Pressure Injuries
Braden and Pressure Staging

provincialwoundprogram@nshealth.ca
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Why do a risk assessment?

- It is more than just a number
- It helps guide the plan of care to prevent PI
<table>
<thead>
<tr>
<th>SENSORY PERCEPTION</th>
<th>MOISTURE</th>
<th>ACTIVITY</th>
<th>MOBILITY</th>
<th>NUTRITION</th>
<th>FRICTION &amp; SHEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unresponsive (does not moan,</td>
<td>Skin is kept moist almost</td>
<td>Confined to bed.</td>
<td>Makes not make even slight</td>
<td>Never eats a complete meal.</td>
<td>Requires moderate to maximum</td>
</tr>
<tr>
<td>2. Very Limited</td>
<td>constantly by perspiration,</td>
<td></td>
<td>changes in body or extremity</td>
<td>Rarely eats more than 1/3 of</td>
<td>assistance in moving.</td>
</tr>
<tr>
<td>Responds only to painful</td>
<td>urine, etc. Dampness is</td>
<td></td>
<td>position without assistance</td>
<td>any food offered.</td>
<td>Complete lifting without</td>
</tr>
<tr>
<td>stimuli cannot communicate</td>
<td>detected every time patient</td>
<td></td>
<td></td>
<td>Eats 2 servings or less of</td>
<td>sliding against sheets is</td>
</tr>
<tr>
<td>discomfort except by</td>
<td>is moved or turned.</td>
<td></td>
<td></td>
<td>protein meal or dairy</td>
<td>impossible.</td>
</tr>
<tr>
<td>moaning or restlessness.</td>
<td></td>
<td></td>
<td></td>
<td>products per day.</td>
<td>Frequently slides down in bed</td>
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<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td>Occasionally will refuse a</td>
<td>or chair requiring frequent</td>
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<tr>
<td>has a sensory impairment</td>
<td></td>
<td></td>
<td></td>
<td>meal but will usually take</td>
<td>repositioning with maximum</td>
</tr>
<tr>
<td>which limits the ability</td>
<td></td>
<td></td>
<td></td>
<td>a dietary supplement when</td>
<td>assistance.</td>
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<tr>
<td>to feel pain or discomfort</td>
<td></td>
<td></td>
<td></td>
<td>offered.</td>
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<td>over 1/2 of body.</td>
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<td>OR is on a tube feeding or</td>
<td></td>
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<td></td>
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<td></td>
<td>TPN regimen which probably meets</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>most nutritional needs.</td>
<td></td>
</tr>
<tr>
<td>Responds to verbal commands</td>
<td>Skin is often, but not always</td>
<td>Ability to walk severely limited</td>
<td>Makes occasional slight changes</td>
<td>Rarely eats a complete meal</td>
<td>Requires moderate to maximum</td>
</tr>
<tr>
<td>but cannot always</td>
<td>moist. Linen must be changed</td>
<td>non-existent. Does not bear own</td>
<td>in body or extremity position</td>
<td>and generally eats only about 1/3</td>
<td>assistance in moving.</td>
</tr>
<tr>
<td>communicate discomfort or</td>
<td>at least once a shift.</td>
<td>weight and must be assisted into</td>
<td>usable to make frequent or</td>
<td>of any food offered.</td>
<td>Complete lifting without</td>
</tr>
<tr>
<td>the need to be turned. OR</td>
<td></td>
<td>chair or wheelchair.</td>
<td>significant changes independently.</td>
<td>Protein intake includes 3</td>
<td>sliding against sheets is</td>
</tr>
<tr>
<td>has some sensory impairment</td>
<td></td>
<td></td>
<td></td>
<td>servings of meat or dairy</td>
<td>impossible.</td>
</tr>
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<td>which limits ability to</td>
<td></td>
<td></td>
<td></td>
<td>products per day.</td>
<td>Frequently slides down in bed</td>
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<td>feel pain or discomfort in</td>
<td></td>
<td></td>
<td></td>
<td>Occasionally will refuse a</td>
<td>or chair requiring frequent</td>
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<tr>
<td>1 or 2 extremities.</td>
<td></td>
<td></td>
<td></td>
<td>meal but will usually take</td>
<td>repositioning with maximum</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>a dietary supplement when</td>
<td>assistance.</td>
</tr>
<tr>
<td>Responds to verbal commands</td>
<td>Skin is occasionally moist,</td>
<td>Walks occasionally during day,</td>
<td>Makes frequent though slight</td>
<td>Eats over half of most meals.</td>
<td>Requires moderate to maximum</td>
</tr>
<tr>
<td>but cannot always</td>
<td>requiring an extra linen</td>
<td>but for very short distances,</td>
<td>changes in body or extremity</td>
<td>Eats a total of 4 servings of</td>
<td>assistance in moving.</td>
</tr>
<tr>
<td>communicate discomfort or</td>
<td>change approximately</td>
<td>with or without assistance.</td>
<td>position independently.</td>
<td>protein (meat, dairy products)</td>
<td>Complete lifting without</td>
</tr>
<tr>
<td>the need to be turned. OR</td>
<td>once a day.</td>
<td></td>
<td></td>
<td>per day.</td>
<td>sliding against sheets is</td>
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<tr>
<td>has some sensory impairment</td>
<td></td>
<td></td>
<td></td>
<td>Occasionally will refuse a</td>
<td>impossible.</td>
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<td></td>
<td></td>
<td></td>
<td>meets most nutritional needs.</td>
<td></td>
</tr>
<tr>
<td>Responds to verbal commands</td>
<td>Skin is usually dry, linen</td>
<td>Walks outside room at least</td>
<td>Makes major and frequent</td>
<td>Eats most of every meal.</td>
<td>Requires moderate to maximum</td>
</tr>
<tr>
<td>but cannot always</td>
<td>only requires changing at</td>
<td>twice a day and inside room at</td>
<td>changes in position without</td>
<td>Never refuses a meal.</td>
<td>assistance in moving.</td>
</tr>
<tr>
<td>communicate discomfort or</td>
<td>routine intervals.</td>
<td>least once every two</td>
<td>assistance.</td>
<td>Usually eats a total of 4 or</td>
<td>Complete lifting without</td>
</tr>
<tr>
<td>the need to be turned. OR</td>
<td></td>
<td>hours during waking hours</td>
<td></td>
<td>more servings of meat and</td>
<td>sliding against sheets is</td>
</tr>
<tr>
<td>has some sensory impairment</td>
<td></td>
<td></td>
<td></td>
<td>dairy products.</td>
<td>impossible.</td>
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<td>which limits ability to</td>
<td></td>
<td></td>
<td></td>
<td>Occasionally eats between</td>
<td>Frequently slides down in bed</td>
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<td></td>
<td></td>
<td>meals. Does not require</td>
<td>or chair requiring frequent</td>
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<td></td>
<td></td>
<td></td>
<td>supplementation.</td>
<td>repositioning with maximum</td>
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<td></td>
<td></td>
<td>assistance.</td>
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**FRICTION & 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 leads to almost constant friction.
   - 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.

2. Potential Problem
   - Moves feebly or requires minimal assistance.
Braden

- Braden score of **18 or less** is considered to be at risk

- The level of risk is divided into four sections:
  - At Risk: 15-18
  - Moderate Risk: 13-14
  - High Risk: 10-12
  - Very High Risk: 9 or less

*Also consider low scores in one subset*
Clinical Judgement

Consider clinical judgement when final score is determined. May consider moving to next highest level of risk if 1 or more are present:

- Advanced age (NSHA-75 years of age or older)
- Hemodynamic instability
- Low diastolic pressure below 60
- Poor dietary intake of protein
- Fever
- Existing pressure injury
Prevention is the key

- Assess risk
- Interventions for all patients at risk
- Consider therapeutic support surfaces
- Cleanse and moisture skin with pH balanced products
- Cleanse incontinence promptly
- Nutrition is important!
Sensation

- Neurological disease

- Cognitive decline

- Medicated for pain
Moisture

- Incontinence: urine & feces
- Diaphoresis: assess skin folds
- Weepy legs from venous insufficiency or edema/heart failure
- Body habitus: Folds or under breasts
- Spilling the urinal in bed
- A highly exudative wound (wound drainage is moisture)
- Leaky ostomy pouch
- Leaking Foley catheter due to bladder spasms
Preventative Strategies

- **Reduce or eliminate moisture**
- Cleanse skin from incontinence immediately
- Change incontinence products more frequently
- Use protective barrier creams to protect skin
- Report irritations in skin immediately
- Avoid multilayers of soakers and continence briefs
Mobility and Activity

- Up and down schedule (time spent in bed and chair)
- Transfers
- Turning schedule
- Surface supports: cushion and mattress
Preventative Strategies

- Turn resident in bed every two hours
- Turn more often if non-blanching occurs and report
- Encourage residence to shift weight in the wheelchair every 15 minutes for 15 second intervals
- If resident is dependent staff should assist the resident to shift pressure in chair every hour (tilt chair or position)
Turn and position system
Preventative Strategies

Check surface support regularly for “Bottoming Out”.

Bottoming out occurs when the patient is actually sitting on the hard surface of the bed frame or wheelchair frame, instead of the air baffles.

To check for bottoming out- place fingers between the air baffles in the cushion while the patient is on the cushion.

Feel for the bony prominence. The bottom should not touch the hard surface below. Use the same technique on the mattress cushion.
Nutrition and Hydration

- Assessment of nutrition
- Assessment of Blood Work - cbc, hgb, iron, cpr, esr, bun, cr, blood glucose, thyroid function
- Enrich protein or other nutritional deficits
- Hydration - 1500-2000mls
- Med pass program
Friction and Shear

- Limit HOB to 30 degrees
- Repositioning with transfer sheet
- Raise end of bed (knee gatch) to reduce sliding
Preventative Strategies

- Prevention of shear during bed mobility and transfers
- Encourage transfers that prevent friction and shear
- Keep head of bed below 30 degrees when able
- Pull patients up in bed using a transfer sheet
Tuming Schedule

- 12:00 - 2:00: Back
- 2:00 - 4:00: Right
- 4:00 - 6:00: Back
- 6:00 - 8:00: Left
- 8:00 - 10:00: Right
- 10:00 - 12:00: Left
Anatomy of the Skin
NPUAP Pressure Injury Stages (2016)

- Pressure ulcers are staged according to the degree of tissue damage observed

- **Stages/Categories include**
  - Deep Tissue Pressure Injury (DTPI),
  - Stages 1-4
  - Unstageable wound

- **Do not stage backwards**
Stage 1
Why is this a Stage 1?

- The skin is not open or broken
- The area is a darker pink/red colour & stays when pressure is removed
- Does not blanch when pressed
Skin Check

Perform frequent skin checks daily. Observe for blanching with each skin check.

Apply pressure
Observe for white (blanching)
Stage 2
Partial Thickness

NSHA
Why is this a Stage 2 PI?

- The skin is open
- It does not have slough
- It has pink granulating tissue
- It can be serum filled blister that is intact or broken
Stage 3
Full Thickness Skin Loss
Why are these Stage 3?

- The skin is open
- The wound is caused by pressure
- Wound bed has some slough
- The wound bed is visible (not covered by slough)
Stage 4
Full Thickness Tissue Loss

Probes to bone
Why are these Stage 4?

- The injury is caused by pressure or shear
- The PI is to bone, tendon or muscle
- The bone is visible or palpable
Unstageable

Full Thickness Skin or Tissue Loss
Depth Unknown due to eschar or slough
Deep Tissue Pressure Injury (DTPI) – Depth Unknown
Deep Tissue Injury
Why is this DTPI?

- Depth is unknown
- The area can be purple or maroon
- The skin can be intact or broken
- Can look like a bruise
- Can be a blood blister
Staging Pressure Injuries
Pressure injuries acquired in a hospital/facility are considered harm to the patient. Hospital (facility) acquired injuries must be reported through the patient safety reporting system if the pressure injury presents as:

- Stage 3 or 4 Pressure Injury
Incontinence Associated Dermatitis (IAD) & Fungal Infections
References


