

Pressure injury measurement frequently asked questions

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1. Why is the Commission interested in measuring pressure injuries?

Pressure injuries are an indicator of the quality of care patients receive. They are often avoidable, have significant negative impacts on patients' lives, increase hospital length of stay and are associated with extra resource consumption.

Measuring the prevalence of pressure injuries is helpful in two ways: it allows us to monitor the effectiveness of improvement activities to reduce pressure injuries; and it helps to make pressure injury prevention practice more consistent around the country.

At the time of writing (November 2017), we cannot measure the exact prevalence of pressure injuries in New Zealand because there is no consistent measurement approach. This is something the Health Quality & Safety Commission (the Commission) hopes to change with the introduction of its pressure injury quality and safety markers (QSMs).

In late 2014, the Commission, the Accident Compensation Corporation (ACC) and the Ministry of Health (the Ministry) engaged KPMG to investigate the economic and social harm caused by pressure injuries. KPMG advised on the likely benefits of a national improvement programme. The report is available on the [Commission website](#). It has helped to inform a joint agency approach to pressure injury prevention for 2016–17 and beyond.

While the exact prevalence of pressure injuries in New Zealand is unknown, it is known that they affect a lot of people. In the KPMG report, approximately 55,000 people were estimated to suffer a pressure injury every year, resulting in direct costs of \$67 million per annum.

There is evidence that the number of pressure injuries can be reduced if interventions that are known to work are properly implemented.

The Commission's pressure injury measurement work aims to complement the work of ACC¹ and the Ministry,² and make prevention practice, data collection and reporting more consistent around New Zealand. This consistency will improve data for local prevention work and enable measurement of the prevalence of pressure injuries. It will also allow change over time to be measured.

2. What does the Commission hope to achieve with its pressure injury work?

The Commission hopes to:

- make pressure injury prevention practice more consistent around the country and, as a result, reduce unwarranted variation
- give organisations the tools to monitor performance improvement, resulting in:
 - fewer pressure injuries occurring over time
 - the benefits of pressure injury prevention activities being realised
- take a robust, standardised approach to data and information aggregation in order to better understand the prevalence of pressure injuries in New Zealand. This information will help with

¹ www.acc.co.nz/for-providers/treatment-safety/#preventing-treatment-injuries and www.acc.co.nz/assets/provider/acc7758-pressure-injury-prevention.pdf

² www.health.govt.nz/our-work/regulation-health-and-disability-system/certification-health-care-services/information-providers-health-care-services/notifying-incident-or-other-matter-required-under-section-31

decisions about which providers should have further support to reduce pressure injuries and associated harm (for example, hospitals, aged residential care providers and/or community-based care providers).

3. Is the Commission introducing pressure injury quality and safety markers (QSMs)?

Yes. The Commission is working with DHBs to develop pressure injury QSMs in 2017–18. The QSMs will be implemented in 2018–19.

From 1 July 2018 DHBs will start to report their PI data 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 (ie, 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’ on implementing the data collection process. The approach will be confirmed by end June 2018 and from July 2018 ‘real’ reporting will begin.

4. What are QSMs?

QSMs are sets of related indicators concentrating on specific areas of harm.

The markers have two parts: process (certain care practices known to be effective) and outcomes (what happens with patients and the health system). For more information about QSMs, go to the [Commission website](#).

QSMs help providers focus on and prioritise an area of high harm. They can drive changes 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 quality improvement programmes and see whether desired changes in practice and reductions in harm and cost have occurred.

QSMs are usually a combination of process measures and outcome measures.

Process measures show whether desired changes in practice have occurred and thresholds are typically set high, for example, at 90 percent. The Commission’s reporting of the process measures shows DHBs’ actual level of performance compared with the threshold for ‘expected’ performance.

Outcome measures focus on the occurrence of avoidable harm (such as a fractured neck of femur following a fall). They are shown at DHB and national levels, to demonstrate the size of the problem being addressed and changes over time.

In addition to the new pressure injuries QSMs, the Commission has QSMs relating to:

- falls
- healthcare associated infections:
 - hand hygiene
 - surgical site infection (cardiac and orthopaedic (hip and knee arthroplasty) surgeries)
- safe surgery
- medication safety.

5. What are the pressure injury QSMs?

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

- Process 1: Percentage of patients with a documented and current³ PI assessment.
- Process 2: Percentage of at-risk patients with a documented and current⁴ individualised care plan with specific pressure injury actions.
- Outcome 1: Percentage of patients with a HAPI.⁵
- Outcome 2: Percentage of patients with a non-HAPI.⁶

The same group of patients must be used for both the process and outcome QSMs.

6. Will there be public reporting of pressure injury QSM results?

Yes. Ultimately both process and outcome QSM data will be reported publicly, just as it is for other Commission QSMs, such as falls, safe surgery and hand hygiene.

The first two quarters will be treated as a testing phase and the PI data will not be made publicly available. Once the Commission and DHBs are confident with the process, the information will be publicly reported, most likely starting with quarter 3, 2018/19 (ie, January–March 2019).

7. Will the outcome QSM be reported by stage?

Yes. Stage 1 pressure injuries are likely to make up the majority of hospital-acquired pressure injuries (HAPIs, see [question 11](#) for a definition). Simply reporting an overall prevalence rate could mislead the reader about the severity of the issue or the pressure injuries being reported. For example, stage 1 pressure injuries involve no break in the skin; stage 2 pressure injuries are partial-thickness wounds; stage 3 and 4 pressure injuries are full-thickness wounds; and unstageable pressure injuries are likely to be full-thickness. DHBs will therefore be asked to report the stages separately so the outcome QSM can be reported by stage and the true scale of the problem is easier to understand.

A recently updated staging tool, *How to classify and document pressure injuries*, is in Appendix 1. This 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) pressure injury classification system. More information can be found on the [New Zealand Wound Care Society website](#).

³ 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.

⁴ 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).

⁵ Hospital acquired PIs (HAPIs) are any stage of PI developed after admission to the hospital or that were not captured on admission.

⁶ Non-HAPIs are any stage of PI above stage 1 that are 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.

8. Where and how will the Commission report the QSM data?

The Commission publishes QSM data quarterly on [its website](#). For the pressure injury QSMs, both process and outcome measures will be reported by DHB as percentages, which means DHBs need to report numerator and denominator data to us.

9. What will the numerators and denominators be?

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

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 will be the count of patients with a documented pressure injury 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 that are specific to that patient's PI(s), either existing or at risk of. The denominator is the number of patients with a documented pressure injury 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 hospital-acquired pressure injuries (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).

10. Which pressure injuries should be counted and reported?

A recently updated staging tool, *How to classify and document pressure injuries*, is in Appendix 1. This 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) pressure injury classification system. More information can be found on the [New Zealand Wound Care Society website](#).

Any stage of PI (ie, stages 1, 2, 3, 4 and unstageable) should be counted and reported as either a HAPI or a 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 pressure injuries (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 quality improvement 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 (refer to questions [19](#) and [20](#) for the reasons why).

11. 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).

12. How should DHB hospitals stage and report non-hospital-acquired pressure injuries (non-HAPIs)?

Non-HAPIs should be staged and reported the same way as HAPIs, but noted as non-HAPIs.

13. Why should stage 1 pressure injuries always be reported as HAPIs?

Stage 1 pressure injuries should **always** be reported as HAPIs because they can develop in a very short period of time.

14. How will pressure injuries that were not acquired in hospital (non-HAPIs) be reported by the Commission?

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

15. Why is the Commission interested in ALL pressure injuries (acquired both in and outside hospitals)?

The Commission wants to know about **all** pressure injuries (excluding deep tissue injuries and mucosal injuries – refer below), whether they are hospital-acquired pressure injuries (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 the Commission, and others such as ACC and DHBs (who have population-wide responsibilities and work with other providers, such as aged residential care providers, in their region), focus efforts on reducing the incidence of and harm from pressure injuries that occur outside hospitals.

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

16. What if a patient has multiple pressure injuries?

Count and report only the most severe to the Commission.

17. 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 the patient is, in effect, counted twice, but the Commission needs to understand the prevalence of both HAPIs and non-HAPIs. The information about non-HAPIs will be used to inform activity with the wider sector, such as community and aged residential care providers.

18. What is the difference between ‘prevalence’ and ‘incidence’, and why is the distinction important?

In any setting, patients may have a pre-existing pressure injury (‘prevalent injury’) and may develop a new pressure injury (‘incident injury’). Over a period of time, for example, one month, **incidence** measures the frequency of **new pressure injuries developing** in that setting; **prevalence** measures the frequency of **all pressure injuries present** during that period in that setting; this includes both new injuries that have developed within a setting and older injuries that developed within a setting but outside the measurement period.

It is hard to measure incidence without constantly counting. Prevalence is easier to measure because it can be a snapshot, for example, the count on one day. If the focus of the measure is on prevalence of pressure injuries that occurred within the setting, for example, hospital-acquired pressure injuries (HAPIs), then it can be an estimate of incidence and thus provide a clearer estimate of the effects of pressure injury prevention and management efforts.

Pressure injuries that occur outside hospitals (non-HAPIs) must still be counted and reported to the Commission, but in their own category. Information about non-HAPIs helps to inform quality improvement activity outside hospitals, for example, with aged residential care and/or community care providers.

19. What are suspected deep tissue injuries and why shouldn’t they be reported to the Commission as pressure injuries?

Deep tissue injuries are areas of discoloured intact skin, often purple- or maroon-coloured, that may indicate underlying tissue damage associated with pressure that can develop into severe pressure injuries.⁷ These lesions should be monitored to determine how they progress. Some evidence suggests many resolve themselves without developing into a skin break.⁸ However, they can signal deeper injuries.

The Commission is interested in counting pressure injuries. Providers may collect and act on deep tissue injury information locally, but they do not need to report them to the Commission. This

⁷ Sullivan R. 2013. A two-year retrospective review of suspected deep tissue injury evolution in adult acute care patients. *Ostomy Wound Management* 59(9): 30–9.

⁸ Cox J, Kaes L, Martinez M, et al. 2016. A prospective observational study to assess the use of thermography to predict progression from discoloured intact skin to necrosis among patients in a skilled nursing facility. *Ostomy Wound Management* 62(10): 14–33.

approach is due to there being no consensus currently on whether deep tissue injuries should be included in large-scale measurement efforts.

20. What are mucosal injuries and why shouldn't they be reported to the Commission as pressure injuries?

Mucosal injuries occur within a body opening, such as a nostril or the mouth. They are usually associated with pressure from a device, for example, an endotracheal or nasogastric tube.

There is currently no staging system for mucosal injuries. Therefore, the international consensus is to not count mucosal injuries as pressure injuries if they are within a body opening.

However, pressure injuries associated with devices that occur outside a body opening, for example, on the nostril or lip, can be staged in the same way as standard pressure injuries and should be reported.

21. Will unstageable pressure injuries be counted?

Yes, as a separate category of pressure injury. Unstageable PIs are almost always stage 3 or 4, but the actual depth is unknown until the underlying vital tissue and structures can be visualised.

A recently updated staging tool, *How to classify and document pressure injuries*, is in Appendix 1. This 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) pressure injury classification system. More information can be found on the [New Zealand Wound Care Society website](#).

22. Why is the Commission interested in pressure injury assessments and individualised care plans?

The Commission wants patients to receive the best care possible. For PI prevention and management 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.

23. What is meant by the term current pressure injury assessment?

A pressure injury assessment involves documented assessment processes to establish what interventions might be needed to stop either the patient from developing a hospital-acquired pressure injury (HAPI) or an existing pressure injury 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 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 data collection, 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 had not taken 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.

24. 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 (for example, 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 QSMs is one that documents and addresses the patient's PI(s), either existing or at risk of.

25. Why is the Commission also collecting demographic data (age, gender and ethnicity)?

The Commission's [Statement of Intent 2017–21](#) sets out four strategic priorities for 2017–21, which underpin our planned activities for that period. One of these, strategic priority 2, is 'Improving health equity':

'Different population groups receive unequal benefits from the health and disability system. We only have to look at life expectancy statistics to know this: while New Zealanders overall are living longer, there is a difference of more than five years in life expectancy between Māori and New Zealand European populations. Children are another population group that, being dependent on others for care, may not access the health services they need.

New Zealanders report economic barriers in accessing health care, which are increasing and becoming more common among Māori and people with low socioeconomic status.⁹ We will contribute to a stronger understanding of health equity through our measurement and evaluation reporting and tools, and will make improving equity part of our improvement initiatives, where possible.

This priority will help us to deliver the broader objective of achieving value and high performance from health spending.¹⁰

Collecting age, gender and ethnicity information along with information about PI prevalence will help the Commission determine if inequities exist between population groups, and whether or not our activities reduce those inequities over time. The intention is to add the requirement for DHBs to submit demographic data, alongside PI prevalence data, in at a later stage – probably late 2018. The Commission will engage with DHB representatives regarding this.

26. What is the proposed methodology for collecting the process QSM data?

Collecting data for the pressure injury process QSMs will involve reviewing the notes of the patients that are randomly selected for a complete skin check (as described in [question 27](#)) to determine whether they have had an appropriate (and current) pressure injury assessment and

⁹ 2015 Health Survey (www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/surveys/current-recent-surveys/new-zealand-health-survey).

¹⁰ www.hqsc.govt.nz/assets/General-PR-files-images/HQSC_2017_Statement_of_Intent.PDF, p 11.

individualised care planning processes completed. The same group of patients must be used for both the process and outcome QSMs.

To summarise, here is one approach to collecting the 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.
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.

27. What is the proposed methodology for collecting the outcome data?

The Commission's methodology is [here](#).

In summary, the methodology is to randomly select patients 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 providers DHB hospitals do the data collection (i.e. review of notes and skin checks) at least each month so 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. 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. Thus 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.

28. 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, each patient has a known probability of being included in the surveillance 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 (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 (for example, via email or printout) on the surveillance day. The DHBs that have developed this approach did so with support from their quality teams and/or

business analysts. Other DHBs have used different methods, but again with support from their quality teams and/or business analysts.

29. What are the exclusions?

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 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.

30. Why exclude emergency department patients?

Many patients in emergency departments will leave without ever being admitted to the hospital; therefore, doing skin checks on these patients is not appropriate.

31. Why exclude day-stay patients?

Day-stay patients are not inpatients – the focus of the measurement approach is hospitalised patients.

32. Why exclude patients on last-days-of-life pathways?

Patient dignity and comfort are priorities at this time.

33. Why exclude the delivery suite?

It may not be appropriate for DHB staff to carry out skin checks of women while they're in labour.

34. Why exclude acute mental health?

Patient dignity and comfort, and staff safety are priorities, therefore doing skin checks on patients is not appropriate.

35. What are the inclusions?

All inpatient areas, bar those noted as exclusions above, should be included in the surveillance.

36. Why include neonates?

Neonates and young children are vulnerable to device-related pressure injuries that can develop rapidly into serious pressure injuries. Published New Zealand evidence shows a J-shaped curve for association between age and pressure injury (Figure 1).

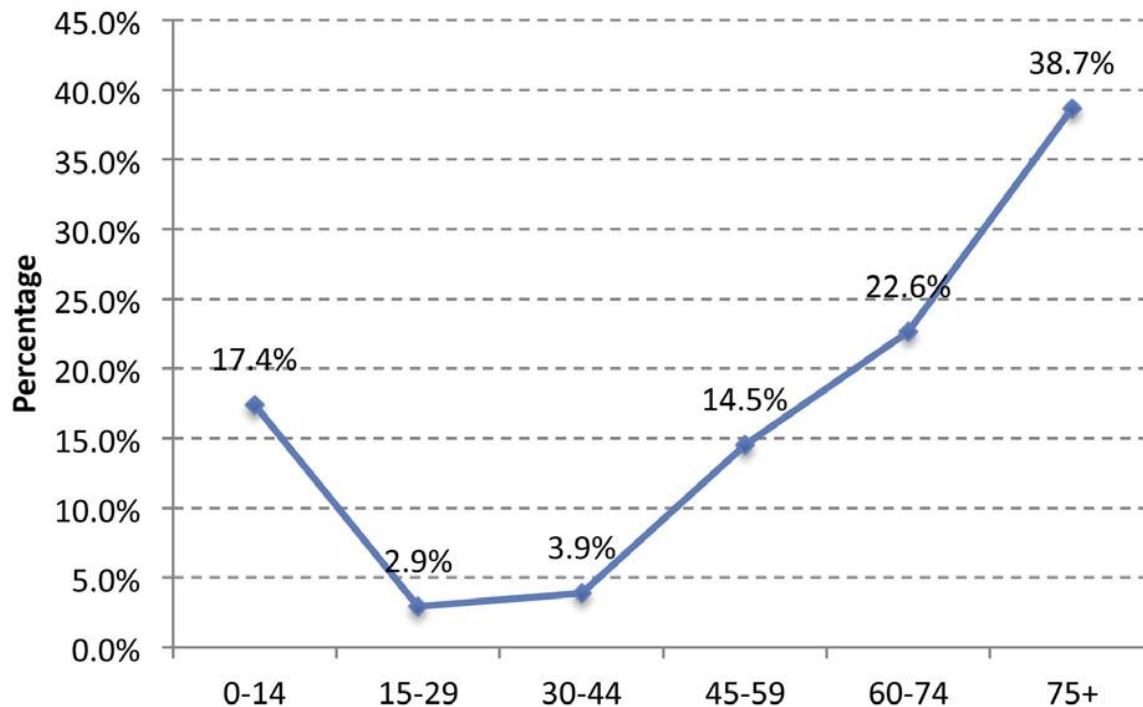


Figure 1: Percentage by age of all patients with a hospital-acquired pressure injury, March 2012 to February 2015¹¹

37. Why include maternity?

The obstetric, midwifery and anaesthetic literature includes case reports of women suffering pressure injuries often related to, but not limited to, epidural use (including low-dose use) after delivery.^{12 13 14 15 16 17} Sites of the pressure injuries included the sacrum and heels.

Factors associated with pressure injuries in postnatal women include shearing forces and friction over oedematous tissue, prolonged exposure to moisture associated with birthing, reduced mobility

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- ¹¹ Jull A, McCall E, Chappell M, et al. 2016. Measuring hospital-acquired pressure injuries: A surveillance programme for monitoring performance improvement and estimating annual prevalence. *Int J Nurs Studies* 58: 71–9.
 - ¹² Smet IGG, Vercauteren MP, De Jongh RF, et al. 1996. Pressure sores as a complication of patient-controlled epidural analgesia after Cesarean delivery. *Reg Anesth* 21(4): 338–41.
 - ¹³ Offori EM, Popham P. 2000. Decubitus ulcers after instituting epidural analgesia for pain relief in labour. *Anaesthesia* 55: 194.
 - ¹⁴ Newton H, Butcher M. 2000. Investigating the risk of pressure damage during childbirth. *Br J Nurs* 9(6): S20–6.
 - ¹⁵ Jury C. 2001. Staff needs to recognise patients are at risk. *BMJ* 322: 732.
 - ¹⁶ Hughes C. 2001. Obstetric care. Is there risk of pressure damage after epidural anaesthesia? *J Tissue Viability* 11(2): 56–8.
 - ¹⁷ Alfirevic A, Argalious M, Tetzlaff JE. 2004. Pressure sore as a complication of labor epidural analgesia. *Anesth & Analgesia* 98: 1783–4.

because of discomfort associated with laxity of pelvic girdle, and reduced mobility and sensation, particularly associated with epidural analgesia.^{18 19}

Maternity units have typically been excluded from large-scale pressure injury surveillance, as well as improvement programmes, mostly because of a belief that pressure injuries do not occur in maternity units. However, small-scale measurement efforts in individual maternity units suggest the incidence of pressure injuries might be at least 0.15–0.20 percent.^{20 21} An infographic released by the NHS Litigation Authority reports on 39 claims made against the NHS for maternal pressure injuries between 2009 and 2014.²²

Without the inclusion of maternity in a formalised surveillance effort, we cannot know the true extent of maternity pressure injuries. Therefore, the Commission has recommended maternity patients, both antenatal and postnatal, should be included in measurement efforts if they are inpatients.

38. Should pressure injuries be treated as adverse events?

All stage 3 and 4 pressure injuries should be considered adverse events and scored as severity assessment code (SAC) 2.²³ Unstageable pressure injuries or suspected deep tissue injuries should be monitored to determine the depth of pressure injury and SAC scored once they can be staged.

¹⁸ Hughes 2001, *op. cit.*

¹⁹ Butcher M. 2004. Risk of pressure damage for women using maternity services. *Nurs Times* 100(41): 46–7.

²⁰ Cheesman K, Makinde S, Bird G. 2010. Pressure ulcers in parturients. *Int J Obstet Anesth* 19(1): 121–2.

²¹ Morison BM, Baker C. 2001. How to raise awareness of pressure sore prevention. *Br J Midwif* 9(3): 147–50.

²² www.nhsla.com/Safety/Documents/Pressure_Ulcers_in_Maternity_Leaflet.pdf

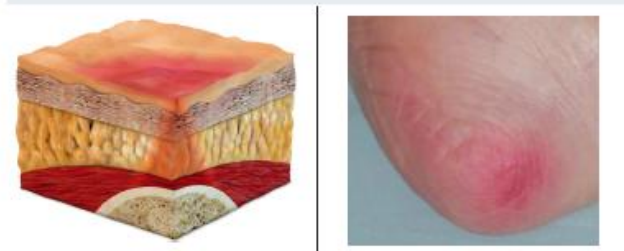

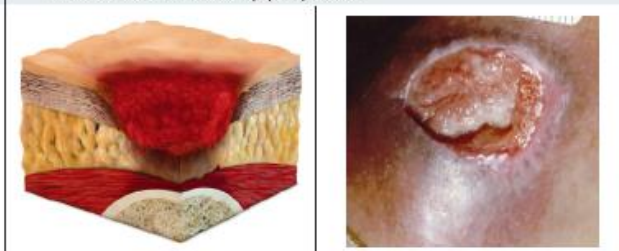



²³ SAC stands for severity assessment code. In general, these incidents have resulted in, or could have resulted in, serious harm or death. For further information on SAC classification of incidents, see www.hqsc.govt.nz/our-programmes/reportable-events/publications-and-resources/publication/636.

Appendix 1: How to classify and document pressure injuries

Below is a recently updated staging tool, entitled *How to classify and document pressure injuries*. This 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) pressure injury classification system. It can also be downloaded as a standalone document from [the New Zealand Wound Care Society website](#).

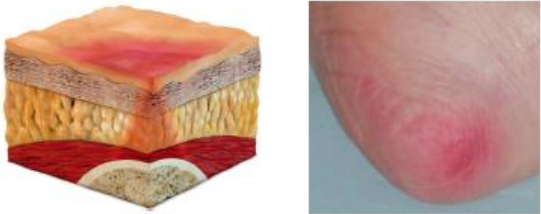
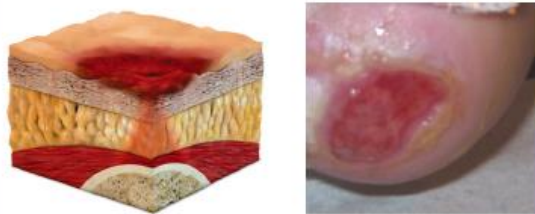



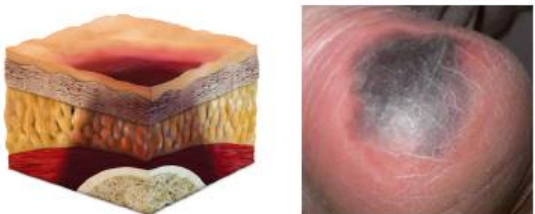
HOW TO CLASSIFY AND DOCUMENT PRESSURE INJURIES

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	Stage 2 pressure injury: partial thickness skin loss	Stage 3 pressure injury: full thickness skin loss
<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	Unstageable pressure injury: depth unknown	Suspected deep tissue injury: depth unknown
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 Jarrod 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.

PRESSURE INJURIES – WHAT TO LOOK FOR

Stage 1	Stage 2	Stage 3
<p>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 some swelling.</p>	<p>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.</p>	<p>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.</p>
		
Stage 4	Stage - Unstageable	Stage - Suspected Deep Tissue Injury
<p>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.</p>	<p>This is a deep wound where you can't 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.</p>	<p>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.</p>
		

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.

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