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Objectives

1. Explain the risk factors and causes of pressure injuries.
2. Discuss nursing assessment and include new pressure point assessments.
3. Discuss care for patients with standard risk and high-risk of pressure injury.
4. Explain management of Stage 1 and 2 pressure injuries by the nursing staff and unit Clinical Nurse Specialist or Clinical Quality Leader.
5. Identify patient and family education needs.

Seattle Children's®
Pressure Injuries and Risk Factors
Epidemiology\textsuperscript{1}

• An estimated 2.5 million injuries are treated each year

• One study identified a 80% increase between 1993 and 2006
Understanding Pressure Injuries

1. Pressure injuries are an area of localized injury to the skin and/or underlying soft tissue
   - May occur over bone
   - Devices
   - Shear forces
Understanding Pressure Injuries$^3$

(UpToDate, 2019)
Risk Factors

✓ History of Stage 3 or 4
✓ Devices
✓ Limited Mobility
✓ Hypotension (vasoactive/inotrope medications)
✓ Platelet count (<50k cells/mcL)
✓ Corticosteroids (> 0.5 mg/kg/day)
✓ Procedures (> 3 hours)
✓ Others
Pressure Injury Prevention (PIP) Pathway
Clinical Standard Work
A Need for Pressure Injury Pathway
Understanding Our Opportunities

• House wide increase in pressure injuries
• Increased areas of injury in the ICU’s for high-risk patients
• Increased prevalence of care refusal
• Inconsistent head-to-toe skin assessment (identified during root cause analysis)
# A Need for Pressure Injury Pathway

Understanding **Our Opportunities**

<table>
<thead>
<tr>
<th>Injury Location</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacrum</td>
<td>1</td>
</tr>
<tr>
<td>Occiput</td>
<td>8</td>
</tr>
<tr>
<td>Trach</td>
<td>3</td>
</tr>
<tr>
<td>Hip</td>
<td>1</td>
</tr>
<tr>
<td>Ear</td>
<td>2</td>
</tr>
<tr>
<td>Nasal Bridge</td>
<td>1</td>
</tr>
<tr>
<td>Nare</td>
<td>1</td>
</tr>
<tr>
<td>Gluteal Cleft</td>
<td>1</td>
</tr>
</tbody>
</table>
Goals of PIP Pathway

Standardize and Outline:
1. Nursing assessment and include new pressure point assessment every shift.
2. Care for all patients (with standard risk and high-risk).
3. Escalation for care refusal or for inability to provide standards of care.
4. Management of Stage 1 and 2 pressure injuries by the staff and unit Clinical Nurse Specialist or Clinical Quality Leader
5. Management of Procedural Care (e.g. OR/IR)
Overview & Scope

Inclusion Criteria
- All patients admitted to the hospital
- All patients admitted to or transferred from procedural areas

Exclusion Criteria
- Any patient with a serious disorder of the integumentary and mucous membranes (Stevens–Johnson syndrome, etc.)
New Daily Assessment

- Complete **Skin Assessment** (all patients) and **Braden Q Scoring** (inpatients):
  - On admission
  - On every shift
- General head-to-toe skin assessment and focus areas:

<table>
<thead>
<tr>
<th>Focus Areas</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occiput</td>
<td>• Assess for bogginess, redness, warmth, and scabs</td>
</tr>
<tr>
<td></td>
<td>• Braids and matted hair increase risk of pressure injury</td>
</tr>
<tr>
<td></td>
<td>• Look with penlight through the hair and under dressings (with surgery if surgical dressings)</td>
</tr>
<tr>
<td></td>
<td>• Assess any area around tubing/ears/head, if applicable</td>
</tr>
<tr>
<td>Shoulder Blades</td>
<td>• Assess the shoulder blades</td>
</tr>
<tr>
<td>Elbows</td>
<td>• Assess elbows for any pressure areas or redness from lines/tubes</td>
</tr>
<tr>
<td>Coccyx / Sacrum</td>
<td>• Assess sacrum area, between folds</td>
</tr>
<tr>
<td></td>
<td>• Hold at hips during turns and gently separate buttocks to assess for pressure areas/ulcers</td>
</tr>
<tr>
<td>Heels</td>
<td>• Assess heels for redness or breakdown</td>
</tr>
<tr>
<td>Toes</td>
<td>• Assess toes for any redness or breakdown</td>
</tr>
</tbody>
</table>

- Document assessment under Skin Assessment in EHR

- **New** pressure point focused areas include assessment/documentation of occiput, shoulder blades, elbows, coccyx/sacrum, heels/toes
Factors for Pressure Injury Risk

Factors for High Risk of Pressure Injury

- Braden Q score is < 18 (or < 20 for infants) or < 2 in any category
- History of Stage 3 or 4 pressure injury
- Devices:
  - Respiratory
  - Orthopedic
  - Lines/tubes
- Limited mobility, immobile and/or insensate
- ECLS, CRRT, HFOV
- Vasoactive / inotropic medications
- Platelet count < 50,000 cells/mcL
- On Malnutrition Screening Pathway
- Current corticosteroids use (> 0.5 mg/kg/day)
- OR/IR procedure ≥ 3 hours (within last 24 hours)
- Generalized edema
- Prolonged hypoxemia

Newly defined risk factors to determine if patient is high-risk or not
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After skin assessment and review of risk factors, RN will determine if patient meets criteria for standard care or high-risk care.
Standard Care Pathway

Pressure Injury Prevention
- Keep skin clean and dry
- Apply moisturizing lotion to dry areas daily and as needed
- Perineal Care:
  - Apply barrier cream with each diaper change for patients who are incontinent (NICU and < 44 weeks gestation excluded)
  - See Job Aid: Diaper Dermatitis Treatment (12198)
- Skin Prep:
  - Apply 3M™ Cavilon™ No Sting Barrier Film under tape or transparent dressings
- Reposition:
  - Turn/reposition at least every 2 hours if insensate or immobile (per protocol in NICU and Rehab)
  - See GOC: Immobilized or Limited Mobility (10533)
- Offload:
  - Use fluidized positioners, gel cushions or pillows for bony prominences
  - Choose appropriate sleep surface/bed options for pressure relief or reduction
  - Use Z-Flo™ devices as position assistive devices

Shear Injury Prevention
- Recognize at-risk patients: fragile skin, poor tissue turgor, reduced mobility, or insensate areas
- Keep head of bed less than 30 degrees elevated unless clinically contraindicated
- Use the knee catch on the bed when head of bed is elevated
- Prevent shearing injury by using a lift sheet or lift assist devices to move or reposition patients

Provide standard care every shift
Pressure injury found?
Manage pressure injury
High-Risk Pathway

New Preventative Dressing for all patients at risk

Device Recommendations when applicable

For All Patients

Preventive Dressings
- Apply any Mepilex® Border on high risk areas (as appropriate):
  - Occiput
  - Shoulders
  - Coccyx
  - Sacrum
  - Heels
  - Any hard and bony surface
- Assess each site every shift by gently lifting the dressing and checking for blanching, bogginess, temperature and scale.
- Document interventions under Pressure Injury Prevention in EHR

Preventive Dressings (if applicable)
- RT to manage / document
- Prevention:
  - Apply 3M™ Cavilon™ No Sting Barrier Film
  - Apply protective dressing
  - Assess skin and release pressure every 4 hours with RT
  - If unable or pressure injury found, contact RT Supervisor
- For new trach, see Job Aid: Tracheotomy Phase 2 (Until 1st Trach Change) (12147)

Appropriate Bed Surface
- Apply waffle overlay on standard hospital bed or crib
- Discuss specialty bed/mattress with CN and CNS
- Apply Mepilex® Border with Safetac or Mepilex® Border Sacrum (do not use Lite)
- Handle skin gently
- Use gel pads

Positioning
- Turn/reposition at least every 2 hours
- See GOC: Immobilized or Limited Mobility (10533)
- Keep head of bed less than 30 degrees elevated unless clinically contraindicated
- Use barrier waffle cushion (green) under head (avoid standard pillow)

Moisture Management
- Apply barrier cream with each diaper change (NICU and < 44 weeks gestation excluded)
- See Job Aid: Diaper Dermatitis Treatment (12198)

Devices (if applicable)

Orthopedic Devices
- Fully assess site and surrounding skin every shift while brace removed for care
- If unable to visualize skin under a brace and/or the brace cannot be removed, consult orthotist / clinician (after hours, weekends and holidays, page via operator on call orthotist) to assist with brace mobilization options and pressure risk assessment
- See GOC: Brach, Care of Patient (10199)

Non-RT Lines / Tubes
- Assess where lines/tubes are in proximity to skin
- Apply Mepilex® Border with Safetac (do not use Lite)
- See GOC: EEG Monitoring After Grid/Strip Placement (10201)

Casts
- See GOC: Casts Including Spica Casts (10207)
- If issues, contact orthopedic surgery team
Identified Pressure Injury

New sections for all stages of injuries for initial treatment and ongoing care every shift.

Stage Pressure Injury and Provide Care

Stage 1 or 2

When Pressure Injury is Found...

- Escalate
  - Notify Provider and CNS
  - Enter an eFeedback (CNS notified)

Perform Initial Management

- Apply Mepilex® Border with Safetac (do not use Lite)
- Document new pressure injury under Wound in EHR

Stage 3, 4 or Unstageable

When Pressure Injury is Found...

- Escalate
  - Notify Provider and CN
  - Enter an eFeedback (CNS notified)
  - Provider to order Wound Care consult after assessing

Perform Initial Management

- Apply Mepilex® Border with Safetac (do not use Lite)
  - If unavailable, use Allevyn™ Gentle Border or Optifoam® Gentle Border
- Assess dressing integrity and replace as needed until Wound Care consult
- Document new pressure injury under Wound in EHR
- Add to Problem List in EHR

Ongoing Care Every Shift

- Assess skin under dressing
- Review care guidelines in CAREDEX
- Discuss concerns/issues with CNS
- Document care under Wound in EHR

When pressure injury is healed

- Document skin findings
- Deactivate dynamic group under Wound in EHR

Ongoing Care Every Shift

If Wound Care instructions are NOT available

- Assess dressing integrity and replace as needed
- Document care under Wound in EHR

If Wound Care instructions are available

- Review Wound Care CAREDEX instructions for wound management
- Change dressing per CAREDEX instructions
- Discuss concerns/issues with Wound Care Consultant
- Document care under Wound in EHR

When pressure injury is healed

- Document skin findings
- Deactivate dynamic group under Wound in EHR
Procedural Care

Complete Pre Operative Assessment Form

Go to tab for Other Risk Assessments
- Select “Yes” if patient has history of stage 3, 4 or unstageable pressure injury
- Automatic Wound Care consult
- Assess patient’s skin (head-to-toe)
- If pressure injury found
  - Identify and document each skin abnormality
  - Select “Pressure injury present on admit”
Procedural Care

Procedure ≥ 3 hours?

No

Standard INTRAprocedural Care
- Complete pre and post procedure Skin Assessment
- Use pressure redistribution devices as needed

Yes

INTRAprocedural High Risk of Pressure Injury Care
- Apply Mapilex® Border with Safetac to the high risk area AND / OR
- Use pressure redistribution devices
- Document INTRAprocedural assessment
- Discuss position change(s) with surgical and anesthesia team every 3 hours

For patients in an ICU crib that require limited mobility POSTprocedure, place a waffle mattress on crib
Procedural Care

POSTprocedural

Inpatient Handoff
- Complete IR / OR to ICU Handoff Procedure
- Identify any skin issues or concerns

Post-Procedure in PACU?

No

Provide prevention measures for high risk

Yes

Procedural / PACU Handoff
- Complete OR to PACU RN Handoff
- Report area(s) of concern OR history of pressure injury to receiving RN
Procedural Care

POSTprocedural

**Inpatient Handoff**
- Complete IR / OR to ICU Handoff Procedure
- Identify any skin issues or concerns

**Post-Procedure in PACU?**

- No
- Yes

**Procedural / PACU Handoff**
- Complete OR to PACU RN Handoff
- Report area(s) of concern OR history of pressure injury to receiving RN

**Provide prevention measures for high risk**
What & Where Do I Chart?

Integumentary & Pressure Injury Prevention Documentation Requirements

Document Every Shift or Every 12 Hours

Integumentary Section
- Complete General Head to Toe Assessment
- Complete Pressure Point Assessment
- Complete General Pressure Injury Prevention Measures

General Pressure Injury Prevention in Integumentary Section
- Complete for All General Prevention Measures

Pressure Injury Prevention Section
- Complete for specific areas of concern

Wound Section
- Complete for new established wounds
- New Dynamic Group for Specific Area of Concern

For new established wounds, document in Wound section

For specific areas of concern, documented in WIP/Care
CIS Enhancements

New Pressure Points Assessment
CIS Enhancements

- General Pressure Injury Prevention Section
- Specific Area of Concern → Document in Pressure Injury Prevention/Care
Preventing Pressure Injuries

What is a pressure injury?
A pressure injury, also called a bed sore, is damage to the skin and the tissue underneath the skin. It is caused by staying in one position for too long which places constant pressure, and reduces blood flow to the area, causing the skin to break down. For patients in the hospital who are often on their back, these injuries happen in areas where the bony parts are close to the skin, such as:
- Back of head and ears
- Elbows
- Heels
- Shoulders
- Tailbone
- Toes

What are the risks for developing a pressure injury?
Your child is at risk for developing a pressure injury if they:
- Are not able to move or shift around easily because of a medical problem
- Wear certain medical devices that put pressure on the skin
- Undergo a long procedure

What is my child’s care team doing to prevent pressure injury?
- Inspect your child’s skin every day for redness or signs of sores forming.
- Keep your child’s skin clean and dry.
- Protect bony areas of the body with protective dressings.
- Use positioning aids such as pillows to shift your child’s body off of the bed, or will be bed protectors or sitting cushions to prevent bed pressure.
- When appropriate, change your child’s position in bed at least every 2 hours if they are not able to move themselves.

How can I help prevent my child from getting a pressure injury?
- Partner with your child’s care team to change their position every 2 hours while they are not able to move themselves.
- Let your child’s care team know if there are new areas of redness on your child’s skin.
- Notify your nurse for any concerns about your child’s skin or care related to reducing the risk of pressure injury.

To Learn More
- Ask your child’s healthcare provider
- seattlechildrens.org

Free Interpreter Services
- In the hospital, ask your child’s nurse.
- From outside the hospital, call the toll free family interpreting line 1-866-366-1577. Tell the interpreter the name or extension you need.

Seattle Children’s offers a comprehensive service for deaf, hard of hearing, or non-native speaking families. Please note we understand you have needs beyond language and offer services for all families. 10/16

This handout has been reviewed by the Medical Staff of Seattle Children’s. However, your child’s needs are unique. Before you act or make any plans, please talk with your child’s healthcare provider.

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Questions?

- Email: PressureInjuryPathway@seattlechildrens.org
Thank you!
References


