authority and cannot compel staff to come along to the training," he says. "However, the fact that the programme was given the backing of the ward managers meant that staff were keen to come along and, even though there was some resistance to the idea of removing bed squares, ultimately the results were very positive."*

"For the first two to three months, someone toured the wards every day to allow staff to ask questions, whether it was me, the supplier or Becky, the isolation ward manager. This was an important part of the change management process and helped to make sure the change became normal practice."

The next stop was the surgical wards, where problems arose because moisture lesions weren't recognised as a major issue with surgical patients.

"There was a low turnout, as staff felt the training was less relevant to them," says surgical ward manager, Joanne Milton. "It is a limited problem on these wards but slowly practice is changing. I think you need experts on every shift to communicate best practice to others and it would have been helpful to have some training sessions for nightshift staff."

"I plan to revisit areas that we have already approached to make sure the change is being sustained and I intend to re-approach the surgical wards," adds Colin. "In retrospect, I would get staff to do their own audit so they can see for themselves what a difference their actions are making to patients. It is impossible to overstate how powerful this is as an approach."



"A year after the ward opened, staff were proud of the fact that, even though they were looking after high risk patients, they had been able to prevent moisture lesions from developing by following a few simple procedures."

Becky Mould
Ward manager

Local results

Impact on quality of care

No moisture lesions developed on the isolation ward over the course of a year.

An audit of numbers of moisture lesions on medical wards pre and post change showed there was a reduction of 80%; typically there were 5% of patients with moisture lesions pre-change. This was reduced to 1% or less post-change.

Impact on patient experience

Reducing lesions reduces pain and suffering for patients.

Impact on staff

The training sessions achieved 100% attendance for those staff on the isolation ward increasing both confidence and competence.

Impact on cost reduction

Product cost on the three wards: before change £5,023 per quarter and after, £4,830 per quarter. It is difficult to estimate the savings made by reducing hospital treatment and length of stay.

Return on investment calculation

Costs of the following inputs were calculated for both the pilot and roll out phases: dedicated time from the project lead to select products, develop the business case and provide ongoing management; and the delivery of education to staff on the pilot and roll out wards. Impact costs were identified in terms of reductions in the incidence of moisture lesions extrapolated over one year and savings made on the products used. For every £1 spent, Kettering General Hospital NHS Foundation Trust generates £3.84 of benefits over a year. This calculation does not take into account the additional quality benefits for patients that have not been monetised.



Key themes and methodology

Project management: the importance of momentum and spread

Working in a busy high-pressure environment doesn't leave much time for reviewing working methods. The lessons learned at Kettering General Hospital illustrate the importance of having a clear plan of what needs to be achieved but also of taking the time to make sure staff are supported through the change. It is important to be flexible in the way that new training is delivered to maximise the number of staff who are both able and willing to participate.

Training by itself will only get you so far. Staff also need continuing support and a constant, visible presence, so that they are reminded of the changes that are being made.

"Education and training were the foundation stones of this project and personalities, too, are a key to success. If you have ward managers or clinical champions who can positively influence their colleagues, then you are far more likely to succeed. In my opinion, you need at least 75% of staff on board to make a significant change. With 50% and an enthusiastic 'champion' you could still make a positive impact for patients."

Colin Iverson
Tissue viability specialist

Improvement tip

Project management should help you start to pull together a practical plan for spreading and sustaining a project. Regardless of which project management approach you use, there are different tools that will enhance your project.

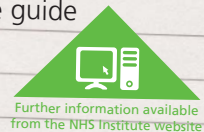
You do not always need a full-blown project management approach, but it is always good to use some of the basic principles in any project, however small. Try the following:

The Productive Series' project guides

NHS Sustainability model and guide

Thinking differently resource guide

Commissioning to make a bigger difference



PRINCE 2 www.ogc.gov.uk



"As healthcare leaders we need the courage to make a personal stand for what is right. We need to make a profound connection with deep-seated values that brought us and our colleagues into healthcare in the first place."

Helen Bevan
Chief of service transformation
NHS Institute

It is important not to underestimate the amount of time that it takes to get new ways of working fully up and running. There is no one way that always works in spreading good practice, it depends on what you are trying to spread and to whom.

Good project plans with aims and milestones are important, but equally important are the more informal aspects. We are all more likely to be influenced by our immediate network of friends and colleagues, and utilising these informal, social networks to get change to happen can be powerful. It is also important to remember that all clinicians want to deliver safe and effective care to their patients. Nobody wants their patient to develop a pressure ulcer. Tapping in to some of these fundamental values that are common to all clinicians is a good way of getting people involved and passionate about making the change.

Understanding the problem

In the NHS, innovative working can often have more impact than extra investment. At Kettering General, a plan to spend thousands on new mattresses to protect vulnerable patients with CDI from skin damage seemed like the obvious answer. But, by really understanding the underlying problem, and asking 'why', the team ensured that the right solution was developed. Often we tend to jump in with a solution before really understanding what the problem is and then get disappointed when we don't get the impact we want. In an improvement project, it is always better to spend more time really understanding the problem rather than just implementing a solution. Doing this is also a great way to involve and engage others early in the change process.

The Power of One, the Power of Many makes a powerful case for the way in which social movement thinking can be incorporated into existing health and healthcare improvement practice to create more effective, compelling, faster change for patients and the public. The publication demonstrates how social movement approaches – based on connecting with peoples' core values and motivations to affect change – can deliver improvement at previously unseen depths.

The Power of One, The Power of Many
(NHS Institute)



Improvement tip

Identifying the root cause of the problem by analysing qualitative and quantitative information will help you understand the real cause and determine whether a symptom is actually the cause or effect of a problem.

Your improvement work needs to focus on the cause of the problem not the effect.

p40, The Handbook of Quality and Service
Improvement Tools (NHS Institute)

Using five whys

This is a simple tool that can help you determine the relationship between different root causes of a problem.

Example – The new ward needs 10 mattresses

WHY The patients on this ward are at higher risk of pressure ulcers

WHY They are a potential risk for moisture lesions

WHY Because the skin is potentially compromised (due to poor continence)

WHY The root cause is that we need to prevent compromised skin by using appropriate continence products.



Case study: East Kent Hospitals University NHS Foundation Trust



Supporting those in need

Pressure relieving mattresses are considered to be an important tool in preventing and treating pressure ulcers – and this is why wards can be less than willing to part with them for fear of having a patient in need and no equipment to support them. East Kent introduced a range of measures to ensure they were available for those patients who were in most need.

Setting the scene

The trust recognised that safe, effective wound prevention and management is not only fundamental to high quality patient care but is inextricably linked to a number of health outcomes.

The approach

Support workers were employed to manage pressure-releasing mattresses. Their role was to help ensure that mattresses are available to those who need them.

The trust also implemented revised tissue viability guidelines and wound dressings/skin care formulary. This was undertaken in conjunction with a multidisciplinary education programme.

A tissue viability multidisciplinary foundation course was created in 2006 and is held regularly for staff. A project group was set up to review evidence, products and processes. An initiative that included all of these components was launched trust-wide to clinicians

April 2009. To measure the impact of the work, a baseline wound audit was undertaken at the bedside in February 2008 prior to the intervention and one year later in February 2009.

"We had a problem with the management of mattresses across the trust. Not only finding them, but also storing them and decontaminating them. Since the introduction of the tissue viability support workers, the problem has been magicked away. Mattresses are available if we need them and the tissue viability support workers have raised the profile of what we need to do and got us thinking about what our patients need."

*Naomi Dickson
Modern matron for
acute medicine*

How they did it

Pressure relieving mattresses are an important component in combating pressure ulcers – but for many trusts, the management of these mattresses can be a big challenge.

East Kent Hospitals University NHS Foundation Trust has introduced tissue viability support workers as part of its work to reduce the risk and severity of pressure damage. These support workers have developed an equipment library, providing both safe storage and a reliable decontamination process.

Their first challenge was to instigate a mattress amnesty – to get wards to trust the system enough to part with unneeded equipment. Support worker, Corrina McMahon readily admits this was not easy.

“My role is to make sure the equipment is with the right patient so that wards had it for when they needed it. An awful lot of equipment was being used on patients who didn’t need it. We had to build up confidence so wards no longer held onto mattresses they didn’t need. This took perseverance.”

Tissue viability nurse specialist, Judy Elliot admitted the roles were not easy to fill. *“When we advertised we didn’t specify a nursing background. But it was vital the support staff had the right personality, as they would have to challenge staff in higher grades.”*

The roles were taken on by seconded healthcare assistants. For the wards, it has been a revolution. Not only is there no longer a panic to find a mattress,

patients are risk assessed by nurses within six hours of admission and sometimes arrive on the ward with the equipment they need with involvement from the support workers.

Liz Bonham, sister in the clinical decisions unit, coordinates admissions. She said: *“Initially we didn’t know what the role (of tissue viability support worker) was, but it has become a lot easier with them in place. We can identify patients as soon as they come through the doors.”*

Their achievements have been felt throughout the hospital. The support workers have the potential to become ‘the eyes and ears’ of the specialist nurses who work at the trust. Through visiting the wards, they can capture information on pressure ulcers and can give simple advice on wound care; all helping to improve care for patients and free up the tissue viability nurses to concentrate on more serious wounds.

The team also helps to improve the reporting and collection of reliable information on pressure ulcers. Having reliable information means that grade one ulcers can be targeted, and this helps prevent grade two ulcers from developing. *“It’s generally accepted that there are some pressure ulcers we can’t prevent,”* adds Judy, *“We don’t see every pressure ulcer – some are wrongly graded and they can develop in hospital or in the community.”*

The trust is considering how to develop the service further, but it is very definite about the value of the work the tissue viability support workers have done.



Local results

Impact on quality of care

Significant improvements were observed in best practice and patient experience. In 2008, 42% of patients were considered to be receiving most appropriate wound care. This had improved to 65.7% in 2009, an increase of 23.7%. Prevalence of wound infection had reduced from 18% in 2008 to under 9% in 2009.

Impact on patient experience

This improvement means that less patients suffer pain, indignity and increased length of stay.

Impact on staff experience

Staff are demonstrating improved confidence and empowerment in their decision making regarding wound management. The tissue viability course is popular and often oversubscribed. There is improved communication with all staff groups throughout the trust and staff appear enthusiastic at taking best practice recommendations forward in their clinical areas.

Impact on cost reduction

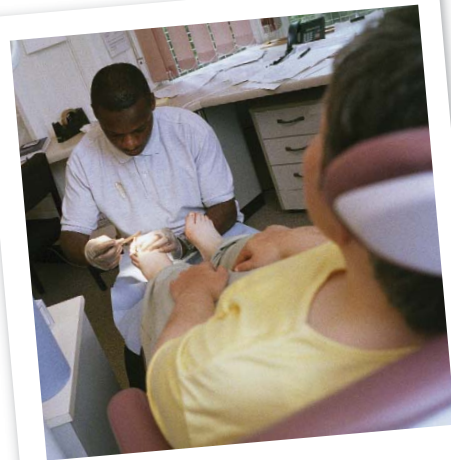
In 2008, data analysis associated wound infection with longer length of hospital stay and a mean increased cost of £3,916.94 per patient with an infection. Using this calculation, in 2009, the reduction provided a total cost saving of £58,754.10.

Key themes and methodology

We are the champions!

The key to success for East Kent Hospitals in developing their High Impact Action work to reduce pressure ulcers has been its use of champions at all levels of the organisation. The tissue viability support workers are the most effective champions. Their work and success with wards has inspired ward staff to champion the programme themselves.

The introduction of new roles will only reap the full benefits when linked to a robust service redesign. This will only happen with strong clinical leadership and active engagement of clinical teams. This ensures that staff feel involved and are supported to act themselves. Involving people in the change means that they are less likely to resist the change.



Improvement tip

Consider the type and extent of empowerment you want to encourage according to the nature of your organisation, its culture and the personalities and roles of the individuals involved.

There are three key areas to help you decide which empowerment approach to take:

area 1: **six basic motivators**

area 2: **vision and directions**

area 3: **examine corporate actions.**

Quality and Service Handbook
(NHS Institute)



"The support workers are an innovation. Nobody wants a patient to develop a pressure ulcer, we have to give frontline staff the knowledge, skills and empowerment to address it."

*Sally Moore
Deputy director of nursing*

Communication, communication, communication!

Any programme of improvement will fall at the first hurdle if no one knows what it is, how to do it and what the benefits are.

Successfully implementing the tissue viability equipment library has been about good communication, gradually building up trust and moving on to wholesale confidence. This is not just about telling people once, says tissue viability support worker, Corrina McMahon, but about perseverance. With some staff it has meant a gentle reminder, with others tackling their scepticism.

Investing in communication is vital to the work you are doing. Spending time in the beginning to understand how you will tell the 'change story' is important. If there are gaps in communication there will be layers of frustration and general nervousness around the change.

"Communication with staff is vital – making sure they are involved and understand and that they are supported so they can act themselves – this goes from the healthcare assistants right through the grades – even the ward clerks have a role to play."

*Nicola Cerrulo
Ward manager*

Improvement tip

Thinking about the change – identify your stakeholders

A good way to do this is to think about and list all the people and groups likely to be affected by the proposed change. One framework that can help you think about different people who may be affected is called the 9 Cs:

- commissioners
- customers
- collaborators
- contributors
- channels
- consumers
- champions
- competitors
- commentators.

Don't worry too much exactly where people fit (and some people will fit under more than one 'C'; it is just a way of identifying who you need to communicate with. Once you have your list, a good question to ask is: 'what do I need from them and what do they need from me?'.

Quality and Service Handbook,
NHS Institute



What are you squirreling away?

Keeping hold of things so they are there when you need them is something that happens a lot in the NHS. It may be anything: pressure-relieving mattresses, wheelchairs or specific medications; if there are things that you keep hold of – or squirrel away – then it indicates that the process around that item needs looking at. Holding on to things, although it seems a good thing to do for you, just makes the matter worse for everyone.

Think about what you squirrel away and think about how you can help to redesign the process around it.

Case study: Abertawe Bro Morgannwg University Health Board



I'd like to stay on the ward without the pressure ulcers, please

Nurses working in the plastic surgery unit were all too familiar with the dire consequences of pressure ulcers, so have developed a zero-tolerance approach to hospital-acquired pressure ulcers. The practice has spread throughout the trust and pressure ulcers are now an extremely rare event.

Setting the scene

The Abertawe Bro Morgannwg University Health Board provides primary and secondary care, serving more than 600,000 people across South Wales. It is part of the 1,000 Lives campaign, organised by NHS Wales, to save 1,000 lives and prevent 50,000 incidents of harm. An audit prior to the work showed a 13% pressure ulcer rate across the health board.

The approach

The health board adopted a zero tolerance approach to hospital acquired pressure ulcers. They introduced a SKIN bundle tool which stands for – surface, keep moving, incontinence, nutrition. In two years, the work has been rolled out across 92 wards in four acute hospitals.

Each ward has been empowered to introduce its own version of the SKIN bundle tool, but keeping the four key elements.

There has been a change in culture across the health board, from pressure ulcers being regarded as part of life, to being a serious incident and 'nursing failure'.

"There was a feeling in many wards that pressure ulcers were part of life: what we have shown in the last two years is that they are avoidable. It took about a year to get the process right; it's crucial to start small, to start on one area and get it right."

*Nicola Williams
Assistant director of nursing
and quality*



How they did it

Charge nurse Nigel Broad regularly sees the extreme harm and distress caused by pressure ulcers. His plastics and burns ward at Morriston Hospital regularly admits patients requiring surgery and skin grafts for severe pressure ulcers, many of which occurred in a hospital. So when his ward had the opportunity to develop a zero-tolerance approach, staff were keen to show it could work.

"We believe that the vast majority of pressure ulcers are preventable; they should not be happening. And that's why we came up with the idea of zero-tolerance," says Nigel. "In recent years, there have been a lot of targets to meet and we felt we were getting away from the quality aspects of nursing."

In 2008, NHS Wales introduced its 1,000 Lives campaign, which aimed to save 1,000 lives and prevent 50,000 incidents of avoidable harm. Within months, the Anglesey ward's zero tolerance approach to pressure ulcers had become a cultural norm with staff no longer feeling 'pressure ulcers are part of hospital life', instead viewing them as a 'nursing failure'.

The ward itself started with a 4.5% rate for pressure ulcers. This is lower than the 13% average across the trust, and around half the national average, but Nigel and his team felt they could still do better and initially aimed for a 50% reduction.

The ward audited its rate of nutrition assessment and skin viability assessment on admission and found it needed improving. It also introduced a SKIN bundle (surface, keep moving, incontinence, nutrition) tool for those identified as high risk. This is a single sheet of paper that sits at the end of the bed and is used by all staff. The SKIN bundle acts as a contract between the staff and the patients – patients will shout 'I need to be moved now!'

Within three months of starting the work, patients were getting properly assessed within hours of admission. Following the introduction of the SKIN bundle tool, the ward reduced the rate of pressure ulcers down to zero, a figure which they maintained for almost two years. When a grade two ulcer developed in January the staff, says Nigel, were devastated. A review found that the SKIN bundle had been used, but not fully maintained. This has further proved that the SKIN bundle works and redoubled staff efforts to ensure they are fully compliant. The ulcer healed within four days.

Key to its success was that the SKIN bundle was introduced slowly, starting with a single patient, and then growing throughout the ward. By April 2010, it had been spread throughout the trust's four sites and 92 wards. Each ward uses the four elements of the bundle, but it is adjusted to suit the ward. The number of pressure ulcers are publicly displayed on 'safety crosses' in green. 'Green' days are quickly developing into green months and green years and have become a source of great pride among staff.

Hamish Laing, consultant plastic surgeon and associate medical director for performance and quality, helped lead the work. *"As a specialty we care quite deeply about pressure ulcers – we see the pain, suffering and distress they cause. The story would often be the same, they came into hospital without one and develop one on a ward,"* says Hamish. *"We became increasingly convinced that they were avoidable. We started with what we thought would be an easy ward, got it right there and moved on. We now have dozens of wards that have gone 200 days or more without seeing a pressure ulcer, when they would have seen one or more a month."*

"We are entering a period where budgets are going to be very difficult and everybody is worrying about how to save money. The obvious thing is to stop wasting it and every patient that gets a pressure ulcer costs the NHS thousands of pounds. Preventing pressure ulcers will stop harm and save a lot of money – it's not surprising our director of finance is as excited about this as we are."

They have had a high level of executive support: the director of nursing writes out to staff members when their ward reach 100 days free from pressure ulcers and the rate is regularly reported at trust board meetings. *"If I went onto a medical ward and the sister said this is not that important, then the director of nursing would visit the ward and say this is a priority,"* adds Nigel. *"It has created a culture of change."*



"I can't emphasise enough how much of a kick nurses get out of this. It really goes back to what nurses come into nursing for: looking after patients."

Nigel Broad
Charge nurse

Local results

Impact on quality of care

The health board changed the culture of staff to make pressure ulcers unacceptable. The pressure ulcer rate was reduced on Angelsey ward from 4.5% to zero; the ward went 638 days without any pressure ulcers.

Reduced pressure ulcers across the health board from 13% to zero. Many wards are now running up to a year without pressure ulcers.

Impact on patient experience

The work raised awareness of what pressure ulcers are and how they should be avoided; patients and families become partners in the SKIN bundle, requesting action when it is needed.

Impact on staff experience

The health board changed the culture of staff to make pressure ulcers unacceptable.

Impact on cost reduction

The work reduces length of stay through avoiding pressure ulcers.

The organisation is now looking at maintaining tissue viability in accident and emergency, looking at use of pressure relieving mattresses on A&E trolleys and modifying the method for use in the community to reduce occurrence of pressure ulcers in the home and in social care.



Key themes and methodology

Plan, Do, Study, Act

The trust introduced the changes in small areas, allowing rapid testing and evaluation. The Angelsey Ward piloted the SKIN bundle, introducing it for one patient, and then one bay and eventually onto the whole ward. This style has been adopted throughout the trust, spreading across 92 wards over four hospitals sites in two years.

Introducing these frameworks will benefit from the model for improvement known as Plan, Do Study Act (PDSA) approach: a simple structure for developing, testing and implementing changes.

The PDSA is a tool commonly used within improvement initiatives was first used in the 1930s within manufacturing industries and began to be used extensively within health improvement programmes from about 1996. One of the core benefits of this approach is that it advocates small scale testing which enables continual learning and adjustment of new approaches in order to achieve the most optimal change. It is still one of the most simple but comprehensive methods to use when thinking about making improvements to the service that you deliver for patients. (See Langley, G J Nolan, K M, Nolan, T W, Norman, L Provost, L P (1996) The improvement guide.)



Improvement tip

"Using a PDSA cycle enables you to test out changes on a small scale, building on the learning from these test cycles in a structured way before whole scale implementation. This gives stakeholders the opportunity to see if the proposed change will succeed and is a powerful tool for learning from ideas that do and don't work. The process of change is safer and less disruptive for patients and staff."

The Handbook of Quality and Service Improvement Tools (NHS Institute)



"We did the SKIN Bundle first with one patient, and then a Bay of six patients and then two Bays. We have spread it to the rest of the hospital and across four sites."

Nigel Broad
Charge nurse

"The PDSA cycle is a never-ending cycle of learning and improvement that Deming developed, based on what he learned from his mentor, Walter Shewhart. Deming taught it to the Japanese in 1950. He called it 'the Shewhart cycle' and the Japanese call it 'the Deming wheel'."

P33, The Leader's Handbook – A guide to inspiring your people and managing the daily workflow

Peter R. Scholtes (1998)



How to measure...Your skin matters

The national picture

A Nurse Sensitive Outcome Indicator has been developed for pressure ulcers. The indicator measures the number of newly acquired pressure ulcers in any given clinical setting per month. The measures are likely to be reported quarterly.

How are pressure ulcers defined?

"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."

Nurse Sensitive Outcome Indicators:

<http://www.ic.nhs.uk/services/measuring-for-quality-improvement/what-is-happening-on-indicators-for>

Pressure ulcers are routinely measured by categories. The European Pressure Ulcer Advisory Panel (EPUAP) http://www.epuap.org/guidelines/Final_Quick_Prevention.pdf guidelines categorises pressure ulcers as follows:

- **category one: non-blanchable redness of intact skin.** Intact skin with non-blanchable redness of a localised area usually over a bony prominence. Discoloration of the skin, warmth, edema, hardness or pain may also be present. Darkly pigmented skin may not have visible blanching
- **category two: 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 blister

- **category three: full thickness (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

- **category four: full thickness loss (bone visible).**

Full thickness tissue loss with exposed bone, tendon or muscle. Slough or Escher may be present. Often include undermining and tunnelling.

How do you define an 'avoidable' pressure ulcer?

The High Impact Action: 'Your skin matters' focuses on preventing avoidable pressure ulcers in NHS provided care. There is no consensus definition around what exactly an avoidable pressure ulcer is; the definition should be developed locally.

How do you define an ulcer as acquired in NHS-provided care?

The Nurse Sensitive Outcome Indicators have some advice around how to classify pressure ulcer that may develop in a healthcare setting:

"For patients admitted or transferred to a healthcare setting without any obvious signs or symptoms of pressure area skin damage, the development of a pressure ulcer of stage three or four within 72 hours is likely to be related to pre existing damage incurred prior to admission or transfer of care. For any pressure area damage arising thereafter, the most likely cause will be related to care within the healthcare setting the patient is in; this must be regarded as a new event."

How might pressure ulcers be recorded and measured locally?

Many organisations routinely monitor pressure ulcers at ward level. How this data is defined and used will vary, but you should consider using the principles of good measurement outlined in the measurement section (page 16). For example, display the information using a simple run chart so that the rate of newly acquired pressure ulcers over time is clearly visible to staff.

Some organisations might also benchmark their wards against one another and produce dashboards which show how the performances of wards compare. This can be useful as it can help to incentivise the spread of best practice, but care needs to be taken in how it is perceived to ensure that the focus is on improvement rather than judgement.

Pressure ulcer calendar

Incident free day

Incidents

Near miss

	1	2			
	3	4			
	5	6			
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
	25	26			
	27	28			
	29	30	31		

Another powerful way of displaying pressure ulcer data is to use a 'safety cross' which graphically shows how many days it has been since the last pressure ulcer in any given ward or organisation. If category one and two pressure ulcers are very common it may be better to start with showing how long it has been since the ward or organisation has had a category three or four pressure ulcer. Safety crosses are illustrated in The Productive Ward: releasing time to care programme www.institute.nhs.uk/productiveward.

As well as looking at the rate of newly acquired pressure ulcers, it is useful to have some 'process' measures that are related to the 'outcome' measure of pressure ulcers (see the measurement section (page 16) to understand more about process and outcome measures). Some examples of process measures that are suggested by the European Pressure Ulcer Advisory Panel are:

- % of high risk patients on pressure relieving mattresses
- % patients who are identified as high risk who have a dedicated repositioning strategy
- % of patients having a complete risk assessment including skin.

Measurement when making improvements

If you are starting to work on reducing pressure ulcers, you should begin by looking at what you and other teams in your department or organisation are already measuring. You might be able to use existing systems if appropriate and this will save a lot of time. Use the **seven steps to measurement** framework outlined in the measurement section (page 21) to link together what you are already collecting around pressure ulcers and to understand gaps where you might need to collect extra information.