Guide to preparing and implementing a pressure injury measurement programme

June 2018

Contents

Published in June 2018 by the Health Quality & Safety Commission,

PO Box 25496, Wellington 6146, New Zealand

This document is available on the Health Quality & Safety Commission's website:
www.hqsc.govt.nz

Acknowledgements

This document has been developed through a partnership between the Health Quality & Safety Commission (the Commission) and four pilot site district health boards (DHBs):

- Waikato DHB
- Whanganui DHB
- Capital & Coast DHB
- Southern DHB.

We would like to thank the DHBs for helping to establish a robust approach to in-hospital pressure injury (PI) measurement. Their support and feedback prior to and during the pilot stage were invaluable.

We also appreciate the DHBs' agreement to our publishing of resources and tools they developed as part of their pre-existing PI prevention and management programmes.

About this guide

This document gives hospital staff practical guidance on how to implement a robust PI measurement approach, as part of wider PI prevention and management (PIPM) activities. Having a strong measurement approach in place means hospital staff can measure the impact of their wider PI improvement work and track change over time. Without a robust measurement approach, change can't be demonstrated.

This document also provides PI measurement guidance prior to the roll-out of the national quality and safety markers (QSMs) for PIs. Reporting to the Health Quality & Safety Commission (the Commission) is required from 1 July 2018.

The experiences of the four DHBs that piloted the PI measurement approach proposed by the Commission are summarised in this guide. This includes information about lessons learned, key priorities, challenges and successes of implementing the recommended approach, and examples of resources developed and used by the pilot DHBs.

Also included are answers to some frequently asked questions taken directly from the Commission's PI measurement frequently asked questions resource (the full document should be referred to alongside this guide) and recommendations for governance, project management and infrastructure arrangements for PIPM programmes.

More information

For more detailed information about preventing, managing and measuring PIs, please read this guide in conjunction with the following resources:

- Guiding principles for pressure injury prevention and management in New Zealand
- The case for investment in: A quality improvement programme to reduce pressure injuries in New Zealand
- Developing a national approach to the measurement and reporting of pressure injuries
- PI measurement frequently asked questions

- New Zealand Wound Care Society PIPM resources at www.nzwcs.org.nz, including a recently updated staging tool called *How to classify and document pressure injuries*. A copy of this resource is in Appendix 1.

Background to the PI measurement approach

The Commission is working with the Accident Compensation Corporation (ACC) and the Ministry of Health (the Ministry) to reduce the occurrence of and harm from PIs.

PIs (also known as pressure ulcers, decubitus ulcers, pressure areas and bed sores) are a cause of preventable harm for people using health care services, including hospital, aged residential care and home or community care.

In late 2014, ACC, the Ministry and the Commission engaged KPMG to investigate the economic and social harm caused by PIs and to advise on the likely benefits of national PI prevention and improvement work. The KPMG report is available on the Commission website and has informed the joint agency approach to PI prevention.

ACC is leading the development of guidance, resources and tools for the sector on the prevention, assessment and treatment of PIs. In May 2017, it published a resource entitled *Guiding principles for pressure injury prevention and management in New Zealand*.

The Ministry provides clinical oversight and support for engagement with clinical leaders. Ongoing focus areas are: developing a culture and infrastructure that supports PI prevention; promoting a multidisciplinary approach; and improving collaboration between different parts of the sector. The Ministry, through HealthCERT, also focuses on PIPM in aged residential care.

The Commission is leading two pieces of related work:

1. producing case studies to inform improvement projects (now complete; four patient stories can be found here)
2. measurement of PI prevalence, of which this document is a part.

In October 2016, the Commission published a report called *Developing a national approach to the measurement and reporting of pressure injuries*. The report outlines an ideal, robust approach to the measurement and reporting of in-hospital PIs, measuring change over time and demonstrating where improvement activities have had a positive impact and reduced the incidence of PIs.

Since then, four DHB hospitals have piloted the measurement approach recommended in that report. Their experience and learnings are shared in this guide.

The case for reducing PIs

PIs are often avoidable, have significant negative impact on patient's lives, their families and whanau, and those providing their care, increase hospital length of stay and are associated with extra resource consumption.

PIs are an indicator of the quality of care being received. While prevalence in New Zealand cannot be precisely quantified because there is no consistent, national measurement approach at this stage (which is something the Commission hopes to change with the introduction of its PI QSMs), it is known that PIs affect a high number of people, and reports of PIs are increasing.

The good news is that, as both international and local evidence shows, with the right knowledge and care, the prevalence of hospital acquired PIs (HAPIs) can be reduced.[1]

At a glance: PIs in New Zealand[2]

- An estimated 55,000 people suffer from a PI in New Zealand every year, which equates to 4–8 percent of people receiving health care in New Zealand.
- Direct costs are estimated at $67 million per annum.
- Approximately 3,000 of these people develop severe (grade 3 or 4) PIs each year, resulting in a significant negative impact on their quality of life.

Case studies: Why is work to prevent PIs important? What is the impact on patients and their carers?

The Commission has worked with patients and providers to develop four case studies that share personal experiences of patients who developed a debilitating PI while in hospital or receiving care. The case studies also outline how the health care providers and carers adjusted their policies and processes to prevent similar events from occurring again.

The case studies are summarised below to provide a personal element to the rationale for undertaking PI prevention and measurement/improvement initiatives. Reading about peoples' actual experiences of PIs helps to build 'the case for change'.

Case study one: PI risk assessment vital to patient safety

In 2016, John Rankin was diagnosed with lymphoma after being admitted to hospital. During his stay in hospital John didn't receive any skin checks and wasn't provided with information about PIs. Unfortunately, John developed the start of a PI, and while it was dressed, no care plan was put in place at the hospital to prevent it getting worse.

At home after discharge, the PI worsened. John needed negative pressure wound therapy, which is a dressing over the wound with a vacuum machine attached to draw moisture out. The PI led to extended recovery time and additional stress for John and his family.

---

[1] Jull A, McCall E, Chappell M, Tobin S. 2016. Measuring hospital-acquired pressure injuries: A surveillance programme for monitoring performance improvement and estimating annual prevalence. *Int J Nurs Studies* 58: 71–9.

[2] KPMG. 2015. *The case for investment in: A quality improvement programme to reduce pressure injuries in New Zealand*. URL: www.hqsc.govt.nz/assets/Pressure-Injuries/PR/KPMG-pressure-injury-report-Jan-2016.pdf.

Following John's PI, the DHB reviewed and improved its PI prevention programme to reduce the likelihood of a similar occurrence.

Additional risk assessment and prevention strategies were also implemented and a comprehensive education programme established to make staff fully aware of the risk to the patient, as well as staff responsibilities.

The full case study is here.

Case study two: Rosalie Ross-Cunningham's Story

In 2012, Rosalie Ross-Cunningham passed away due to sepsis caused by an infected PI that developed while she was living in aged residential care.

Factors that contributed to Rosalie's PI and subsequent deterioration included lack of the right resources and equipment, lack of attention to Rosalie's poor hydration levels, and staff who did not seem to know about PI prevention (including non-medical staff, such as those providing food and drinks).

The residential care facility where Rosalie lived has since changed ownership and new management is in place. The case study highlights the priority the new management places on PI prevention.

The full case study is here.

Case study three: Patient and family collaboration vital to PI care plan success

In 2013, Amanda Bradbury was admitted to hospital with lymphedema (swelling) in her legs and a PI on her sacrum, believed to be caused by an old, ill-fitting wheelchair.

Amanda's story shares the difficulty of managing a long-term PI. It highlights the importance of patient, carers, family and whānau members and health care professionals developing a care plan that everyone contributes to and that clearly articulates roles and responsibilities.

The full case study is here.

Case study four: Patient participation supports PI awareness and prevention

In March 2017, David Jackson underwent a bilateral (double) hip replacement. However, during his stay David's limited mobility and a lack of preventative actions, such as the provision of a pressure-relieving mattress, contributed towards the development of a PI on his sacrum.

The hospital acknowledged the shortfall in David's care, stating that engagement and communication with David about his PI risk should have been better, both before admission and during his stay.

Following David's experience, the hospital reinforced the expected practice of using a three-step skin check process to support staff to more appropriately engage the patient in their care. It also put in place a surgery-related pre-assessment alert system so that appropriate PI prevention resources, such as pressure relieving mattresses, are available immediately after surgery.

The full case study is here.

Why is measurement important?

Patients have the right to safe, quality health care; and measurement is a key part of preventing patient harm. Without measurement the extent to which PIs are prevalent within an organisation will be unknown. Whether or not the right PI interventions are being performed at the right time to reduce the risk of PIs occurring will also be unknown. Measurement tells the measurer whether or not prevention efforts are making a difference.

Without robust information, there is no basis for improvement. Measurement provides a solid foundation upon which to monitor quality improvement (QI) activities and drive change at a local level.

The Commission's PI measurement work is focused on bringing about national consistency in PI prevention practice, data collection and reporting. This will improve data for local PI prevention work and eventually allow the Commission to understand the national prevalence of PIs and measure change (improvement) over time across the sector.

Preparing for PI QSMs

Until now, there has been no consistent, national approach for measuring PIs in New Zealand.[3] In promoting this PI measurement approach and introducing the PI QSMs (focused on in-hospital process and outcome improvement), the Commission hopes to achieve three aims:

1. Make PI prevention practice more consistent around the country and, as a result, reduce unwarranted variation and patient harm.
2. Give organisations the tools to monitor performance improvement, resulting in:
    a. fewer PIs occurring over time
    b. the benefits of PI prevention activities being realised.
3. Take a robust, standardised approach to data and information aggregation so the Commission can better understand the prevalence of PIs in New Zealand. This information will help the Commission decide which providers need further support to reduce PIs and associated harm (for example, hospitals, aged residential care providers and/or community-based care providers).

What are timeframes?

The intention is that, from 1 July 2018, PI data will be reported by DHBs to the Commission on a quarterly basis. Once the Commission and DHBs are confident with the process, the information will be publicly reported, most likely starting with quarter 3, 2018–19 (January–March 2019).

The Commission will work with DHBs in January–June 2018 to test and refine the PI QSM data collection and reporting process. Willing, early adopters will be able to get a 'head start'

[3] Moore D, Sin M, Smith J, et al. 2016. *Developing a national approach to the measurement and reporting of pressure injuries*. Wellington: Health Quality & Safety Commission. URL: www.hqsc.govt.nz/assets/Pressure-Injuries/PR/Developing-a-national-approach-to-the-measurement-and-reporting-of-pressure-injuries-Oct-2016.pdf.

on implementing the data collection process. The approach will be confirmed by the end of June 2018 and from July 2018 'real' reporting will begin.

Please refer to the PI measurement frequently asked questions for detailed information. This guide provides a summary of key points only. More information to guide you in the set-up of your PI measurement programme is below under 'PI measurement: How to measure and what data to collect' and 'Setting up your PI measurement programme'.

What are QSMs?

QSMs are usually a combination of process measures and outcome measures. They are sets of related indicators concentrating on specific areas of harm.

QSMs help providers focus on and prioritise an area of high harm. They can drive change in behaviour or practice, and a shift to using evidence-based processes that are known to reduce harm and improve patient outcomes. They are also used to evaluate the success of QI programmes and see whether desired changes in practice and reductions in harm and cost have occurred.

More information about QSMs is on the Commission website.

What are the PI QSMs?

The PI QSMs comprise two process measures and one outcome measure, which is calculated in two ways:

- Process 1: Percentage of patients with a documented and current[4] PI assessment.
- Process 2: Percentage of at-risk patients with a documented and current[5] individualised care plan with specific PI actions.
- Outcome 1: Percentage of patients with a HAPI.[6]
- Outcome 2: Percentage of patients with a non-HAPI.[7]

Collecting data for the PI process QSMs will involve reviewing the notes of patients that are randomly selected for a complete skin check to determine whether they have had the appropriate (and current) PI assessment and individualised care planning processes completed (and documented). The same group of patients must be used for both the process and outcome QSMs.

To summarise, here is one approach to collecting data for the QSMs:

1. Selection of a random sample of patients, with the size of the sample determined by the ward or unit size and excluding ineligible patients (see the PI measurement frequently asked questions for detailed information about random sampling).

[4] A current assessment is one that evaluates recent patient need and has been conducted before the day of measurement and within the last seven days.

[5] A current individualised care plan is one that responds to a current assessment of patient need (eg, within the last week or within reasonable proximity to a change in the patient's condition).

[6] Hospital acquired PIs (HAPIs) are any stage of PI developed after admission to hospital or that were not captured on admission.

[7] Non-HAPIs are any stage of PI above stage 1 captured on admission. If the PI is stage 1 it is considered to be a HAPI because these can develop in a very short period of time, eg, four hours. and could have developed while the patient was waiting for admission. Regardless of stage, if the PI was not captured on admission (meaning noted in the patient notes) it must be counted as a HAPI.

2. Process QSM 1: Review of the patient's notes to confirm if a PI assessment was done and is current.
3. Process QSM 2: Where the assessment found the patient to be at risk of PIs, review of the patient's notes to confirm if a current individualised care plan is in place.
4. Outcome QSM 1 and 2: Skin check.

Why is the Commission interested in PI assessments and individualised care plans?

The Commission wants patients to receive the best care possible. For PIPM, that care should include assessments of the patient's risk of developing a PI and an individualised care plan that responds to the findings of that assessment.

What is meant by the term 'PI assessment'?

PI assessment involves documented assessment processes to establish what interventions might be needed to stop either the patient from developing a HAPI or an existing PI from worsening. Any assessment tool that considers patients' needs to prevent the development of a HAPI is suitable evidence of a documented assessment.

For the purposes of the Commission's PI QSMS, a current assessment is one that evaluates recent patient need and has been conducted before the day of PI measurement and within the last seven days.

An evaluation of recent patient need depends on the patient's circumstances. It will usually take place within the week before the day of QSM measurement, assuming there has been no change in circumstances. For instance, in an older rehabilitation patient, an assessment that took place within the previous week will likely be current, unless the patient's condition has deteriorated, in which case a more recent assessment would be required. If an assessment did not take place in response to the deterioration, then any assessment should not be considered current. If an assessment is not current, the individualised care plan is unlikely to be current.

What is meant by the term 'individualised care plan'?

An individualised care plan is a plan that responds to the assessed needs of the particular patient, is updated as the patient's status changes and shows evidence of identified needs being met. A current individualised care plan is one that responds to a current assessment of patient need (eg, within the last week or within reasonable proximity to a change in the patient's condition).

A current individualised care plan that meets the requirements for the Commission's QSM is one that documents and addresses the patient's PI(s), either existing or at risk of.

How will the QSMs be reported by the Commission?

The PI QSMs will be reported by DHB as percentages, which means DHBs need to submit numerator and denominator data to the Commission.

What will the numerators and denominators be?

A numerator is the top number in any fraction. The denominator is the bottom number of any fraction.

The numerator for the first process QSM is the count of patients with a documented PI assessment. The denominator is the number of patients included in the surveillance for that period (ie, the total number of patients sampled).

The numerator for the second process QSM is the count of patients with a documented, current individualised care plan that includes actions specific to that patient's PI(s), either existing or at risk of. The denominator is the number of patients with a documented PI assessment that were then found to be 'at risk' (meaning an individualised care plan with specific PI actions is warranted). In other words, the denominator of the second process QSM will be a subset of the numerator of the first process QSM.

For the outcome measure, the Commission will report the prevalence of HAPIs by stage. The numerator will be the count of patients with any stage of HAPI (stages 1, 2, 3, 4 and unstageable). The denominator will be the number of patients included in the surveillance for that period (ie, the total number of patients sampled).

Will the outcome QSM be reported by stage?

Yes. DHBs will therefore be asked to report the stages separately so the outcome QSM can be reported by stage, making the true scale of the problem easier to understand.

Stage 1 PIs are likely to make up the majority of HAPIs. Simply reporting an overall prevalence rate could mislead the reader about the severity of the issue or the PIs being reported. For example, stage 1 PIs involve no break in the skin; stage 2 PIs are partial-thickness wounds; and stage 3 and 4 PIs are full-thickness wounds and unstageable PIs are likely to be full-thickness.

A recently updated staging tool, *How to classify and document pressure injuries*, is in Appendix 1.

PI measurement: How to measure and what data to collect

Please refer to the PI measurement frequently asked questions for detailed information. The information provided in this section is a summary of key points only.

What is the proposed methodology for collecting the outcome data?

In summary, the methodology is to randomly select patients (refer to next subheading for information about random selection) then carry out a complete skin check of bony prominences on those patients as part of normal rounds. The data for the process markers should be collected at the same time via reviewing the patient's notes. We recommend DHB hospitals do the data collection (ie, review of notes and skin checks) at least each month to ensure they have the appropriate number of patients per quarter to build up a picture of prevalence in as short a period as possible.

The methodology specifies that skin checks should be carried out on a minimum of five randomly selected patients for a ward or unit, assuming a ward size of about 22–25 beds. For smaller wards or units (eg, fewer than 15 beds), three randomly selected patients will be enough, while for larger wards or units (eg, more than 30 beds), 7–10 randomly selected patients will be enough.

Some patients may be unavailable for the skin check, for example, if they meet an exclusion criterion or are on leave on the measurement day. DHBs may want to generate a slightly larger list of randomly selected patients for each ward each month so alternates are available. For instance, Auckland DHB generates a list of seven patients for each ward on measurement/audit/surveillance day with the expectation that the first five consecutive patients on the list will be included in the measurement, and the remaining two are alternates to be included sequentially if required.

Why is random selection of patients important?

Random selection is important because it eliminates selection bias and therefore means the estimated prevalence is accurate. With random selection it is unpredictable who will be sampled and this approach produces a sample representative of the hospital census on the day. Non-random methods can lead to unrepresentative samples and thus unreliable estimates of prevalence.

Non-random methods include selection by last digit of the NHI number (eg, odd or even), selection by specified bed space and selection by date of admission.

There are many ways to do random selection. It is best to work with your quality teams and/or business analysts to develop a suitable method for your hospital. Several DHBs have developed automated methods, generating a list from the midnight census, with the list of selected patients automatically being sent to the wards (eg, via email or printout) on measurement day. The DHBs that have developed this or another approach did so with support from their quality teams and/or business analysts.

Which PIs should be counted and reported?

A recently updated staging tool, *How to classify and document pressure injuries*, is in Appendix 1.

Any stage of PI (ie, stages 1, 2, 3, 4 and unstageable) should be counted and reported as either a HAPI or non-HAPI (a PI that existed prior to and was documented on admission). For patients with more than one PI, DHB hospitals should report the most severe PI to the Commission.

Hospitals should assume that all stage 1 PIs are HAPIs; other stages may have occurred outside the hospital. However, if the PI was not noted on admission, it must be reported as a HAPI regardless of stage because this will drive improvements in admission processes and/or transitions of care both within the hospital and across the sector.

Note for patients who have transferred between clinical areas, wards or units and the PI occurred in another area or service within the hospital, the PI is still a HAPI and should be included.

The individual stages of all PIs (both HAPIs and non-HAPIs) need to be submitted to the Commission but we will only report publicly on the prevalence of HAPIs by DHB.

Data about non-HAPIs will be used to inform wider, non-hospital QI activities, such as with aged residential care and community care providers.

Providers should not include suspected deep tissue injuries and mucosal injuries in the count reported to the Commission (the rationale for which is explained in the PI measurement frequently asked questions).

How are hospital-acquired pressure injuries (HAPIs) defined?

HAPIs are any stage of PI developed after admission to hospital or not captured on admission. Stage 1 PIs should always be reported as HAPIs because they can develop in a very short period of time.

Where an undocumented PI is found after admission, no matter what stage, it should be considered a HAPI because this is an important part of driving improvements in PI detection and management at admission.

Any PIs documented as part of admission are considered pre-existing (ie, non-HAPI).

Why is the Commission interested in ALL PIs (ie, HAPI and non-HAPI)?

We want to know about all PIs (excluding deep tissue injuries and mucosal injuries) whether they are HAPIs or non-HAPIs (meaning they occurred outside the hospital, for example, in aged residential care or in the community).

Data about non-HAPIs will help us, and others such as ACC and DHBs (who have population-wide responsibilities and work with other providers, such as aged residential care, in their region), focus efforts on reducing the incidence of and harm from PIs that occur outside hospitals.

Note the Commission will only report HAPIs by DHB hospital; DHB hospitals will not be held accountable for non-HAPIs.

How will non-HAPIs be reported by the Commission?

The Commission will not report non-HAPIs as part of DHB hospital QSM reporting. Instead, we and other agencies, such as ACC, will use this information to work with regions with high numbers of non-HAPIs to identify where these PIs are coming from. We will work with the carers of those patients (eg, aged residential care facilities and/or community care providers) to inform quality improvement activities and reduce the incidence of and harm from non-HAPIs.

What if a patient has multiple PIs?

Count and report only the most severe PI to the Commission.

What if a patient has both a HAPI and a non-HAPI?

Count and report both the most severe HAPI and the most severe non-HAPI. This will mean that the patient is, in effect, counted twice, but the Commission needs to understand the prevalence of both HAPI and non-HAPI, and the information about non-HAPIs will be used to inform activity with the wider sector, such as community and aged residential care providers.

What are the exclusions/inclusions?

The Commission's proposed methodology allows for some planned exclusions (that is, patients that should be excluded from selection or lists of selected patients). The focus of the measurement approach is hospitalised patients, where skin checks are appropriate. All inpatient areas, bar those noted as exclusions below, should be included in the measurement.

The exclusions are:

- patients in emergency departments
- day-stay patients
- patients on last-days of life pathways
- patients in delivery suites
- patients in acute mental health units.

There may be other reasons that individual patients on participating wards should not be included and wards should exercise a common-sense approach to inclusion or exclusion in such circumstances.

Aside from the exclusions noted above, all other inpatients/inpatient areas should be included.

Reporting findings internally

Reporting PI prevalence data internally can be a powerful tool to help motivate staff and drive improvement. A lot of DHBs already make use of this mechanism and report their adverse events data for a similar reason.

Internal reporting allows explanation of the DHB's current situation, highlights where improvement occurred and shows what interventions are making a difference.

DHBs must determine the best way to present and report data internally. However, we recommended DHBs report PI data on a monthly basis, while the data is still new. This will enable data to be used in a more timely manner to drive local change and improvement.

Strategies to feed PI QI data back to ward staff and up through to members of the senior leadership team should be developed to support the cycle of QI. DHBs may also wish to consider the following:

- Outcome data should be reported back to each service (as overall hospital prevalence data, rather than service/unit-level prevalence data, which can vary too much on a monthly basis and be discouraging) as well as to quality and safety managers, directors of nursing and the chief executive.
- Feedback from pilot DHBs advised that the charge nurse manager and senior team on each service is best placed to disseminate a hospital-level PI prevalence report to ward staff.
- Encourage ward staff to compare process measure results with other wards. This comparison will support healthy competition and will encourage staff to identify solutions to support improvement and prevent PIs occurring.
- Will you publicly display your reports? If so, how and where will you do this?

Setting up a PI measurement programme

Below are some recommendations to help plan and implement a PI improvement and measurement programme. These steps provide general guidance only. Please assess and consider how each step relates to your hospital's unique environment.

Step	Description

1. Governance	Engagement with senior leadership about a PI measurement programme is vital for meaningful support and leadership. Before starting it is essential that the project has that endorsement and support, and has agreed governance processes in place, with appropriate resourcing. Useful guidance about leadership can be found in principle 2 of ACC's *Guiding Principles for Pressure Injury Prevention and Management in New Zealand*. See also the Commission's 2017 guide, *Clinical governance: Guidance for health and disability providers*, which provides a useful framework to consider when establishing and/or improving quality and safety programmes.
2. Establish a programme team	Establish a multidisciplinary programme team to plan and support implementation of the PI measurement programme. Identify key individuals and assign roles and responsibilities, such as the programme lead and/or coordinator. Key people to consider including are: • director of nursing (or a delegate) • chief medical officer (or a delegate) • quality and safety representative(s) • wound care clinical nurse specialist • allied health representative(s) • charge nurse(s) of pilot wards • nurse educator(s) • frontline nursing staff.
3. Plan	The programme team will plan the implementation approach that will be taken. Key considerations are: • should the approach be a pilot phase followed by a roll-out phase? • how should pilot wards be selected? • should a 'champion' for each ward be appointed to help promote and encourage PI prevention among colleagues be identified? • how should pilot ward staff be engaged to ensure buy-in? • what PI education and measurement specific training is needed? • how will patients be engaged with and informed about PI measurement? • what data will be collected? • how will random sampling be conducted? • who will organise random sampling? • who will conduct measurement? • how will data be analysed and who will analyse it? • how will data be reported? • who will the reports go to and how often? • how long will the pilot last?

	• what resources are needed? • how and when will the roll-out of the PI measurement programme to the wider hospital (barring excluded areas) occur once the pilot is complete?
4. Choose a QI methodology	Decide what QI methodology will be used to test and refine the pilot (eg, the improvement model including plan–do–study–act (PDSA) cycles, the existing/preferred methodology (if the DHB has one) or another recognised QI approach). The Healthcare Quality Improvement Partnership's *Guide to quality improvement methods* is a useful resource to determine what improvement method will suit local context.
5. Internal reporting	Consider what internal reporting will be implemented once data has been collected. For example, using run and control charts are a good way to display findings. The DHB's QI specialist(s) can support this.
6. Engagement	Engage with pilot wards. Seek buy-in and discuss and concerns raised, particularly those related to additional workload and time required. Engage more widely too. Let the whole organisation know what's planned and the proposed timeframes for roll-out. Engage patients. Talk to them about PIs, what they can expect from staff and what they can do to reduce PI risk.
7. Tool development	Work with the project team and ward staff to develop measurement tools that best suit their unique needs. This document includes some examples from the pilot DHBs. It is important to develop tools in partnership with those who will conduct the measurement, so the tools are user friendly.
8. Training	Train staff so they understand the measurement processes, data collection requirements, and PI escalation requirements, eg, stage 3 and 4 PIs to be classified as adverse events.
9. Conduct measurement	Schedule a date to start measurement. Once collected, data should be sent to the appropriate project team member for analysis. Consider using a questionnaire to gather feedback from staff to understand how the measurement process went for them. What difficulties did they encounter? These will need to be addressed prior to roll-out. Do staff need more training? What went smoothly? Should this be replicated in other areas or kept as part of the roll-out?
10. Review measurement process	Review the data submitted by staff. Is there any missing data? What does the data show? What feedback did staff provide about the process? Study and discuss the results with the project team.

	Consider what improvements could be made to the measurement tools or to pre-measurement training to make the process quicker and easier, or to ensure any missing data is collected.
11. Start cycle 2	Implement improvements agreed by project team. Perform the next monthly measurement, incorporating any changes.

Pilot DHB learning and experience

Four DHBs were invited to pilot the PI measurement approach as part of their broader PI prevention/improvement programmes: Waikato, Whanganui, Capital & Coast and Southern. Their involvement helped us understand the implications of the proposed measurement approach across different types of DHBs, in different stages of developing a PI measurement programme.

- Waikato DHB is a large multi-campus DHB that was already using the proposed method, but needed to extend it to include the proposed population.
- Whanganui is a small DHB that had implemented a different weekly data capture approach, but needed to extend the approach to the proposed population.
- Capital & Coast DHB is an urban DHB with two hospital sites that had implemented a two-monthly data capture approach but needed to increase the frequency of sampling, test/confirm their sampling approach reflected the patient population (and met the definition of random), and extend the approach to the proposed broader population.
- Southern DHB is a multi-campus DHB that was awaiting Commission guidance before implementing any routine DHB-wide PI data collection method and was, therefore, 'starting from scratch'.

Tips from the pilot DHBs

The following tips are the culmination of common findings and experiences shared by the DHBs during the pilot.

Planning and management

- Don't rush the programme set-up process, particularly the planning stage.
- Taking your time at the set-up stage will save time in the long run and will set you on a better path.
- If you can, have a dedicated FTE (full-time equivalent) resource to coordinate your PI measurement programme. This allows specific time to be allotted to the work required to establish and manage the programme.
- Consider a staged approach – roll out gradually rather than all at once.

Leadership and engagement

- Senior leadership support is vital for appropriate governance and resourcing.
- Charge nurse manager support and leadership are vital for the success of a PI measurement programme roll-out, as well as ongoing management.
- Good leadership supports staff to get it right.
- Management should celebrate PI measurement programme achievements at DHB level. This is vital for staff morale, motivation and continued improvement.

Education considerations

- Determine what level of PI detection and prevention knowledge staff have. This will help you determine what educational resources are needed to support staff to improve.
- Keep PI education flexible and achievable by offering different types of training on different dates. Rolling presentations and in-ward/service training worked well for pilot DHBs.
- Provide measurement training and conduct practice measurement so those conducting the measurement understand what is needed.
- Those conducting the measurement must have a sound knowledge of PI staging (see Appendix 1). Include this in all training and run regular, quick refreshers.

Measurement tool development

Don't reinvent the wheel when developing measurement tools. See what other DHBs have developed, then borrow and adapt them for your own use. Examples from the pilot DHBs have been included in this document.

Managing PI measurement

- Make sure random sampling truly is random – get help from measurement experts within your DHB.
- Keep your PI measurement tools and processes as simple as possible.
- Develop a sustainable approach to PI measurement approach, so it becomes business as usual on each ward.
- Conduct audits in small, manageable chunks so data can be analysed and reported in a timely way.

Provide feedback

- Provide overall PI measurement reports to wards and senior leadership. Don't feed back individual ward prevalence because it can vary too much on a monthly basis and be discouraging. The measurement approach is designed to monitor DHB performance, not ward performance.
- Display results publicly on 'how are we doing'-style noticeboards.

Quality improvement

- Use a QI methodology to test your measurement process and tools.
- Include staff in the feedback and development loop. This is key to gaining buy-in and making the PI measurement programme sustainable.

DHB case studies

The following case studies describe the steps each pilot DHB took when implementing a PI measurement programme.

Waikato DHB

Timeline

2013: Three serious and sentinel events, Health Roundtable data and wound care data show a need to improve PIPM at Waikato DHB. Planning for a PIPM programme pilot begins.

2014: Pilot is rolled out to three inpatient wards. The planning and pilot lasts approximately nine months.

2015: Findings of the pilot are presented to the board of clinical governance. Approval sought to roll out the programme to the rest of the DHB. Approval granted. Liaison with nurse managers begins and the programme is rolled out to a cluster of new wards every three months.

2016: Programme implementation completed in all target wards.

2017: Roll out to neonatal intensive care and paediatrics.

In 2013, a series of stage 3 HAPIs prompted Waikato DHB to renew its approach to PIPM.

Since then it has implemented a comprehensive PIPM programme throughout the DHB including Waikato Hospital, four rural hospitals and two long-term care facilities. It is currently working with paediatrics and neonatal intensive care to introduce PIPM. The Commission's pilot gave the DHB an opportunity to consider how best to roll out a PI measurement programme within these services, both of which have unique considerations.

What governance approval was required for the programme?

Waikato DHB sought approval from the board of clinical governance to implement the PIPM programme. This included seeking approval to implement roll-out of the programme across the DHB once the pilot was complete.

Waikato also established a PI measurement steering group to provide expert leadership and guidance to the programme. The individuals within this group are influential advocates for the programme. The group is nursing focused, meets quarterly and is chaired by the chief nursing and midwifery officer. Members include the director of quality and patient safety, clinical nurse director, nurse educator, nurse practitioner wound care, clinical nurse specialist wound care, and the patient safety facilitator.

How did the DHB establish and plan the programme?

Waikato DHB's overall PIPM programme is managed by the DHB's patient safety facilitator, a role that has an allocated 0.2 FTE.

It took approximately nine months to plan, document, mandate and trial the new approach in the DHB's orthopaedics, vascular and stroke wards.

Waikato DHB felt strongly that it was important to take time to plan and implement the programme. Having a pilot stage was vital. It allowed the DHB to determine what would work and what wouldn't, helping it improve and try again until it was confident the programme could be successfully implemented on a wider scale.

The DHB's PI risk assessment form was also reviewed and updated to give staff a structured course of action to take when a PI is identified. Ward staff, predominantly nurses, were engaged in all parts of developing the form.

The form utilises the Braden Pressure Ulcer Risk Assessment and each patient assessment is linked to one of three PI packages of care (all shown in Appendix 2). The form is now reviewed annually with input from clinical areas. The revised form has improved the consistency, completion and adequacy of patient assessments. Packages of care ensure changes to skin integrity are recognised, and interventions to prevent and manage PIs are timely.

How did the DHB engage with hospital staff about the programme?

The lead-up time for implementing the pilot was important. It provided the DHB with time to introduce the plan to charge nurse managers and nurse educators for each pilot ward.

It also provided time to seek input from staff on developing practical solutions for a clinical setting and introduce the programme in advance to ward staff. This involved listening to staff concerns and finding out what level of PI knowledge staff had (via a questionnaire) so PI education could be designed to meet staff needs.

The programme team felt strongly it was important to make sure the PI measurement approach would work for ward staff, because they would be the ones implementing it at ward level.

Concerns about the time required to manage measurement was an initial challenge. Walking staff through the measurement steps to demonstrate the time it takes was important to address this concern.

Widespread roll-out across Waikato DHB required liaison with the clinical nurse director group to gain support and determine how the roll-out would take place.

Programme roll-out to a new cluster every three months was regarded as the most pragmatic approach. It allowed clinical areas that are naturally clustered together to be involved in making the change and implementing auditing together.

Showing staff how their efforts make a difference and celebrating their achievements helped to support and motivate them.

What PI training and education was provided to hospital staff as part of the programme roll-out?

Waikato DHB developed new PI education materials and offers staff a variety of PI training opportunities on different days/times, so staff can refresh their knowledge of PIs. This includes one-to-one PI education, 10-minute in-service education during handover, and video conference training to support rural hospitals without the need to travel.

The DHB also developed a 'train-the-trainer' approach enabling clinical champions and nurse educators to provide PI education. An online education programme is also being developed and nurses receive in-service PI measurement training before starting their role as an auditor.

How does the DHB conduct measurement?

PI measurement takes place every second Tuesday of the month on all wards. The patient safety facilitator uses calendar appointments and email reminders the Friday prior, to alert charge nurses to an upcoming audit. On the Tuesday of audit week, a random sample of patients is generated in an Excel spreadsheet from Monday census information. A list of names is then sent to charge nurse managers to audit.

Working out how to randomly sample patients for measurement was initially difficult. Waikato DHB worked with a DHB business analyst to create a reporting system that randomly selects patients on the measurement day of each month.

If the ward has fewer than 11 beds, three patients are randomly sampled for measurement. If the ward has 11–30 beds, seven patients are measured. If there are more than 30 beds, 10 are measured. Most wards measure five patients per month or approximately 150 patients per month for the whole DHB.

Charge nurse managers typically oversee measurement completion, with one nurse responsible for completing audits. Managing measurement if the charge nurse manager was on leave was an initial challenge. However, Waikato DHB determined that at least two staff on each ward should know how to manage the audit process, so measurement isn't put on hold if someone is away.

Skin checks are required for each patient that is randomly selected, but there is no audit of risk assessment documentation. This is captured as part of the charge nurse managers' care standards. The measurement data is returned to the patient safety facilitator via internal mail or email. Data is then entered into an Excel spreadsheet and analysed.

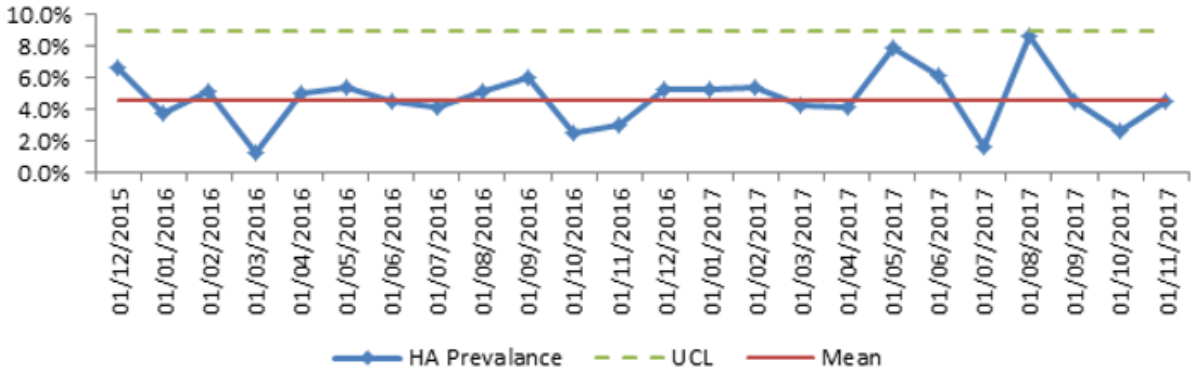
How does the DHB report data internally?

Waikato DHB develops a monthly report that goes back to charge nurse managers and their managers displaying overall hospital data, rather than individual ward data. Data is also reported to Waikato DHB's PI steering group and senior leadership team on a monthly basis.

Achievements

- Monthly measurement has helped to drive improvement, where required.
- Waikato DHB now has 32 wards completing PI measurement each month.
- Since the roll-out of the programme, HAPI stage 3 and 4 PIs have decreased (Table 1).
- PI measurement is now regarded as business as usual at Waikato DHB.

Table 1: Waikato DHB HAPI prevalence control chart – rolling 24 months



Whanganui DHB

In 2016, Whanganui DHB undertook an audit of patients found to have had a PI recorded in the National Minimum Dataset (NMDS) between 1 January 2013 and 30 June 2015.

The review highlighted issues, such as inconsistent coding, inconsistent staging and multiple recordings of the same PI. The issues pointed to a need for a more robust approach towards the collection and reporting of PI data.

To address the situation, Whanganui DHB implemented PI measurement using Care-Metric in mid-2016. Care-Metric is an online quality and safety performance data management service. Prior to this, the DHB did not undertake regular PI measurement as part of its PIPM programme, except for information collected and sent every two years to Care-Metric as part of the National Survey Care Indicators New Zealand.[8]

What governance approval was required for the programme?

Initial sign-off for the programme came from the director of nursing.

How did the DHB establish and plan the programme?

Discussions regarding how to best to improve the existing programme and implement a measurement approach took place between the director of nursing, the PI prevention coordinator and the associate director of nursing for patient safety and service quality.

Whanganui DHB has one medical, one surgical and one AT&R ward, so the revamped PI programme and new measurement approach was rolled out across these high-risk wards in one go.

Because the DHB already has a 'Knowing how we are doing' programme that focuses on care outcomes, such as medication errors, falls, hand hygiene and skin integrity, the PI measurement programme was not difficult to implement. Instead it was regarded as an addition to complement the skin checks that were already taking place.

In addition, a small PI working group was established and meets monthly to review PI data entered into RiskMan, Care-Metric reports and patient notes.

[8] www.care-metric.com/products.html

This helps the DHB identify problems with equipment, care planning or the initiation of new prevention measures that may have inadvertently contributed to a PI occurring.

How did the DHB engage with hospital staff about the programme?

Initial discussions to introduce the idea to each ward took place between the director of nursing, the PI prevention coordinator and the line managers/charge nurse managers for each area. Topics included the process for implementing the programme, and what requirements were needed to implement it appropriately within each ward.

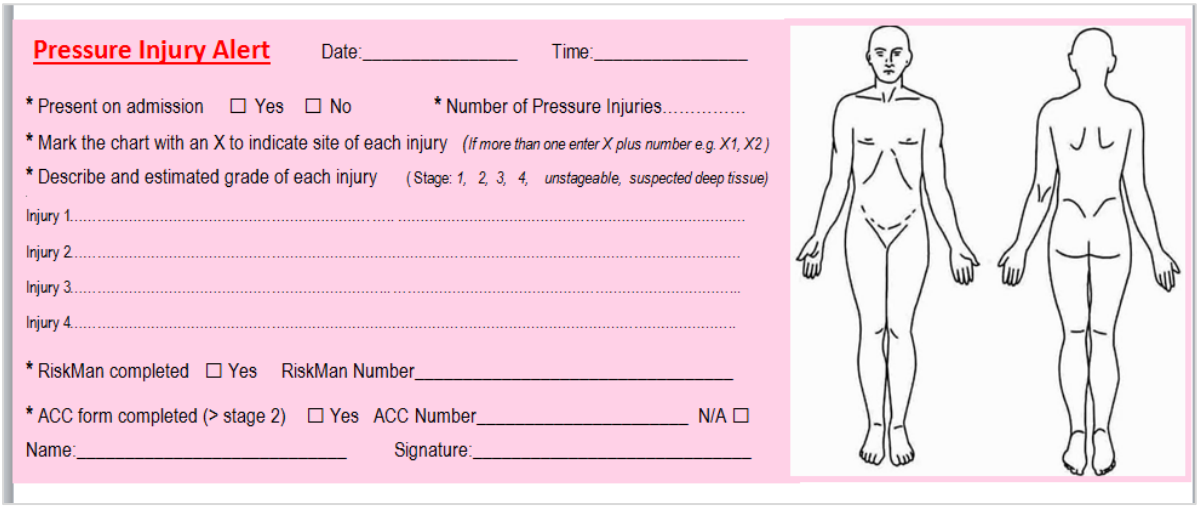
Charge nurse managers decided that the clinical coach (sometimes known as nurse educator) would manage the measurement programme for their ward. This is because the clinical coach can provide feedback immediately if they believe the ward is not doing well in a specific area.

What PI training and education did the DHB provide to hospital staff as part of the programme roll-out?

Clinical coaches were initially concerned that measurement would be time-consuming. To address this, the PI prevention coordinator provided one-to-one education on how to perform measurement and enter data into Care-Metric.

After this, the clinical coaches were comfortable with the process and their concerns were alleviated about the length of time it would take.

To support ward staff to complete required actions when a PI is first found, Whanganui DHB introduced a pink sticker system (see below).



Actions prompted by the sticker include grading the injury, completing a risk management plan, entering it into the clinical incident management system (RiskMan) and completing or updating the individualised care plan.

The sticker is then placed in the patient's clinical notes to alert other staff members to the PI. Staff can also add data to RiskMan to advise that a pink sticker has been added.

PI education at the DHB was revamped, with the introduction of a rolling PI prevention seminar. A room was booked for a day and a 5–10-minute presentation provided throughout the day, making it easier for staff to attend the bite-sized session. These sessions covered:

- a snapshot into aetiology and epidemiology of PIs in New Zealand
- cost implications in New Zealand
- evidence-based practice (dressings for prevention in high-risk patients)
- protocols for applying dressings for prevention, ie, checking the skin underneath daily
- moisture lesion versus PI.

There have also been monthly continuing education sessions in clinical areas with an emphasis on prevention. Education sessions are continuing in 2018.

A new PI education booklet has been developed. All clinical staff must read and sign this booklet to state they understand their responsibilities when a PI is first noted.

Whanganui DHB also believes staff must have a very sound knowledge of staging, so its ward education covers this. The PI education booklet also includes staging information and the measurement tool.

How does the DHB conduct measurement?

To enable each clinical coach to fit PI measurement into their business-as-usual workload, measurement is performed on a weekly basis, with five per week. This divides measurement into easily manageable chunks and keeps a stream of data flowing into Care-Metric.

The clinical coach starts each data collection by randomly selecting eight sets of bed spaces to measure. This allows for occasions when there is no patient in a particular bed space, and the clinical coach can move on to the next selected space.

The measurement tool asks if a skin check has taken place that day. The clinical coach must confirm, from evidence in the patient notes, whether this has occurred or not. Because daily skin checks are required at the DHB, staff don't need to physically check the patient during measurement. (See Appendix 3 for Whanganui's PI bedside data collection form.)

To record, analyse and report auditing data, the DHB uses Care-Metric. This makes the process of reporting and reviewing data quick and easy for DHB staff.

However, when a PI is identified, it must be entered into the DHB's RiskMan database and the PI prevention coordinator is notified automatically. If a stage 3 PI is entered, the coordinator goes to the ward to physically confirm the staging is correct.

ACC forms are required for stage 3 PIs and above. By checking the accuracy of staging, the DHB has reduced the number of PIs being recorded inaccurately and submitted to ACC.

How does the DHB report data internally?

Live, up-to-date results are reported as and when required by designated ward staff, the director of nursing and the PI prevention coordinator. This removes the need for the DHB to manage the analysis of data itself and means immediate improvements to practice can be made if and when required.

Reports are also produced on a monthly basis by the director of nursing and the PI prevention coordinator, who compare month-by-month data and discuss the results. Care-Metric provides a six-monthly report with data analysis. Reports are distributed to charge nurse managers and senior leaders.

The working group also considers how best to make PI prevalence results matter to staff, for example, through the DHB's 'Knowing how we are doing' boards.

Key achievements

- The implementation process has been smooth with few difficulties. Part of this is due to the DHB already having a 'Knowing how we are doing' campaign in place, making PI measurement a relatively small addition.
- There is a greater focus on PI prevention at the DHB and regular education is taking place.
- The 'can-do' approach staff have demonstrated has made a real difference.
- The integrity of the data is better than before. Much more detailed data is being collected and provided via RiskMan.
- A recent staff survey indicated that staff have a good understanding of PI prevention strategies and are able to appropriately stage PIs. When in doubt, staff are able to find appropriate resources to aid decision-making.

Capital & Coast DHB

Capital & Coast DHB has had a PIPM programme in place for a number of years, utilising three main measurement approaches:

1. Monthly reporting of adverse event data using control charts.
2. Taking part in and reporting on findings from the National Survey Care Indicators 'annual' point prevalence exercise (used 1–2-yearly since 2009 across all adult patients, excluding maternity and mental health).[9]
3. Care process PIPM tool using a three-step skin check and PI bundle of care interventions (process measures) – see Appendix 4.

Capital & Coast DHB uses a three-step skin check to physically look for PIs on the day of measurement, as well as using this to guide practice and documentation in clinical notes. A copy of the three-step skin check resource is provided below.

[9] www.care-metric.com/products.html

Pressure Injury (PI) prevention and management - SKIN CHECK

Capital & Coast District Health Board
Ūpoko ki te uru hauora

SKIN CHECK - 3 steps and document care

1. ASK THE QUESTION - if unable to respond start at 2 and proceed to 3

Do you feel pressure or have any discomfort (localised pain):

- where your body is pressing on the bed/chair (elbows, sacrum, bottom, heels, bony prominences, ears, head)?
- where medical devices touch your skin?

2. EDUCATION – patient/family/staff

- **S**urface: right surface in bed and chair, wrinkle free bed sheets and surfaces, minimise pressure damage by using safe handling equipment when turning 'at risk' dependant patients
- **S**kin Inspection: check for discolouration and tell us about soreness
- **K**eep moving: ensure patients are encouraged or assisted to move positions regularly (2 hourly)
- **I**ncontinence: good skin hygiene
- **N**utrition: check right diet and plenty of fluids - linked to Malnutrition Screening Tool (MST).

3. DO THE SKIN INSPECTION – assess and check areas at high risk of pressure injury

If patient has discomfort/pain related to pressure or has reduced mobility or sensation:

- Inspect bony areas in contact with a surface, including under and around medical devices
- Look for changes in usual skin colour - redness or darker tones. With darker skin colour the change may be a purplish/bluish area.
- Test for persistent non blanching redness or darkened coloured skin areas. Gently press on the discoloured area with your finger. The area should go white under your finger and when pressure is released the area should return to red, pink or natural dark skin tone by 3 seconds to indicate good blood flow.
- Feel for localised skin changes such as heat, coolness or swelling that may signal skin breakdown.

NOTE: For each PI complete a PI Incident Sticker if not in progress notes.

NOTE: Visual skin assessment is the earliest indicator for skin vulnerability and PI damage. Skin check frequency is dependent on risk and advice is dependent on patient's needs and clinical judgement.

What governance approval was required for the programme?

The changes that Capital & Coast DHB made to their existing PI care process auditing programme had to go through the existing governance process for approval. This was overseen by the quality improvement and patient safety (QIPS) directorate. As part of this, QIPS sought approval from nursing and midwifery leadership and the medical and surgical services directorate quality managers.

Support from each clinical directorate's quality manager was important, because they took the proposal about the pilot to their directorate for discussion.

Governance processes were tabled right through to the hospital and health services executive level. The whole governance process took a couple of months, but was an important foundation to build at the start.

How did the DHB engage with hospital staff about the programme?

The associate director of nursing for practice development and clinical nurse specialist (CNS) wound care at the DHB talked with the charge nurse manager/leaders from each service. Capital & Coast found it important to work with each service (especially those that would be undertaking the process) according to their schedule and not to rush.

This supported each clinical area to 'own' its PI measurement approach, because it was able to define and rework the measurement tools and process to fit its unique needs. For example, the child health services and neonatal service use a tool with different PI care bundle interventions than the bundle used in the adult areas. Each area decides which staff members should drive the PI care process tool use, which includes them undertaking PI measurement. It is important that the senior team supports staff members undertaking PI measurement.

The CNS ensures each clinical area's dedicated wound care resource nurse can competently use the criteria associated with each measured care intervention.

It was also important to engage frontline staff in the development of the measurement tool to make it relevant to the specific challenges and opportunities in each area.

Capital & Coast DHB also found that how you communicate monthly measurement requirements to staff is important. It has focused on the positives of being able to provide real-time data and how the measurement will support practice change.

How did the DHB establish and plan the programme?

Capital & Coast DHB began piloting its PIPM tool in 2015 in a selection of surgical, medical and rehabilitation wards, but only started collecting PI prevalence data in 2016.

This involved measurement of patients and PI care delivered by nurses every two months, via the PI care process audit tool. It also involved capturing a snapshot of practice delivery against real-time risk assessment, care planning and practice.

The pilot proved that the tool and skin check approach worked well, so it was rolled out across adult inpatient areas, excluding mental health and maternity.

Organisational support from a leadership perspective was important, particularly at this stage, to ensure critical review. This supported staff to get it right, rather than fail because of systems and processes.

Capital & Coast DHB was also careful to assess how measurement can be balanced so it is manageable for the hospital. Making sure measurement is practical and sustainable has been key.

How does the DHB conduct measurement?

Capital & Coast DHB has now moved from two-monthly to monthly measurement and has incorporated four new areas into the PI measurement programme (two child health wards, the neonatal intensive care unit (NICU) and psychogeriatric). Maternity were invited to take part but at this stage have chosen not to and instead are participating in an improvement project across a range of services aimed at reducing the PI risk for patients receiving epidural analgesia.[10]

The DHB uses a sampling method based on allocating by bed numbers.[11] A 10-patient sample (every third patient on the bed list) is used for areas with over 15 beds, while a five-patient sample (every second patient on the bed list) in clinical areas is used with 15 or fewer beds.

Each ward/unit sends its bed list to the QIPS team when it submits its measurement results. This enables the DHB to check compliance against care process audit policy guidance on sampling and population representation.

The process is as follows:

1. Capital & Coast DHB requires all directorates to undertake PI measurement during the first half of each month so DHB PI reports can be generated by month-end.
2. The charge nurse manager or coordinator identifies that PI measurement is required and prints the measurement tool from the intranet.
3. The charge nurse manager prints off the bed list and highlights which patients' care or notes should be measured.
4. The measurement tool is given to the staff member conducting measurement, along with the bed list of highlighted patients, ie, every second or third patient highlighted.
5. Generally, patient NHIs are not written on the forms. However, required information can be written on the form, for example, a patient's relevant demographic information in the case of falls and PI prevalence.
6. When complete, the measurement form is emailed to a clinical measurement email address. All areas must submit the randomised measurement sampling list with their measurement results.

[10] Please note maternity is not an exclusion and evidence shows that PIs in maternity patients are not limited to those receiving epidural analgesia. The Commission's methodology specifies that maternity should be included and treated the same as the other inpatient areas.

[11] Please note this method of sampling is not a random sampling approach. Using this methodology, it is possible to predict the patients that will be included in the sample. The Commission recommends using a random sampling approach to ensure unpredictability in sampling.

7. The CNS wound care sends collated results to charge nurse managers and relevant others, acknowledging practice effort as well as constructively communicating practice change that needs to occur.
8. The charge nurse manager displays compliance measurement results on the quality board. The QIPS directorate adds results of measurement to a measurement spreadsheet for the overall PI report. The report allows comparisons to be made with previous findings and helps to identify whether previous actions have improved results.
9. The QIPS analyst is responsible for producing an organisational report of compliance and sending this to the director of nursing, associate directors of nursing and quality managers of relevant directorates.

How does the DHB report data internally?

Capital & Coast DHB's measurement criteria requires a real-time assessment to determine if the patient's care plan has been used to prevent PIs occurring. This means if an episode of patient care is missed, it can be addressed at the time of the measurement.

This allows nurses to inform the wider team about practice achievements, as well as improvement required. As a team, they can determine solutions that will work in their environment.

In addition, the QIPS team collates results and improvement strategies from each area and produces a report that shows reportable PI event data.

Capital & Coast DHB's CNS wound care sends collated results to charge nurse managers and others to acknowledge practice effort, as well as constructively communicating practice change that needs to occur. The staff involved with wound care resource nurses and PI care process auditing then help to communicate results back to their own clinical teams.

Key achievements

- Most recently, extending PI measurement into four new clinical areas, including NICU.
- Identifying opportunities to improve auditing processes.
- Effective use of the three-step skin process, which is supporting practice development in this area.

Southern DHB

Until 2013, PI measurement was conducted annually on Southern DHB's Otago and Southland sites. Both collected PI prevalence and incidence data, but results were reported separately. Since then, measurement has been intermittent and inconsistent within the DHB.

What governance approval was required for the programme?

To begin with, Southern DHB sought endorsement for a new PIPM programme via the executive director of nursing (project sponsor), the chief medical officer and the director of quality.

The DHB also has a patient safety group that provides oversight on patient safety activities. Approval was also sought from this group.

How did the DHB establish and plan the programme?

Southern DHB believes it is important to have the right people involved in a PI measurement programme. This begins with establishing a programme team so the right people are involved.

Once approval to begin was given, the DHB established a PIPM programme project team (see box below for members). Project co-leads were identified; with representation from both the Otago and Southland sites. No dedicated FTE was allocated to the project. A patient safety and policy advisor also joined the group to provide input from an improvement advisor perspective. The team meets weekly and uses an A3[12] improvement methodology to guide the project.

Strong leadership support was important to help get a clear message across to the organisation about PI prevention and why measurement is important, as was support from charge nurse managers and the educator group.

Southern DHB PI measurement programme team members

- Nurse manager, older persons and community service
- Long-term conditions manager, quality and performance medical directorate
- Patient safety and policy advisor
- Nurse educators
- Charge nurse managers
- Clinical nurse specialists (CNS) wound care
- Allied health representative

For the Otago site, Southern DHB selected general surgical wards for the pilot PIPM programme. Those wards were selected due to their close working relationship with the DHB's wound care nurse specialist. The wards also had strong leadership and a nurse educator, who was a powerful champion for the work.

Southern DHB's Southland site self-selected its pilot areas. It chose to focus on frail elderly patients, so it selected its AT&R service.

How did the DHB develop its measurement tools?

Together, the programme project team determined what questions the audit tool should ask and how it should be structured.

Southern DHB used the PI audit tool developed by Waikato DHB as a guide for the development of its own audit tool. This saved time and meant Southern could amend the tool to suit its own specific data collection needs.

Once the tool was developed, members of the programme project team worked with pilot wards to undertake a PDSA QI process. This enabled them to trial and refine the audit tool and auditing process.

[12] A3 is a structured problem-solving and continuous improvement approach, first employed at Toyota and typically used by lean manufacturing practitioners.

Two PDSA cycles were undertaken on the audit form to ensure ease of use and understanding.

The first PDSA cycle highlighted that the audit form was not as clear as the team thought. When data was analysed, crucial information was missing. This included whether a PI was present on admission. Noted stage 3 and 4 PIs were also not being entered as adverse events. Undertaking a PDSA process enabled the DHB to address these issues at an early stage.

Three further PDSA cycles were undertaken to further refine the tool, and begin to test data collation.

According to staff feedback, the form is now easy to use and the average time it takes to complete an audit is five minutes.

How does the DHB conduct measurement?

Southern DHB conducts audits on a monthly basis using the sampling methodology recommended in this guide. The day selected is the second Tuesday of each month. Having a consistent day for audits helps staff become familiar with the audit timetable.

A reminder is sent to charge nurse managers the day before the audit as a reminder to staff. The DHB's patient safety and policy advisor randomly samples from the patient list on the morning of the audit. The audit tool and patient list is physically taken to each pilot ward (though it is planned that this will be emailed once staff are familiar with the regular audit cycle). A questionnaire for the person conducting the measurement is also included to encourage feedback on the audit process during this stage of implementation; it is not anticipated this will continue once full implementation is achieved.

Typically, the nurse caring for the patient will undertake PI measurement during routine daily care, for example, when hygiene cares or similar are undertaken. Southern DHB found this to be the most logical option because it provides a reminder to staff about PI assessment and intervention. It also keeps the measurement process simple and sustainable. Using a wound care specialist or quality person to do the measurement wasn't deemed a sustainable approach.

Making sure those who are conducting the measurement know how to perform measurement correctly was also an important step.

How does the DHB report data internally?

Once collected, data is sent to the DHB's patient safety and policy advisor to input and analyse. During the pilot, this has been relatively easy to manage. However, a more sustainable way to manage analysis and reporting will be required once the programme is implemented more widely across the DHB.

PI prevalence reports are not currently being sent throughout the DHB. The PDSA cycles identified that further work is needed to improve consistent capture of all required data.

Key achievements

- Getting to the current stage of implementation within a few months.
- Recognition that stage 3 and 4 PIs should be treated as adverse events has added importance to PI prevention within the DHB.

Appendix 1: How to classify and document pressure injuries

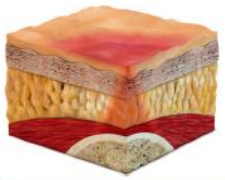
Below is a recently updated staging tool, entitled *How to classify and document pressure injuries*. It was developed by the New Zealand Wound Care Society, ACC, the Ministry of Health and the Commission, and is based on the European and US National Pressure Ulcer Advisory panels (EPUAP and NPUAP) PI classification system. It can be downloaded as a standalone document from the New Zealand Wound Care Society website.

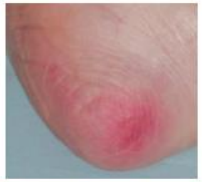
HOW TO CLASSIFY AND DOCUMENT PRESSURE INJURIES

The NPUAP/EPUAP Pressure injury classification system provides a consistent and accurate means by which the severity of a pressure injury can be communicated and documented.

Stage 1 pressure injury: non-blanchable erythema

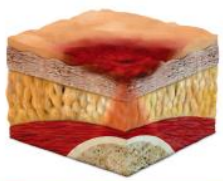
- Intact skin with non-blanchable redness of a localised area usually over a bony prominence.
- Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area.
- The area may be painful, firm, soft, warmer or cooler compared to adjacent tissue.
- May be difficult to detect in individuals with dark skin tones.
- May indicate "at risk" persons (a heralding sign of risk).

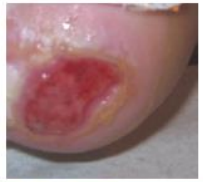




Stage 2 pressure injury: partial thickness skin loss

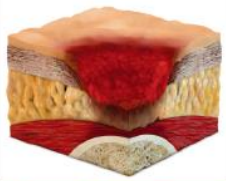
- Partial thickness loss of dermis presenting as a shallow, open wound with a red-pink wound bed, without slough.
- May also present as an intact or open/ruptured serum-filled blister.
- Presents as a shiny or dry, shallow ulcer without slough or bruising (NB bruising indicates suspected deep tissue injury).
- Stage II PI should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation.

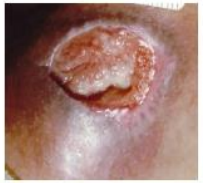




Stage 3 pressure injury: full thickness skin loss

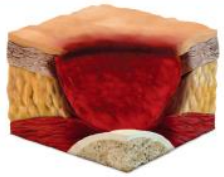
- Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunnelling.
- The depth of a stage III PI varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and stage III PIs can be shallow. In contrast, areas of significant adiposity can develop extremely deep stage III PIs. Bone or tendon is not visible or directly palpable.

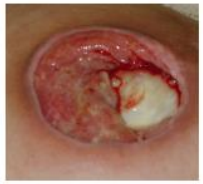




Stage 4 pressure injury: full thickness tissue loss

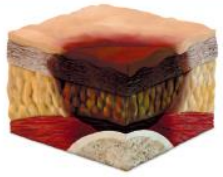
- Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed.
- The depth of a stage IV pressure injury varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and these PIs can be shallow. Stage IV PIs can extend into muscle and/or supporting structures (e.g. fascia, tendon or joint capsule) making osteomyelitis possible. Exposed bone or tendon is visible or directly palpable.

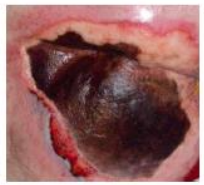




Unstageable pressure injury: depth unknown

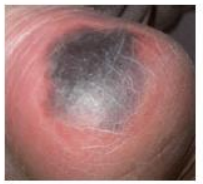
- Full thickness tissue loss in which the base of the PI is covered by slough (yellow, tan, grey, green or brown) and/or eschar (tan, brown or black) in the PI bed.
- Until enough slough/eschar is removed to expose the base of the PI, the true depth, and therefore the stage, cannot be determined. Stable (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as the body's natural biological cover and should not be removed.





Suspected deep tissue injury: depth unknown

- Purple or maroon localised area or discoloured, intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
- Deep tissue injury may be difficult to detect in individuals with dark skin tone.
- Evolution may include a thin blister over a dark wound bed. The PI may further involve and become covered by thin eschar. Evolution may be rapid, exposing additional layers of tissue even with optimal treatment.



All 3D graphics designed by Jarrad Gittos, Gear Interactive, http://www.gearinteractive.com.au
Photos stage, I,IV, unstageable and suspected deep tissue injury courtesy C. Young, Launceston General Hospital.
Photos stage II and III courtesy K. Carville, Silver Chain. Used with permission.

MINISTRY OF HEALTH
MANATŪ HAUORA

HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND

ACC
PREVENTION. CARE. RECOVERY.

NEW ZEALAND WOUND CARE SOCIETY
www.nzwcs.org.nz

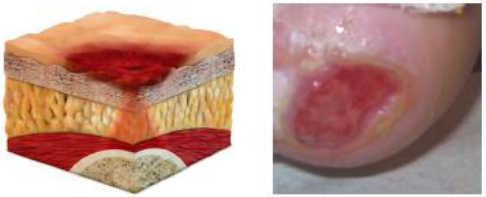
PRESSURE INJURIES – WHAT TO LOOK FOR

Stage 1

A red area of skin that does not turn white when pressed with a finger (this is called non-blanchable redness). There may also be a some swelling.

Stage 2

The top layer of skin is broken and the bottom of the wound looks red or pink. Sometimes there is a blister on top, and it may weep clear fluid.

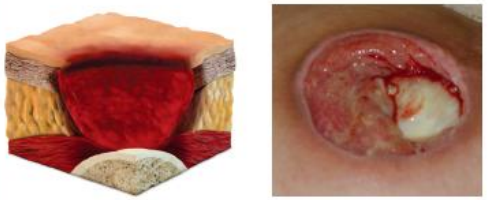


Stage 3

The wound is deeper, down to the bottom layers of skin. You may see muscle, tendon, bone fat or cartilage underneath. There may be gaps (loss of tissue) under the edges of the skin.

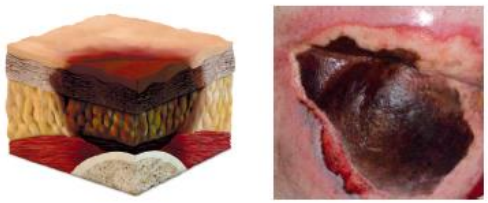
Stage 4

The wound is down to the bottom of the skin as well as into the muscle, tendon, bone, or cartilage, which you may be able to see.



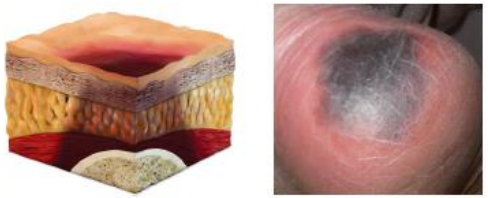
Stage - Unstageable

This is a deep wound where you cant see the bottom because there is a layer of dead tissue covering it. This is called slough or eschar which may be yellow, tan, grey, green or brown.



Stage - Suspected Deep Tissue Injury

The skin on top may look purple, maroon or navy, or may look like a blood filled blister. It can be hard to see on dark skin. It may have felt painful, hard or mushy or boggy, and warmer or cooler than the skin next to it. It may break down easily.



Guidance:
If your patient, client or family member has any areas of the skin you are concerned about: Turn and move them off this area. Check their skin on the pressure points they are now lying on. Elevate heels off bed. Notify your nurse, medical support or manager.

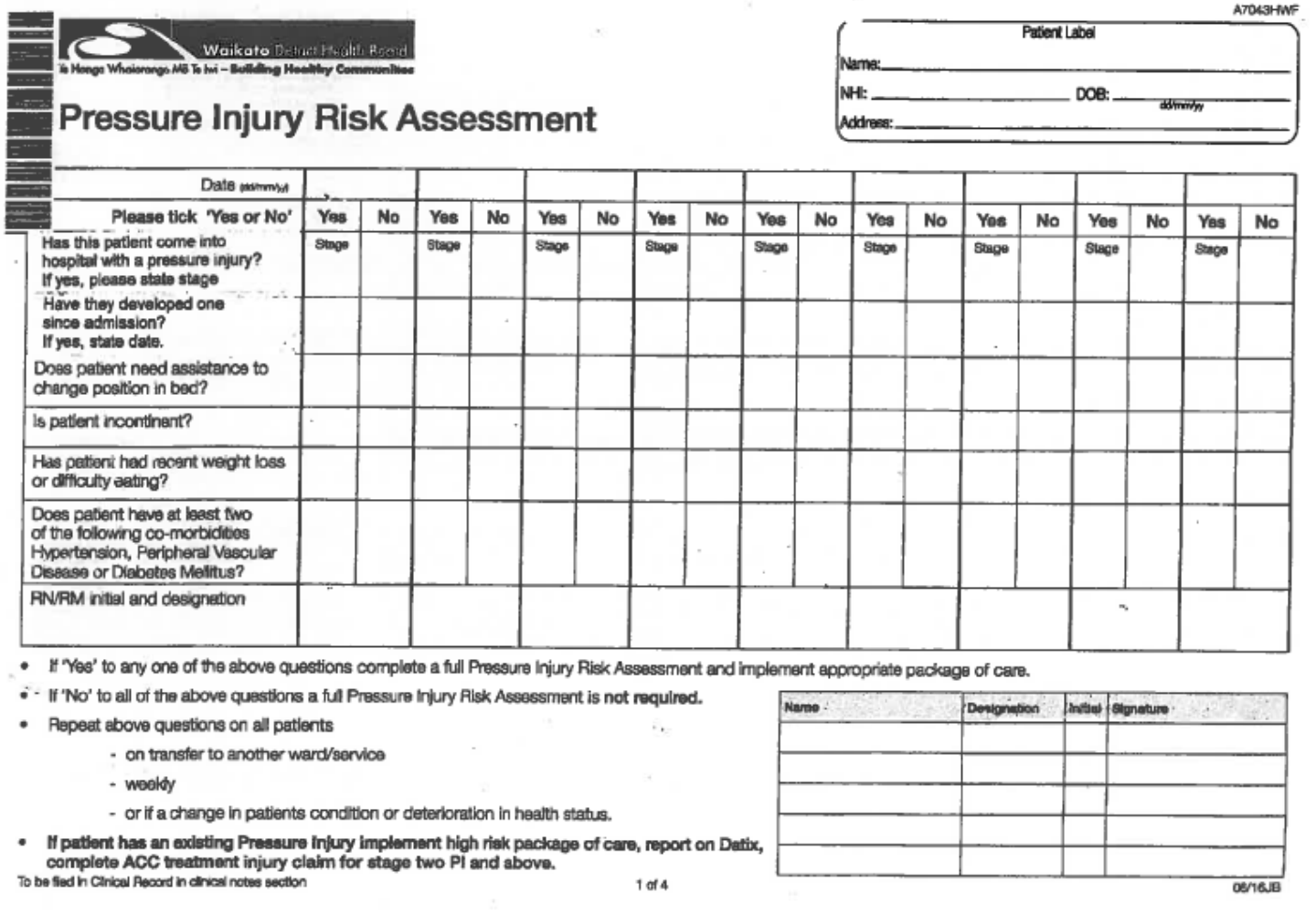
All 3D graphics designed by Jarrad Gittos, Gear Interactive, http://www.gearinteractive.com.au
Photos stage, I,IV, unstageable and suspected deep tissue injury courtesy C. Young, Launceston General Hospital.
Photos stage II and III courtesy K. Carville, Silver Chain. Used with permission.

MINISTRY OF HEALTH
MANATŪ HAUORA

HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND

NEW ZEALAND WOUND CARE SOCIETY
www.nzwcs.org.nz

Appendix 2: Waikato DHB PI risk assessment form



A7043HWF

Waikato District Health Board
Te Honga Whaiorongo Mō Te Iwi – Building Healthy Communities

Pressure Injury Risk Assessment

Patient Label
Name:
NHI: DOB: dd/mm/yy
Address:

Date (dd/mm/yy)																		
Please tick 'Yes or No'	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Has this patient come into hospital with a pressure injury? If yes, please state stage	Stage		Stage		Stage		Stage		Stage		Stage		Stage		Stage		Stage	
Have they developed one since admission? If yes, state date.																		
Does patient need assistance to change position in bed?																		
Is patient incontinent?																		
Has patient had recent weight loss or difficulty eating?																		
Does patient have at least two of the following co-morbidities Hypertension, Peripheral Vascular Disease or Diabetes Mellitus?																		
RN/RM initial and designation																		

- If 'Yes' to any one of the above questions complete a full Pressure Injury Risk Assessment and implement appropriate package of care.
- If 'No' to all of the above questions a full Pressure Injury Risk Assessment is **not required.**
- Repeat above questions on all patients
  - on transfer to another ward/service
  - weekly
  - or if a change in patients condition or deterioration in health status.
- **If patient has an existing Pressure Injury implement high risk package of care, report on Datix, complete ACC treatment injury claim for stage two PI and above.**

Name	Designation	Initial	Signature

To be filed in Clinical Record in clinical notes section

1 of 4

05/16JB

Braden Pressure Ulcer Risk Assessment

Patient Label

Name: _____

NHI: _____ DOB: _____ dd/mm/yy

Address: _____

					Date	Date	Date	Date	Date	Date	Date	Date
SENSORY PERCEPTION: Ability to respond meaningfully to pressure related discomfort.	**1. Completely limited** Unresponsive (does not moan, flinch or grasp) to painful stimuli, due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body surface.	**2. Very limited** Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness. OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of the body.	**3. Slightly limited** Responds to verbal commands but cannot always communicate discomfort or need to be turned. OR has a sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	**4. No impairment** Responds to verbal commands, has no sensory deficit which would limit ability to feel or voice pain or discomfort.	1	1	1	1	1	1	1	1
					2	2	2	2	2	2	2	2
					3	3	3	3	3	3	3	3
					4	4	4	4	4	4	4	4
MOISTURE: Degree to which skin is exposed to moisture.	**1. Constantly moist** Skin is kept moist almost constantly by perspiration, urine etc. Dampness is detected every time patient is moved or turned.	**2. Very moist** Skin is often, but not always, moist. Linen must be changed at least once a shift.	**3. Occasionally moist** Skin is occasionally moist, requiring an extra linen change approximately once a day.	**4. Rarely moist** Skin is usually dry, linen only requires changing at routine intervals.	1	1	1	1	1	1	1	1
					2	2	2	2	2	2	2	2
					3	3	3	3	3	3	3	3
					4	4	4	4	4	4	4	4
ACTIVITY: Degree of physical activity.	**1. Bedfast** Confined to bed.	**2 . Chairfast** Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	**3. Walks occasionally** Walks occasionally during day but for very short distances with or without any assistance. Spends majority of each shift in bed or chair.	**4. Walks frequently** Walks outside the room at least twice a day and inside room at least once every two hours during waking hours.	1	1	1	1	1	1	1	1
					2	2	2	2	2	2	2	2
					3	3	3	3	3	3	3	3
					4	4	4	4	4	4	4	4
MOBILITY: Ability to change and control body position.	**1. Completely immobile** Does not make even slight changes in body or extremity position without assistance.	**2. Very limited** Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	**3. Slightly limited** Makes frequent though slight changes in body or extremity position independently.	**4. No limitation** Makes major and frequent changes in position without assistance.	1	1	1	1	1	1	1	1
					2	2	2	2	2	2	2	2
					3	3	3	3	3	3	3	3
					4	4	4	4	4	4	4	4
NUTRITION: Usual food intake pattern.	**1. Very poor** Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement. OR is NPO and/or maintained on clear liquids or IVs for more than 5 days.	**2. Probably inadequate** Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement OR receives less than optimum amount of liquid diet or tube feeding.	**3. Adequate** Eats over half of most meals. Eats a total of 4 servings of protein (meat or dairy products) each day. Occasionally will refuse a meal but will usually take a supplement if offered OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs.	**4. Excellent** Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.	1	1	1	1	1	1	1	1
					2	2	2	2	2	2	2	2
					3	3	3	3	3	3	3	3
					4	4	4	4	4	4	4	4
FRICTION AND SHEAR:	**1. Problem** Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair requiring frequent repositioning with maximum assistance. Spasticity contractures or agitation lead to almost constant friction.	**2. Potential problem** Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	**3. No apparent problem** Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.		1	1	1	1	1	1	1	1
					2	2	2	2	2	2	2	2
					3	3	3	3	3	3	3	3

2 of 4

Packages of care

High package (12 OR LESS)	Medium package (13 – 18)	Low package (19 – 23)
• Full skin integrity check once a shift and document • 2 hrly turning schedule • Teach or do frequent small shifts of body weight if chair fast • Refer to Physiotherapy and Occupational Therapy for supports if required • Consult with Occupational Therapy for specialist cushions if chair fast • Consult with dietitian for use of supplement if concerned with adequacy of intake • Minimum of two people plus manual handling devices to move patient up bed • Keep bed linen clean dry and wrinkle free • Keep elevation of bed at 30 degrees or less if not clinically contraindicated • Source heel pressure relieving device if required or elevate heels off the bed • Use protective skin barrier creams • Use mild soap and soft cloths of package cleanser wipes • Check incontinence pads frequently • If patient has an existing pressure injury , stage pressure injury and document in clinical file, care plan and source alternating air mattress	• Full skin integrity check daily and document • Turn/reposition frequently • Teach or do frequent small shifts of body weight • Consider Physiotherapy consult for structured mobility plan including strengthening/conditioning if required • Keep food chart and fluid balance chart including output if appropriate • Keep bed linen clean dry and wrinkle free • Use protective skin barrier creams • Use mild soap and soft cloths of package cleanser wipes • Check incontinence pads frequently • Encourage patient to report pain over bony prominences	• Full skin integrity check daily and document • Encourage mobilisation and change of position • Encourage patient to use skin barrier lotions and report any skin moisture concerns • Encourage patient to report pain over bony prominences
• Other		

Waikato District Health Board
Te Hanga Whaioranga Mō Te Iwi – Building Healthy Communities

Patient Label
Name:
NHI: DOB: dd/mm/yy
Address:

Pressure Ulcer Classification System

International NPUAP – EPUAP Pressure Ulcer Classification System

Category/Stage I: Non-blanchable redness of intact skin

Intact skin with non-blanchable erythema of a localised area usually over a bony prominence. Discolouration of the skin, warmth, oedema, hardness or pain may also be present.

Darkly pigmented skin may not have visible blanching.

Category/Stage II: 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 sero-sanginous filled blister.

Category/Stage III: Full thickness skin loss (fat visible)

Full thickness skin 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/Stage IV: Full thickness tissue loss (muscle/bone visible)

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

Additional categories:

Unstageable/Unclassified: Full thickness skin or tissue loss – depth unknown

Full thickness tissue loss in which actual depth of the ulcer is completely obscured by slough (yellow, an, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed.

Suspected deep tissue ulcer – depth unknown

Purple or maroon localise area of discoloured intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear.

Reference:

European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel. Prevention and treatment of pressure ulcers: quick reference guide. Washington DC: National Pressure Ulcer Advisory Panel; 2009.

4 of 4

Appendix 3: Whanganui DHB PI audit – bedside data collection form

What happened on admission

Please mark the boxes with the correct answers.

Department	NHI number client	Date of Audit	Date of Admission

1. Was a skin check performed on admission		
yes	No	Not recorded

1.1 Was one or more pressure injuries observed during the skin check?	
Yes	No
If NO, go to question nr.2	

1.3 What was the grade of the most severe pressure injury?			
Grade I	Grade II	Grade III	Grade IV
Unstageable	Suspected Deep Tissue injury		Not recorded

1.3.1 Was a RiskMan incident raised on admission?	
Yes	No

1.3.2 Was an ACC form completed on admission? **Only for pressure injury grade II-IV, unstageable and suspected deep tissue injury.**	
Yes	No

2. On admission, what level of Risk on developing a pressure injury was recorded in the notes?		
Not at risk	At risk	Not recorded

2.1 What prevention was put in place **AND** recorded in the care plan to reduce the risk of (further) development of a pressure injury? (you can select more than one option)		
Pressure reducing mattress	Floating heels	Frequent turning
Nutritional assessment	Informed about the risk (Brochure)	None of the above

What happened Today

3. Has the skin inspection been performed today?	
yes	No

3.1 Is the patient currently at risk for developing a pressure injury?		
At risk	Not at risk	Not recorded
If "Not at Risk" go to 3.3		

3.2 What preventions are currently in place **AND** recorde in the care plan to prevent the development of pressure injuries? (you can select more than one option)		
Pressure reducing mattress	Floating heels	Frequent turning
Nutritional assessment	Informed about the risk (Brochure)	None of the above

3.3 Does the patient currently have one or more pressure injuries?	
Yes	No
If NO, End of audit	

3.4 What was the grade of the most severe pressure injury?			
Grade I	Grade II	Grade III	Grade IV
Unstageable	Suspected Deep Tissue injury		Not recorded

Appendix 4: Capital & Coast DHB PI care process tool

CARE PROCESS AUDIT: Pressure Injury (PI) Prevention and Management

Capital & Coast District Health Board

HOW TO USE THIS TOOL:

1. Each time a care intervention is performed correctly, insert a **Y** (Yes) in the relevant column. If the care is not performed or documented insert **N** (No)
2. Check criteria on page 2 for each care for **Y, N** or **N/A**
3. Calculate compliance levels (**N/A** and **Y**) by totalling the columns and turn into a percentage
4. **Please send to ClinicalAudit@ccdhb.org.nz** Results and bed list/ handover sheet showing random patient selection (every third if over 15 beds or every second if 15 or less.

← PATIENT OBSERVATION	KEY CARE INTERVENTIONS → **Pressure Injury/s -** record number of PI/s per stage and when PI/s occurred: **Before** patient came into hospital **After** patient came into hospital														**CARE 1** Initial Braden scale for PI risk is completed and care plan documented for 'at risk' patients	**CARE 2** Initial malnutrition screening tool (MST) is completed with weight	**CARE 3 DO 3-STEP SKIN CHECK** *1.Ask the question* *2.Do the education* *3.Do the skin inspection*	**CARE 4** Current Braden score (last 24 hrs) is documented in PADP with patient care plan (score applicable)	**CARE 5** PI prevention SSKIN for 'at risk'patients is actioned (last 24 hrs): correct surface (mattress, cushion) and MST action flow chart applied	**All care performed All SSKINS care bundle provided**
	BEFORE							AFTER												
	None	Mucosal	Stage 1	Stage 2	Stage 3	Stage 4	US/sDTI	None	Mucosal	Stage 1	Stage 2	Stage 3	Stage 4	US/sDTI						
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
TOTAL number of times a care intervention was performed																				
% WHEN CARE WAS GIVEN: 10 patients: total number x 10 5 patients: total number x 20															%	%	%	%	%	%
COMMENTS:																				
Practice focus required:																				
Clinical area and auditor name:																			Date:	

CapitalDocs ID: 1.102484 / Issued July 2017 / review date July 2020

USING THE TOOL - The goal is to perform every Key Care Intervention every time it is needed. Checking compliance with each key care intervention will -

1. Show which individual care interventions were or were not performed to criteria standard

2. Enable services to use immediate feedback to address missed care

3. Enable the improvement effort to focus on those care interventions enable the improvement effort to focus on those care interventions not consistently well performed to improve overall compliance.

"AT RISK' PATIENT FOR PI: Patient has medium (Braden 10 -16) to high risk (Braden <10) & moderate MST=2, Medium MST=3-4 or high MST=5

PATIENTS: not able to communicate (sedated, stroke, cognitive issues), immobilised requiring repositioning, neuropathy or paralysis that reduces or prevents patient detecting pressure and discomfort.

SKIN CHECK - 3 steps and document care

1. ASK THE QUESTION - if unable to respond start at 2 and proceed to 3

Do you feel pressure or have any discomfort (localised pain):

- where your body is pressing on the bed/chair (elbows, sacrum, bottom, heels, bony prominences, ears, head)?
- where medical devices touch your skin?

2. DO THE EDUCATION – patient/family/staff

- Surface: right surface in bed and chair, wrinkle free bed sheets and surfaces, minimise pressure damage by using safe handling equipment when turning 'at risk' dependant patients
- Skin Inspection: Check for discolouration and tell us about soreness
- Keep moving: ensure patients are encouraged or assisted to move positions regularly (2 hourly)
- Incontinence: good skin hygiene
- Nutrition: adequate hydration and food for MST score.

3. DO THE SKIN INSPECTION – assess & check areas at high risk of pressure injury

If patient has discomfort/pain related to pressure or has reduced mobility or sensation:

- inspect bony prominences, areas under the most pressure and under and around medical devices
- test for non-blanching reddened skin. Press on the red or pink area with your finger. The area should go white; remove the pressure and the area should return to red or pink within a few seconds, indicating good blood flow.
- feel for localised heat, coolness, swelling or warmth that may signal skin breakdown
- look for changes in skin colour (redness or darkening), persistent skin discolouration purplish/bluish areas.

NOTE: For each PI complete a PI Incident Sticker if not in progress notes.

NOTE: Visual skin assessment is the earliest indicator for skin vulnerability and PI damage. Skin check frequency is dependent on risk and advice is dependent on patient's needs and clinical judgement.

Criteria for Pressure Injury (PI) Prevention & Management Care Interventions

CARE 1: Initial Braden completed and individualised care plan documented (PADP, patient care flow chart) for 'at risk' patients.

Mark Y when:

- Assessed initial Braden score (low risk >17)
- Assessed initial Braden score risk is (medium 10 -16) to high (Braden <10) and individualised SKINS risk interventions (PADP p 7) care plan documented for 'at risk' patients

MARK N WHEN:

- Braden score not calculated or care plan for 'at risk' patient not documented within 8 hours of admission

CARE 2: Initial malnutrition screening tool (MST) is completed with weight.

Mark Y when:

- Nutrition screening (MST p3 PADP) with weight documented
- Nutrition screening completed with documented medically contraindicated reason weight is not completed
- ICU patient weight completed (MST not applicable)

Mark N when:

- Incomplete MST or ICU documentation

CARE 3: DO 3-Step SKIN CHECK and record number of PI/s per stage and when they occurred. After occurred. Write NHI if PI/s present.

1. Ask the question
2. Do the education
3. Do the skin inspection

Mark Y when:

- PI question (step 1) is asked and PI prevention/SKINS education (step 2) occurs with patient and/or family with visual skin assessment (step 3) when applicable – use clinical judgement
- Skin inspection occurs when patient indicates discomfort from pressure and with 'at risk' patient
- When patient can not respond to step 1 then step 2 reinforced and step 3 undertaken

OR

- Documented PI Skin Check care delivered within last 2 hours in patient clinical record, flow chart, for 'at risk' patients

Mark N when:

- No steps undertaken and or no documentation of 2 hourly PI Prevention

NOTE: Use this opportunity to document *Skin Check Steps undertaken during the audit - in Care Plan if on-going Skin Check steps required or in clinical record to record assessment, education and any treatments given.*

CARE 4: Current Braden Scale (last 24 hrs) is documented with patient care plan (score applicable).

Mark Y when:

- Braden score documented each shift when applicable (patient care flow chart) or at least within last 24 hrs in PADP

CARE 5: PI prevention for 'at risk' patients is actioned (last 24 hrs) :

Mark Y when:

- Correct surface (mattress, cushion) and MST action flow chart applied

Mark N when:

- Risk assessment incomplete and care not documented

Mark N/A when:

- SKINS standard precautions in place for low risk adult (low risk > 17) and MST= 0-1 (screened weekly)

Appendix 5: Southern DHB PI Pressure Injury Patient Audit Form

Southern District Health Board Piki Te Ora	**Pressure Injury Patient Audit**

Ward: _____ **Date Conducted:** _____

Person Conducting the Audit: _____

Exclusions:

- Pressure injuries do not include mucosal injuries or incontinence associated dermatitis (see below description).
- Patients that are documented as in Last Days of Life.

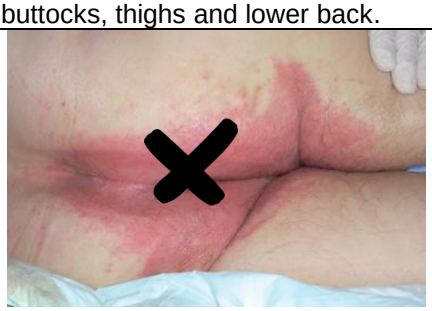
Check all the pressure points on your patient and indicate on the form whether or not they have a Pressure Injury (PI). If they do have a PI tick the appropriate stage and H/A if hospital acquired (a PI which was not present on admission]

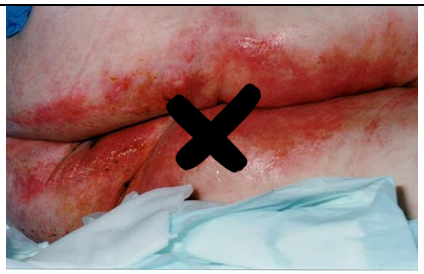
Once completed please scan the forms to kim.caffell@southerndhb.govt.nz

This audit is undertaken as part of *normal care* delivery using a full skin assessment. If the patient declines please select the next patient on the randomised list until the number for your area is complete.

PI **do not** include mucosal injuries or Incontinence Associated Dermatitis

Incontinence Associated Dermatitis (IAD):
Skin damage from exposure to urine or stool. IAD appears over a large area, and initially as erythema which can range from pink to red. In darker skin tones, skin may be paler, darker, purple, dark red or yellow. Lesions including vesicles or bullae, papules or pustules may be observed. The epidermis may be damaged superficially or partial-thickness. IAD can affect perineum, peri-genital area, groins, buttocks, thighs and lower back.





If a new PI is found you need to:

- Complete a Pressure Area Risk Assessment (MIDAS 42082)(Otago), Braden Scale: PA Risk Assessment and Intervention Tool (MR1257 V1) (Southland)
- If there is a wound present complete a Wound Assessment form (Oracle PRNT4405)
- If the PI is a Stage 3 or 4, please refer to the Wound Care CNS for advice
- For all Pressure Injuries, complete a Skin and Tissue form on Safety1st

CONFIDENTIALITY
The information contained on this report is classified as confidential therefore keep in a safe place in your office. If the reader of this report is not the intended recipient you are notified that any use, disclosure, copying or distribution of the information is prohibited.

Note: if there is additional information following the audit, e.g. detailed clinical assessment/ interventions, please document these in the patient's clinical record. These forms are for audit purposes only and are not retained in the clinical record.

Surname:		**NHI:**
Other names:	**DOB:**	**Age:**
Ward:	**Consultant:**	
Address:	**Phone number:**	

Apply patient label, or document patient surname and NHI

DATE OF ADMISSION TO HOSPITAL: _____

WHAT WAS THE BRADEN SCALE SCORE ON ADMISSION: _____

DATE OF MOST RECENT BRADEN ASSESSMENT: _____

WHAT IS THE MOST RECENT BRADEN SCALE SCORE: _____

√ affected body site and stage	State "No" if no PI on assessment	Stage 1		Stage 2		Stage 3		Stage 4		Unstageable		Suspected Deep Tissue Injury		If PI due to equipment or device state type	Hospital Acquired Y/N
Nose															
Ear		L	R	L	R	L	R	L	R	L	R	L	R		
Shoulder		L	R	L	R	L	R	L	R	L	R	L	R		
Spine															
Sacrum or Coccyx															
Hip		L	R	L	R	L	R	L	R	L	R	L	R		
Buttock		L	R	L	R	L	R	L	R	L	R	L	R		
Heel		L	R	L	R	L	R	L	R	L	R	L	R		
Other site state / stage:															

Note: if there is additional information following the audit, e.g. detailed clinical assessment/ interventions, please document these in the patients clinical record. These forms are for audit purposes only and are not retained in the clinical record.

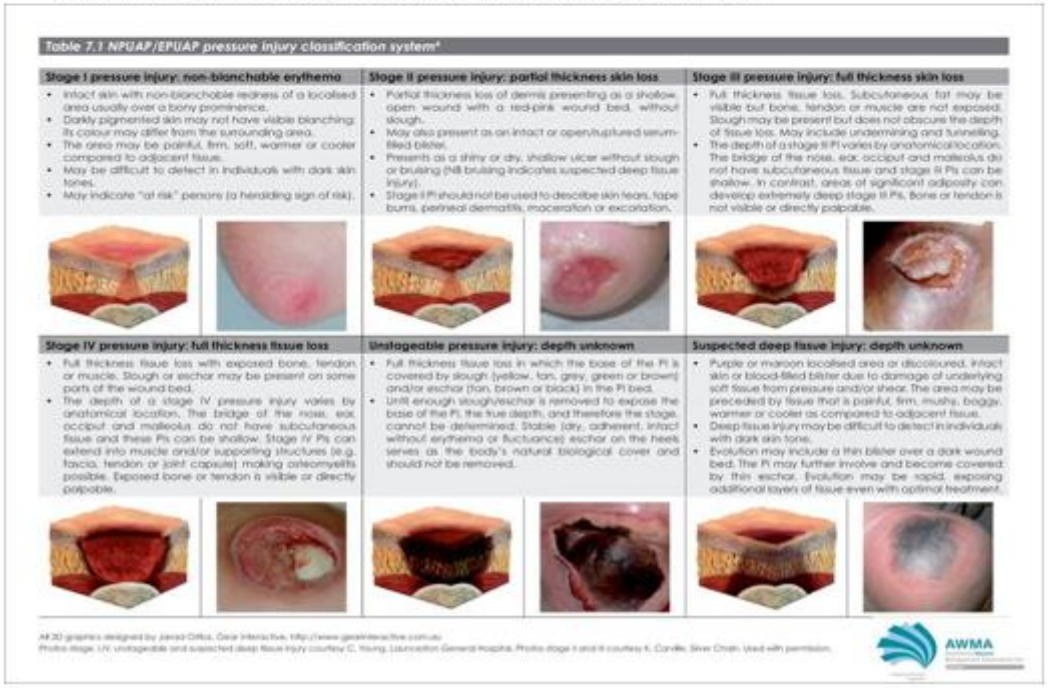


Table 7.1 NPUAP/EPUAP pressure injury classification system

Stage I pressure injury: non-blanchable erythema

- Intact skin with non-blanchable redness of a localised area usually over a bony prominence.
- Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area.
- The area may be painful, firm, soft, warmer or cooler compared to adjacent tissue.
- May be difficult to detect in individuals with dark skin tones.
- May indicate "at risk" persons (a heralding sign of risk).

Stage II pressure injury: partial thickness skin loss

- Partial thickness loss of dermis presenting as a shallow, open wound with a red-pink wound bed, without slough.
- May also present as an intact or open/ruptured serum-filled blister.
- Presents as a shiny or dry, shallow ulcer without slough or bruising (NB bruising indicates suspected deep tissue injury).
- Stage II PI should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation.

Stage III pressure injury: full thickness skin loss

- Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunnelling.
- The depth of a stage III PI varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and stage III PIs can be shallow. In contrast, areas of significant adiposity can develop extremely deep stage III PIs. Bone or tendon is not visible or directly palpable.

Stage IV pressure injury: full thickness tissue loss

- Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed.
- The depth of a stage IV pressure injury varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and these PIs can be shallow. Stage IV PIs can extend into muscle and/or supporting structures (e.g. fascia, tendon or joint capsule) making osteomyelitis possible. Exposed bone or tendon is visible or directly palpable.

Unstageable pressure injury: depth unknown

- Full thickness tissue loss in which the base of the PI is covered by slough (yellow, tan, grey, green or brown) and/or eschar (tan, brown or black) in the PI bed.
- Until enough slough/eschar is removed to expose the base of the PI, the true depth, and therefore the stage, cannot be determined. Stable (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as the body's natural (biological) cover and should not be removed.

Suspected deep tissue injury: depth unknown

- Purple or maroon localised area of discoloured, intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
- Deep tissue injury may be difficult to detect in individuals with dark skin tone.
- Evolution may include a thin blister over a dark wound bed. The PI may further involve and become covered by thin eschar. Evolution may be rapid, exposing additional layers of tissue even with optimal treatment.

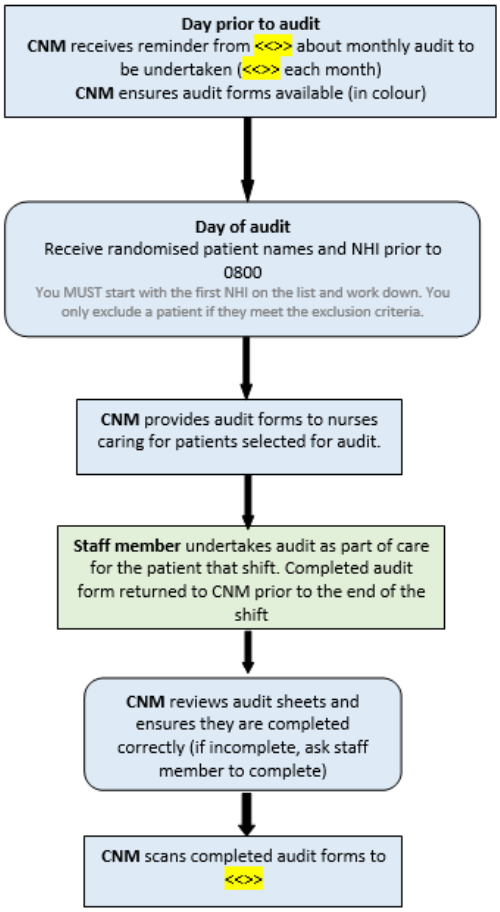
All 3D graphics designed by Jared Gitlin, Gear Interactive, http://www.gearinteractive.com.au
Photos stage I, IV, unstageable and suspected deep tissue injury courtesy C. Young, Launceston General Hospital. Photos stage II and III courtesy K. Conlin, Silver Chain. Used with permission.

AWMA

Appendix 6: Southern DHB Prevalence and Incidence Audit Process

Southern District Health Board
Piki Te Ora

PREVALENCE AND INCIDENT AUDIT PROCESS FOR CNMS



Note: If the CNM is on leave or not available this must be handed to the person who will be in charge of the shift on the day of the audit. The CNM must ensure the person in charge understands the process.

The number of patients selected depends on the number of beds in your ward. In the event of patient unavailability/refusal, or by your clinical judgement it is not appropriate or safe to audit them, please continue to the next selected patient (spare)**.**

1-10 patients on ward = 3 patients selected, only 2 audits required (1 spare)

11-30 patients on ward = 7 patients selected, only 5 audits required (2 spare)

30+ patients on ward = 14 patients selected, only 10 audits required (4 spare)