



**National Wound Care  
Strategy Programme**



**Pressure  
Ulcers**

# Pressure Ulcer Categorisation Tool 2024

Working in partnership with

**Health  
Innovation  
Network**



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## Pressure Ulcer Categorisation 2024

When categorising a pressure ulcer, it is important to consider not just what you see but also what you feel, and what you know about anatomy. For example, understanding what the layers of the skin are, the location of bony prominences, and whether there is muscle or fat over the bony structure. These factors all contribute to our understanding regarding the depth of the tissues, and layers which might be implicated in damage. In particular, a good understanding of the skin is important. See Figures 1, 2 and 3.

The International Pressure Ulcer Guidelines (EPUAP, NPIAP, PPPIA 2019)<sup>1</sup> recommend that inspection of the skin should include a visual assessment performed under good lighting conditions. This should be conducted in conjunction with other skin assessment techniques such as touch and palpation for differences in temperature and tissue consistency.

Relative skin temperature changes over areas of inflammation can present as warmer than surrounding skin and tissue. By contrast, tissue which is ischaemic may feel colder to touch than the surrounding tissue. The findings of skin and tissue assessment should be considered in the context of the individual's overall presentation and pressure ulcer risk profile. The latter can be assessed using a structured, evidence-based risk assessment tool, for example PURPOSE-T.

When assessing patients with dark skin tones, additional consideration should be given to detecting the early signs of skin damage, which are often overlooked as erythema may not be clearly visible. Where visible signs of damage are diminished, more focus should be placed on temperature and tissue consistency, as well as patient reported pain or itching in relation to surrounding tissue (e.g., induration/hardness).

A good understanding of anatomy will help to understand what structures should be present beneath the skin e.g. subcutaneous fat, fascia, muscle, bone, cartilage, tendon, and this information should also inform the allocation of the correct category. See figure 2 for location of muscles, an example would be: there is no muscle over the calcaneus, there is just subcutaneous fat between the skin and the bone, therefore it is more likely that a deep pressure ulcer at this site will be a category 4.

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<sup>1</sup> European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. The International Guideline. Emily Haesler (Ed) EPUAP/ NPIAP/ PPPIA: 2019



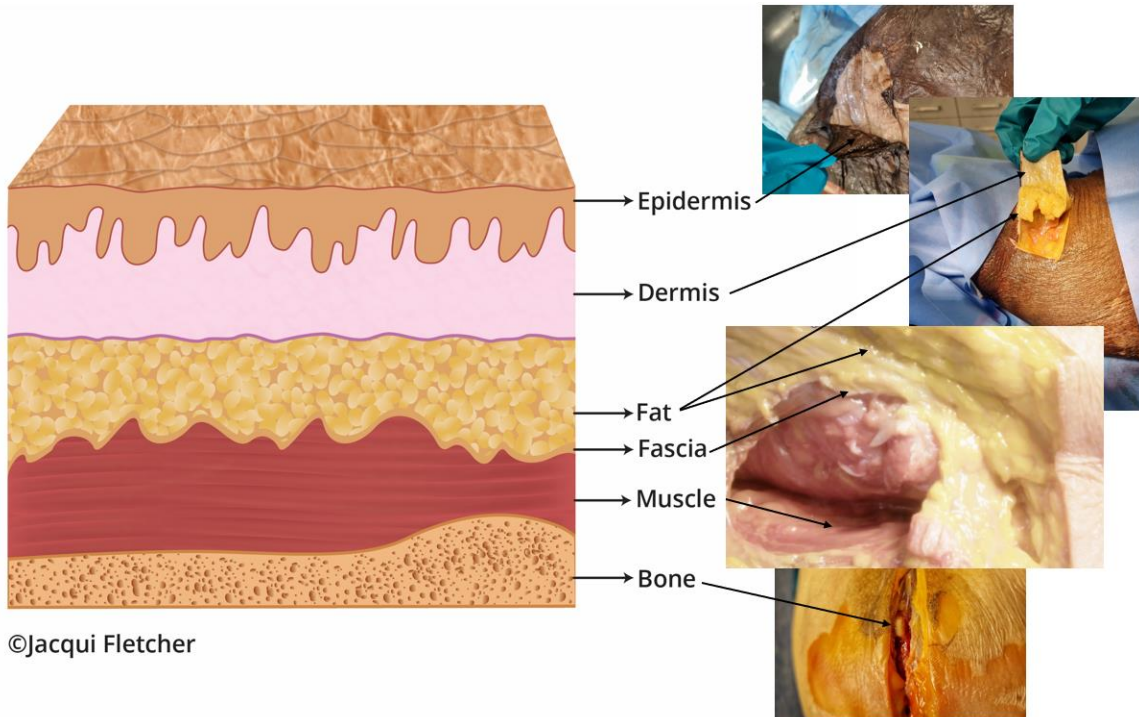


Figure 1 showing actual skin layers in comparison to diagrammatic layers.

**Posterior view of muscles & bones:**

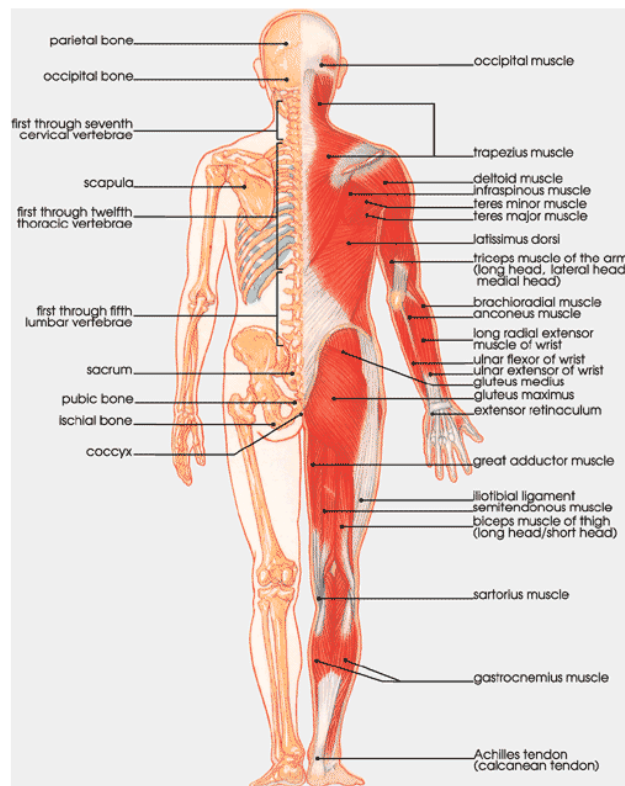
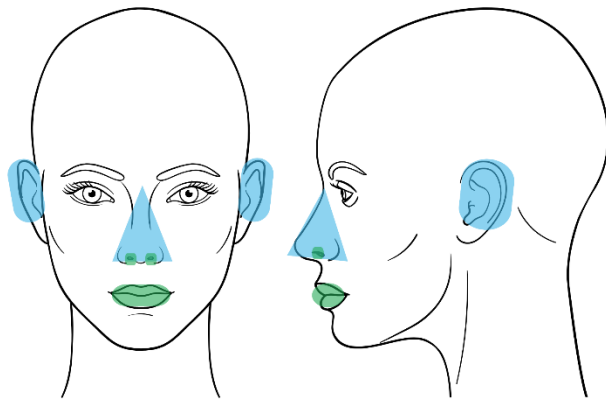


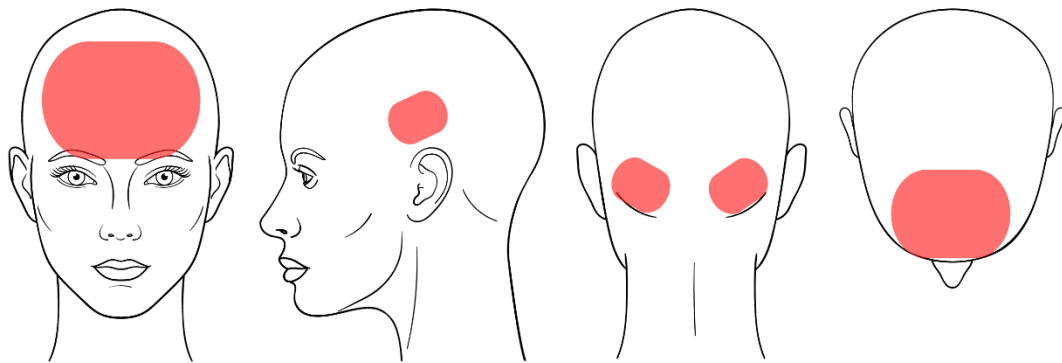
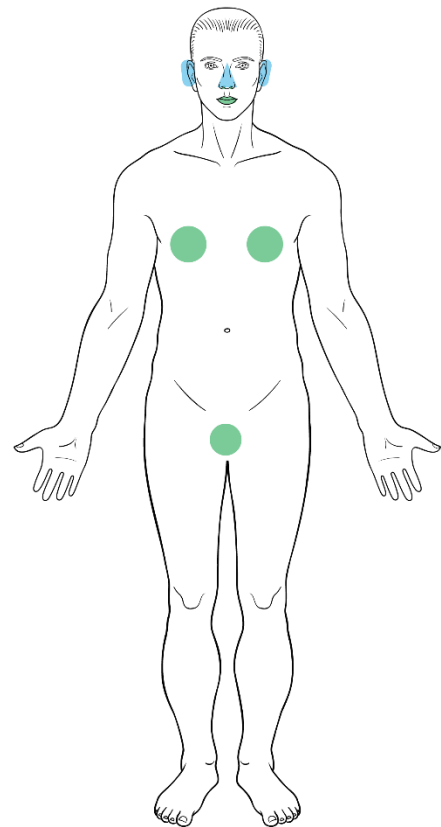
Figure 2 showing location of the muscles.





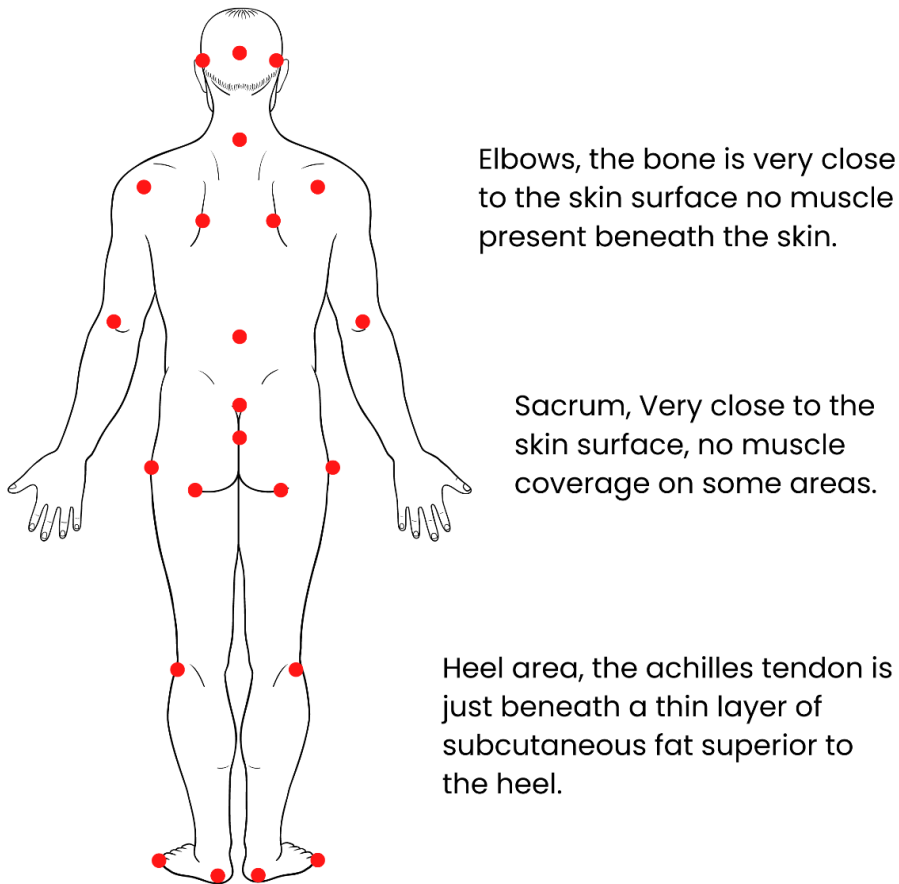
Ears and nose have no muscle or bone. The underlining structure is cartilage (*in blue*).

Lips, nostrils, nipples and genitalia are formed of mucosal membranes cannot be allocated a numerical category (*in green*).

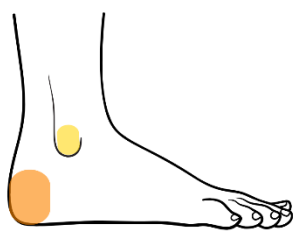


Occiput, skin closely overlaid onto the bone. There are small muscles located at some areas over the skull (*in red*).





**Red dots indicate common sites for pressure damage to occur**



The lateral malleolus is covered in a thin layer of ligament, with a thin layer of muscle over the top of the ligament (*in yellow*). There is no subcutaneous tissue at this location.

In contrast the posterior element of the calcaneus bone is covered only by subcutaneous tissue and skin (*in orange*).



Figure 3 showing areas where additional consideration of the location is important due to variation in the underlying tissues. Diagrams © Claire Gillespie University Hospitals Sussex.



## Mucosal membrane pressure ulcers

Mucosal membrane pressure ulcers occur in of the moist membranes that line the respiratory, gastrointestinal, and genitourinary tracts. They do not have the same anatomical structures as the skin; therefore, it is not possible to categorise them. See figure 4.

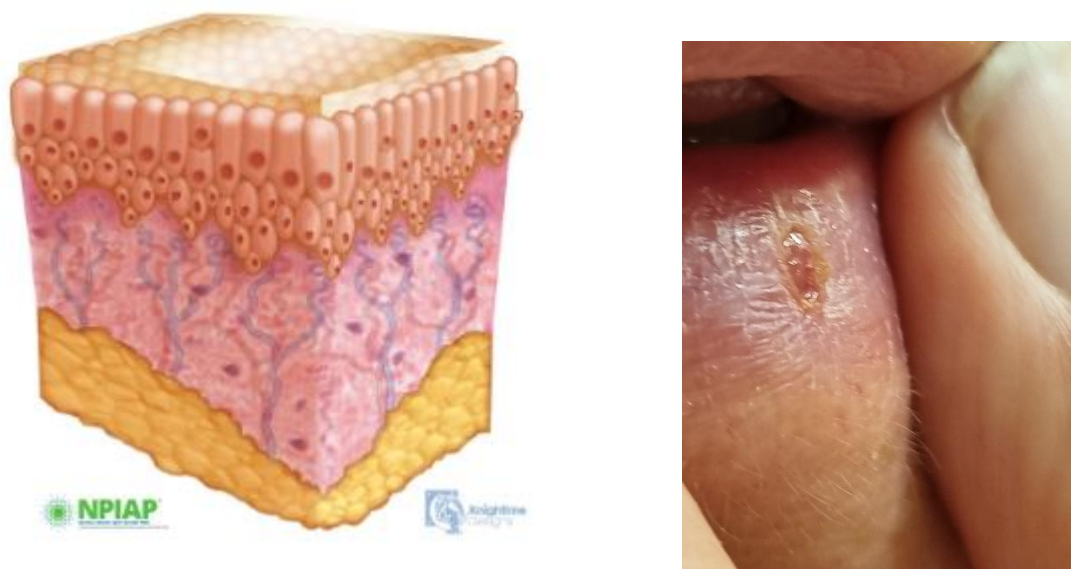


Figure 4 structures of the mucosal membrane and wound on the lower lip.

## Medical device-related pressure ulcers

Device-related pressure ulcers should be categorised as per any other pressure ulcer where possible. If the pressure ulcer is on a mucosal membrane, it should not be categorised but recorded as a mucosal pressure ulcer. Details of both the device and cause of the wound, if known, should be recorded (e.g. ties too tight, incorrect securement system, tubing underneath the patient). Device-related pressure ulcers can often be observed over challenging anatomical sites e.g. bridge of the nose (Continuous positive airway pressure mask (CPAP)), top of ear (oxygen tubing), etc. Therefore, careful consideration of tissue depth is needed prior to categorisation.

Specific information on device-related pressure ulcers can be found here: Gefen A, Alves P, Ciprandi G et al. Device-related pressure ulcers: SECURE prevention. Second edition. J Wound Care 2022; 31; 3 (Suppl 1):S1–S72.





## Pressure ulcer categories

The following categories are taken directly from the International Pressure Ulcer Guidelines ((EPUAP, NPIAP, PPIA 2019 pp 203 – 205) and reflect the National Wound Care Strategy Programme Pressure Ulcer Recommendations and Clinical Pathway 2024. Minor amendments have been made to the language to reflect new understanding of assessing patients with dark skin tones.

Refer to figure 1 to illustrate the skin layers described.

### Category 1 Pressure Ulcer / Non blanchable erythema

The ulcer appears as a defined area of persistent redness (erythema) in lightly pigmented skin tones, whereas in darker skin tones, the ulcer may appear with persistent red, blue or purple hues, without skin loss. The patient may report pain or discomfort over the area.

### Category 2 Pressure Ulcer

Pressure ulcer with abrasion, blister, partial-thickness skin loss involving epidermis and or dermis.

### Category 3 Pressure Ulcer

Pressure ulcer with full-thickness skin loss involving damage or necrosis of subcutaneous tissue. Undermining and tunnelling may occur, fascia, muscle, tendon, ligament, cartilage and or bone are not exposed.

### Category 4 Pressure Ulcer

Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage and/or bone in the ulcer. There is an increased risk of osteomyelitis.

Any area of skin discolouration with associated changes in skin texture and temperature or patient reports of pain and discomfort that do not fit the above categories should be clearly documented with a full description of the clinical signs. This should be recorded as vulnerable skin so that the pressure ulcer prevention pathway (Orange pathway in PURPOSE-T) is triggered. This more thorough assessment of the surrounding tissue may alert the clinician to potential tissue damage beyond what is readily visible. Once again, these should be considered in relation to the anatomical location and the likelihood of further breakdown based on the temperature and texture of the area. If this area of discolouration breaks down, the standard categorisation listed above should be used and documented.

It is important to note that whilst in many situations, the level of tissue injury can be accurately assessed with visual inspection, the tissue surrounding the “visible injury” should be assessed for changes in sensation (e.g., pain), temperature (e.g., warmer from inflammation, colder as tissues die), firmness (firmer or boggy with tissue destruction and oedema), colour (signs of inflammation consistent with skin tone) and drainage expressed from surrounding tissues as they are palpated. This more thorough assessment of surrounding tissue may alert the clinician to more extensive damage than is readily visible (NPIAP 2017)<sup>2</sup>.

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<sup>2</sup> NPUAP Position Statement on Staging – 2017 Clarifications January 24, 2017

<https://cdn.ymaws.com/npiap.com/resource/resmgr/npuap-position-statement-on-.pdf>





These additional findings should be described and documented clearly and thoroughly as they will help to distinguish between a pressure ulcer where the full extent was not initially visible i.e. it is evolving and one which is deteriorating i.e. further damage has occurred.



## Examples of pressure ulcer categories

### Healthy skin

Healthy skin may demonstrate reactive hyperaemia i.e. transient redness (or alterations in skin tone in darker skin) for example, where the arms or legs have been crossed. This should resolve after a short period of time (20 to 30 minutes). To distinguish between reactive hyperaemia and a category 1 pressure ulcer (also known as non-blanching erythema) the blanching test should be used.

To test for non-blanching erythema (remember this may not be helpful in some skin tones):

- Using the finger pressure method, a finger is pressed on the erythema for three seconds and blanching is assessed following removal of the finger on intact skin.
- Using the transparent disk method, a transparent disk is used to apply pressure equally over an area of erythema and blanching can be observed underneath the disk during its application.

If there is difficulty in differentiating between a Category 1 pressure ulcer and reactive hyperaemia, relieve the pressure area for 30 minutes, then repeat the skin inspection.

Large skin areas require several measurement points.

(EPUAP, NPIAP, PPIA 2019 Section 2.3)



Healthy skin showing reactive hyperaemia (normal redness) in white skin.



Healthy skin showing blanching in a dark skin tone, note the risk of a Medical Device Related PU from the catheter tube.



## Category 1

This is a category 1 pressure ulcer in brown skin. Note that the erythema (redness) is still visible as the skin is much lighter on the margin of the foot.



This image shows non-blanching erythema in white skin.



## Category 2



*An intact serum-filled blister*



*A shallow open ulcer with a red pink wound bed without slough*

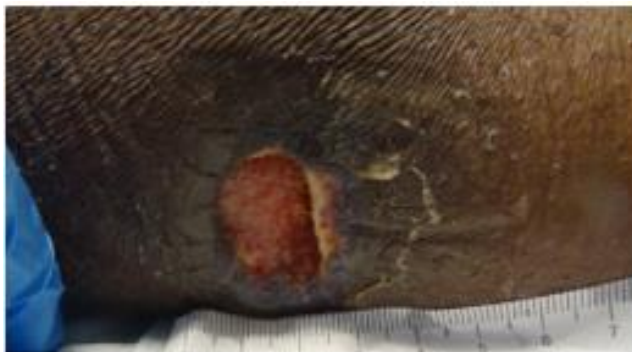


*A superficial ulcer with a collapsed blister*

A category 2 pressure ulcer progresses into but not through the dermis, therefore the blister may be blood streaked if vessels within the dermis are damaged.

## Category 3

This image shows a category 3 pressure ulcer, subcutaneous fat is visible but no underlying structures.



This image shows a dry necrotic wound over the heel, the skin surrounding the wound should be carefully palpated and consideration given to the location to help determine the category. It is as a minimum a Category 3 pressure ulcer.



This occipital ulcer is as a minimum a category 3 pressure ulcer. Careful palpation and consideration of the location (minimal tissue between the skin and the bone) would suggest it may be a category 4, but until the underlying structures are visible, this should be recorded as a minimum category 3.



## Category 4

In the first wound, the bone is clearly visible. There is an increased risk of osteomyelitis and this should be addressed within the plan of care. Both wounds have visible underlying structures (they are both category 4).



*In this wound, the bone is clearly visible*

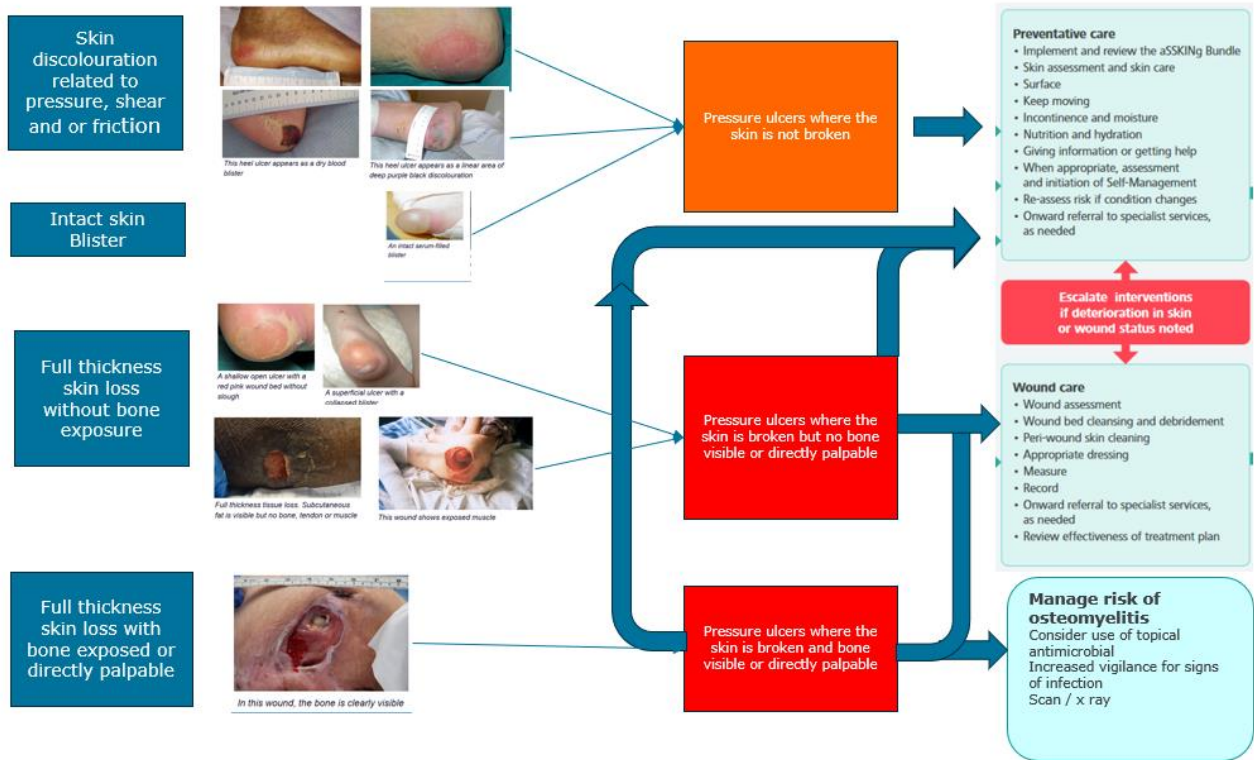


*This wound shows exposed muscle*



## Delivery of care

Once a skin assessment has been completed and an appropriate diagnosis / category allocated, care should be delivered following the appropriate pathway from the Pressure Ulcer Recommendations and Clinical Pathway <sup>3</sup>.



<sup>3</sup> <https://www.nationalwoundcarestrategy.net/wp-content/uploads/2024/02/NWCSP-PU-Clinical-Recommendations-and-pathway-final-24.10.23.pdf>

