Pressure Injuries

May 2nd 2025

1

Objectives

- Pressure Injury Definition
- Pressure Injury Staging
- Offloading and Positioning
- Best Practice
- Resources

2

Facts and Statistics

- 2016 terminology changed from pressure ulcer to pressure injury
- Estimated 2.5 million patients develop pressure injuries each year
- Stage 3 and Stage 4 PI are among the 14 preventable conditions identified by CMS and are considered a sentinel event by TJC
- Cost of treatment of a PI is estimated to 11 billion annually in the United States
- Treatment cost may be as much as 2.5 times the cost of prevention

3

Definition of a Pressure Injury

A pressure injury is localized damage to the skin and underlying soft tissue usually over a bony prominence or related to a medical or other device. The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of intense and/or prolonged pressure or pressure in combination with shear. The tolerance of soft tissue for pressure and shear may also be affected by microclimate, nutrition, perfusion, co-morbidities and condition of the soft tissue.

4

Stage 1 Pressure Injury: Non-blanchable erythema of intact skin

- Intact skin with a localized area of non-blanchable erythema, which may appear differently in darkly pigmented skin. Presence of blanchable erythema or changes in sensation, temperature, or firmness may precede visual changes.

*Color changes do not include purple or maroon discoloration; these may indicate deep tissue pressure injury.

5

Stage 2 Pressure Injury: Partial-thickness skin loss with exposed dermis

The wound bed is viable, pink or red, moist, and may also present as an intact or ruptured serum-filled blister. Adipose (fat) is not visible and deeper tissues are not visible. Granulation tissue, slough and eschar are not present. These injuries commonly result from adverse microclimate and shear in the skin over the pelvis and shear in the heel.

* This stage should not be used to describe moisture associated skin damage (MASD) including incontinence associated dermatitis (IAD), intertriginous dermatitis (ITD), medical adhesive related skin injury (MARSI), or traumatic wounds (skin tears, burns, abrasions).

6

Stage 3 Pressure Injury: Full-thickness skin loss

Full-thickness loss of skin, in which adipose (fat) is visible in the ulcer and granulation tissue and epibole (rolled wound edges) are often present. Slough and/or eschar may be visible. The depth of tissue damage varies by anatomical location; areas of significant adiposity can develop deep wounds. Undermining and tunneling may occur. Fascia, muscle, tendon, ligament, cartilage and/or bone are not exposed.

*If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.

7

Stage 4 Pressure Injury: Full-thickness skin and tissue loss

Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage or bone in the ulcer. Slough and/or eschar may be visible. Epibole (rolled edges), undermining and/or tunneling often occur. Depth varies by anatomical location.

* If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.

8

Unstageable Pressure Injury: Obscured full-thickness skin and tissue loss

Full-thickness skin and tissue loss in which the extent of tissue damage within the ulcer cannot be confirmed because it is obscured by slough or eschar. If slough or eschar is removed, a Stage 3 or Stage 4 pressure injury will be revealed.

*Stable eschar (i.e. dry, adherent, intact without erythema or fluctuance) on the heel or ischemic limb should not be softened or removed.

9

Deep Tissue Pressure Injury: Persistent non-blanchable deep red, maroon or purple discoloration

Intact or non-intact skin with localized area of persistent non-blanchable deep red, maroon, purple discoloration or epidermal separation revealing a dark wound bed or blood filled blister. Pain and temperature change often precede skin color changes. Discoloration may appear differently in darkly pigmented skin. This injury results from intense and/or prolonged pressure and shear forces at the bone-muscle interface. The wound may evolve rapidly to reveal the actual extent of tissue injury, or may resolve without tissue loss. If necrotic tissue, subcutaneous tissue, granulation tissue, fascia, muscle or other underlying structures are visible, this indicates a full thickness pressure injury (Unstageable, Stage 3 or Stage 4).

*Do not use DTPI to describe vascular, traumatic, neuropathic, or dermatologic conditions.

10

Additional pressure injury definitions.

- **Medical Device Related Pressure Injury:** This describes an etiology. Medical device related pressure injuries result from the use of devices designed and applied for diagnostic or therapeutic purposes. The resultant pressure injury generally conforms to the pattern or shape of the device. The injury should be staged using the staging system.
- **Mucosal Membrane Pressure Injury:** Mucosal membrane pressure injury is found on mucous membranes with a history of a medical device in use at the location of the injury. Due to the anatomy of the tissue these ulcers cannot be staged.

11

Avoidable vs Unavoidable Pressure Injuries

- Avoidable (NPIAP)- when provider **did not** do one or more of the following: evaluate clinical condition and pressure injury risk factors; define and implements interventions consistent with individual needs, individual goals, and recognize standards of practice; monitor and evaluate the impact of the interventions; or revise the interventions as appropriate
- Unavoidable (NPIAP)- individual develops the PI even though the provider evaluated the individual's clinical condition and pressure injury risk factors, defined and implemented interventions that are consistent with individual needs, goals and recognized standards of practice, monitored and evaluated the impact of the interventions, and revised the approaches as appropriate

12

Who is at risk?

- Limited mobility
- Limited activity
- High potential for friction and shear
- Perfusion and circulation deficits
- Neuropathy
- Impaired nutrition
- Moist skin / incontinence

13

Prevention

- Skin care / moisturize
- Continence management
- Assessments under medical devices
- Frequent repositioning
- Frequent skin assessments
- Support surfaces
- Bed positioning
- Heel positioning
- Seated positioning

14

Prophylactic Dressings

- Prophylactic dressing standards initiative (PDSI)
- 5 layer silicone bordered dressing recommended in adjunct to offloading for sacral area
- Heel dressings do not replace offloading!

15

Device Rounds

- Collaboration between wound clinician, therapy, and nursing
- Round on patients with removable devices
- Ill fitting device- therapy to coordinate with orthotic company
- Wearing schedule
- Skin Checks
- Patient education

16

My Devices

☐ At All Times ☐ While Walking ☐ For Comfort

☐ When Out of Bed ☐ When In Bed ☐ _____

Check Patients Orders For Individualized Care Plan

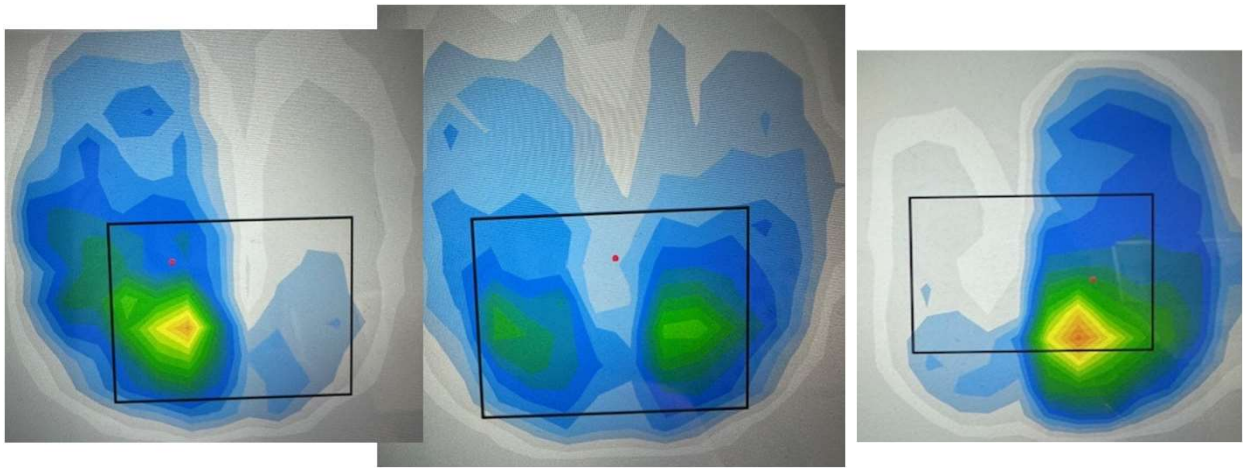
17

Pressure Mapping

- Why?
- Who?
- NPIAP Guidelines
  - Individual care plans including a comprehensive evaluation which includes pressure mapping

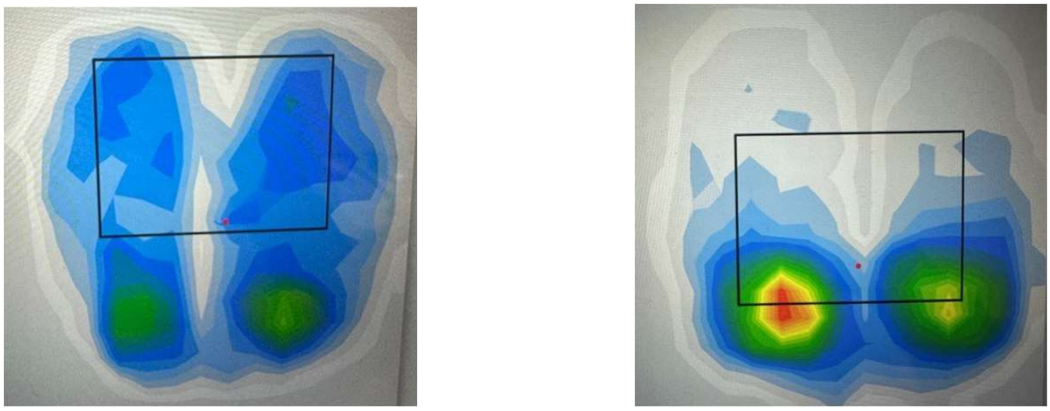
18

Office Chair



19

Foam Cushion



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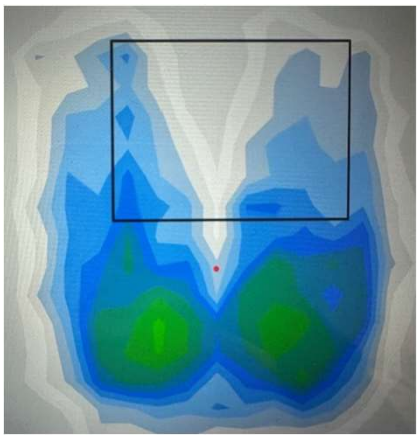
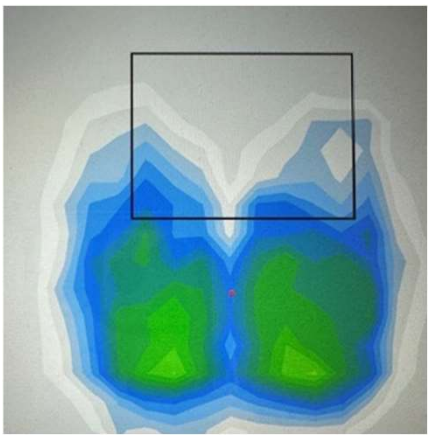
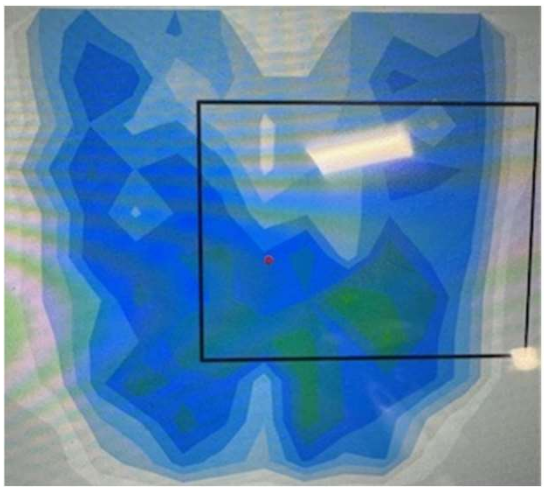
Roho Cushion

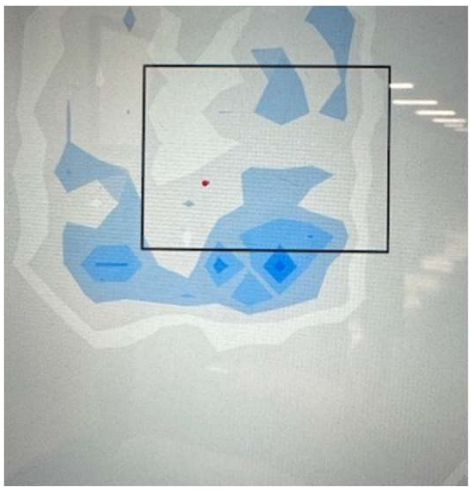




21

Roho Tilt in Space





22

Interdisciplinary Wound Team

- Nursing
- Collaboration with therapy for support surfaces, positioning, sitting schedule, safe patient mobility, skin assessments, orthotic management, shoe management, bathing
- Collaboration with support staff during bathing, dressing, toileting, repositioning
- Dietitian
- Administration
- Providers

23

Challenges

24

Resources

- National Pressure Injury Advisory Panel
  - National Pressure Injury Advisory Panel
- International Clinical Practice Guidelines
  - 2019 version is free to download
  - 2025 version coming soon
  - International Guideline
- Dressings as an adjunct to pressure ulcer prevention: consensus panel recommendations
- The vision and scope of the prophylactic dressing standard initiative of the European Pressure Ulcer Advisory Panel and National Pressure Injury Advisory Panel - PubMed

25