“Rates of musculoskeletal injuries from overexertion in healthcare occupations are among the highest of all U.S. industries. The single greatest risk factor for overexertion injuries in healthcare workers is the manual lifting, moving and repositioning of patients, residents or clients, i.e., manual patient handling.”
This Value Analysis Guide provides product solutions and program resources for Heel Off-Loading and Safe Patient Handling. Please share this guide with members of your Value Analysis Team and other key decision makers in your facility. Content within this guide can be printed or shared electronically for educational and training purposes. Contact your local DeRoyal sales representative for additional information.

**Product Solutions:**
- PRUventor™ & PRUventor™ II
  Heel Off-Loading Devices
- PRUventor TurnPRO™
  Turning & Positioning System

**Resources:**
- Product Features & Benefits
- Protocol Development Guides
- Clinical Decision Trees
- Competency Checklists
- Product Application Guides
Silbac™ antimicrobial technology has the ability to reduce elevated levels of bacteria without disrupting levels of normal skin bacterial flora. This technology maintains its antimicrobial properties throughout the life of the product, even after disinfecting.

SOLUTION FOR HIGH RISK PATIENTS
PRUventor™ II Heel Off-Loading Device

PRODUCT FEATURES & BENEFITS

Structured Foot Rest: Additional foot-drop support

Foot Securement Strap (optional): Improves patient compliance

Static Bilateral Straps: Keeps the foot in a neutral position

Silbac™: Anti-microbial technology

Leg Securement Strap: Adjustable and customizable

SCD/ICD Exits: Outlined by blue stitching

Anti-Rotation Wedge: Helps prevent foot rotation

FOR ENHANCED FOOT-DROP SUPPORT
POLICY:
The PRUventor™ Heel Off-loading Device will be used on all patients at risk for developing pressure ulcers and plantar flexion of the foot. The PRUventor™ Anti-Rotation Wedge will be used in conjunction with the heel off-loading device to help prevent external rotation.

PURPOSE:
To help prevent pressure ulcers on the heel by maintaining heel suspension and to help prevent plantar flexion by maintaining the neutral position of the foot.

RISK FACTORS/CONDITIONS:
- Total Braden Score of 18 or less
- Braden Mobility Score of 1 or 2
- Braden Activity Score of 1 or 2
- Expected Immobility > 6-8 hours
- Inability to move leg or legs, numbness of leg(s), arteriosclerosis of leg(s) (absent pulse, hair)

KEY CO-MORBIDITIES:
- Diabetes mellitus, stroke, PVD, hemiparesis, quadriplegia, malnutrition (low albumin < 3.5/Braden Nutrition Score of 1 or 2)
- Unconscious, comatose, spinal cord or head injury, peroneal nerve injury, leg or other trauma
- Orthopedic and other surgeries that limit motion of the legs (hip fractures, THR, TKR), leg compartment syndrome
- On medications such as sedatives, paralytics and vasopressive medications

PRODUCT NEEDED:
PRUventor™ or PRUventor™ II Heel Off-loading Device with optional Anti-Rotation Wedge

PROCEDURE:
1. Follow skin care procedures for assessment, cleansing, moisturizing and treatment of the heel and foot:
   a. Remove the heel protector q-shift and inspect the patient’s skin for signs of breakdown.
   b. Cleanse and moisturize the skin daily. Be sure to dry thoroughly prior to re-application of the device.
   c. Follow your facility’s procedures for assessing pedal pulses and performing range of motion exercises.

2. Apply the heel protector on the patient:
   a. Place the heel protector on the bed next to your patient’s leg. Make sure all straps are open.
   b. Carefully lift the leg and position the heel over the opening. Support the knee to prevent hyperextension.
   c. With the heel resting in the opening, pull the heel protector’s sides up and around the foot, ankle and lower leg. Make sure each side is pulled up completely (to properly seat the heel, ankle and lower leg).
   d. Attach all securement straps and make sure two fingers fit between the straps and the patient’s leg.
   e. Verify the heel is positioned in the opening at the bottom of the heel off-loading device. If it is not, reposition the heel and readjust the securement straps.
   f. The heel off-loading device is to be used in bed only. Do not stand or walk while wearing the device.

3. Using the heel protector with a sequential compression device:
   a. Put the sequential compression device on the patient according to your facility’s protocol.
   b. Follow steps (a) through (d) as explained above.
   c. Before attaching the securement straps, feed the tubing through the opening in the bottom side of the device.
   d. Verify the heel is positioned in the opening at the bottom of the heel off-loading device. If it is not, reposition the heel and readjust the securement straps.
   e. Make sure the tubing is not kinked or compressed against the patient’s skin.

4. Cleaning the heel protector:
   Wipe down surface using a cloth and/or a hospital approved disinfecting wipe. Air dry completely prior to reapplication. Do not use bleach or oxidizing agents.

5. Documentation:
   Document completion of the procedure on the appropriate form.
Decision Tree for Heel Pressure Injury Prevention

START HERE

Is patient able to help with re-positioning?

NO

• Establish patient appropriateness
• Review Clinical Protocol for PRUventor™ Heel Off-Loading Device

PATIENT MUST
• Be NON-AMBULATORY
• Have a total Braden Score of 15 or less
• Have at least TWO of the co-morbidities listed in the Clinical Protocol.

If a patient does not meet the above criteria, but the nurse has concerns about heel protection, call for a wound care consult to assess patient.

YES

• Establish patient appropriateness
• Educate patient on pressure reducing techniques

PATIENT MUST
• Have the potential to be AMBULATORY
• Be AMBULATORY
• Be recommended for heel off-loading through gait/mobility assessment
• Be referred to Physical Therapy

IS PATIENT AT AN INCREASED RISK FOR FOOT DROP?

NO

PRUventor™ Heel Off-Loading Device

YES

PRUventor™ II Heel Off-Loading Device
### PRUventor™ & PRUventor™ II

**HEEL OFF-LOADING DEVICES COMPETENCY CHECKLIST**

Date: ____________________________
Facility Name: ____________________________
Operator: ____________________________
Department: ____________________________
Instructor: ____________________________

<table>
<thead>
<tr>
<th>Where is device applied?</th>
<th>LEFT</th>
<th>RIGHT</th>
<th>BOTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>The operator has shown proficiency in the following activities:</td>
<td>N/A</td>
<td>Satisfactory</td>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>Places foot into device properly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusts foot flaps and side flaps properly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Places two lateral straps along each side of boot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not criss-cross two lateral straps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applies lower leg strap(s) properly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensures two fingers fit between patient’s skin and strap</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applies wedge properly to help prevent rotation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensures SCD/ICD tubing exit device properly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If moderate foot drop is present, reassesses and considers alternative</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I understand my facility's policy/protocol regarding the use of this device:

Signature: ____________________________ Date: ____________________________

Notes:
**Heel Off-Loading Device**

**PRUventor™**

1. Check to make sure heel is off-loading.
2. Do not criss-cross lateral straps.
3. Ensure sequential or intermittent compression device tubing is not in contact with patient’s skin.

**NOTE:** Perform periodic skin assessment as specified by hospital policies and procedures.

**CLEANING AND/OR MAINTENANCE**

Wipe down surface using a cloth and/or a hospital approved disinfecting wipe. Air dry completely prior to reapplication. Do not use bleach or oxidizing agents.

*Device may be applied across lower leg with single or double straps.*

**Heel Off-Loading Device**

**PRUventor™ II**

1. Check to make sure heel is off-loading.
2. Make sure blue hook connects to the blue loop and black hook connects to black loop.
3. Ensure sequential or intermittent compression device tubing is not in contact with patient’s skin.

**NOTE:** Perform periodic skin assessment as specified by hospital policies and procedures.

**CLEANING AND/OR MAINTENANCE**

Wipe down surface using a cloth and/or a hospital approved disinfecting wipe. Air dry completely prior to reapplication. Do not use bleach or oxidizing agents.

*Device may be applied across lower leg with single or double straps.*

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The PRUventor TurnPRO™ System is an easy-to-use safe patient handling solution for clinicians.

Silbac™ antimicrobial technology has the ability to reduce elevated levels of bacteria without disrupting levels of normal skin bacterial flora. This technology maintains its antimicrobial properties throughout the life of the product, even after disinfecting.
• **Ergonomic Handles**
  Comfortable, secure place to hold

• **High Friction Top**
  Keeps absorbent pad stationary

• **Universal Sizing**
  Accommodates most of the patient population

• **Sacral Locater Sticker**
  Ease of locating sacrum and applying wedges

• **TurnGRIP™ High Friction Surface**
  Keeps wedges positioned under sheet

• **Wipeable Cover**
  Silbac™ Antimicrobial Technology

• **High Density Foam**
  Accommodates varying patient weight

• **30 Degree Angle**
  Supports turning protocol to off-load sacrum

• **Top Layer**
  Soft, breathable, moisture-managing top layer

• **Bottom Layer**
  Quiet, non-slip back to keep pad in place

• **Leakproof**
  To help prevent contamination of sheets

• **Patented SuperCore® Technology**
  Premium absorbency and moisture wicking capabilities

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*https://mcairlaids-usa.myshopify.com/products/laydry-adult-bed-pads*
Preventing Sacral Pressure Ulcers with a Friction-Reducing Device

Policy:
The DeRoyal® PRUventor TurnPRO™ system is intended to assist and maintain proper positioning of the patient and to provide assistance to the caregiver when repositioning. The system helps to prevent pressure injury when instituted in pressure injury prevention bundles to aid in turning and positioning the patient (PRUventor TurnPRO™ sheet and wedges), offloading the sacrum (PRUventor TurnPRO™ wedges), and through control of the skin micro-environment by dissipating body heat and wicking moisture away from the skin. The system is also designed to help protect and assist the patient and caregiver during repositioning of the patient. This protocol template is designed to assist facilities to identify at risk patients that require a PRUventor TurnPRO™ system and to provide information for safe use to utilize the PRUventor TurnPRO™ system.

Disclaimer:
Pressure injury prevention requires a comprehensive bundle that considers skin and pressure injury risk assessments, skin care, nutrition, support surfaces, education (patient and staff), and other interventions (i.e. PRUventor heel offloading device) designed to prevent pressure injuries. These other components must be implemented within a pressure injury prevention bundle to achieve success in protecting patients from pressure injuries.

Evidence-based guidance to determine when to use TurnPRO system:
Assess patient risk for pressure injury with risk assessment tool (i.e. Braden score or facility risk assessment tool) at admission (within 8 hours), whenever the patient’s clinical condition changes, (i.e. Braden score or facility risk assessment tool) at admission (within 8 hours), whenever the patient’s clinical condition changes, (i.e. Braden score or facility risk assessment tool) at admission (within 8 hours), whenever the patient’s clinical condition changes, and according to facility protocol frequency. The risk assessment should be documented in the patient’s records to monitor progress and identify when the PRUventor TurnPRO™ system should be started or discontinued.

Patients determined to be high-risk for pressure injury by Braden score or other risk-assessment metric, receives abnormal skin assessment, or the patient meets one or more of the following risk criteria:\1,2,5,8:

- a. Patient requires assistance to reposition, slides down frequently in bed, or receives a Braden friction and shear sub-score of ≤ 2.\1,3-5,10
- b. Patient does not move or makes only slight/non-significant occasional movements and determined at risk for friction and shear (friction/shear sub-score: ≤ 2) and/or skin moisture (moisture sub-score ≤ 3) on Braden scale.\2,7-11
- c. Patient determined to have poor nutrition or low albumin.\2,7,9,10,12
- d. Patient likely will require ventilation greater than 24 hours, has current or history of pressure injuries, hypotension, and/or evidence of hypoperfusion (i.e. edema, third-spacing, etc.) of skin.\1,6,7,9
- e. Impaired sensation that prevents patient from feeling pain or discomfort at bony prominences, specifically the sacrum, or inability to communicate discomfort or pain (Braden sensation sub-score ≤ 3).\8
- f. Patient suffers intractable pain with movement.\1,3,9,13,14
- g. Patient placed on progressive mobility protocol.\14,17
- h. Patient placed on progressive mobility protocol.

References:
Decision Tree for Safe Turning & Positioning

**START HERE**

Can patient assist with turning and positioning?

**YES**

**Partially Able**

- Encourage patient to assist using a positioning aid or cues.

- If patient is **<200 pounds:** Use a friction-reducing device and 2-3 caregivers.

- If patient is **>200 pounds:** Use a friction-reducing device and at least 3 caregivers.

**FULLY ABLE**

- Caregiver assistance not needed; patient may/may not use positioning aid.

**NO**

- Use full-body sling lift or friction-reducing device and 2 or more caregivers.

**Important Information:**

- This is not a one person task - DO NOT PULL FROM HEAD OF BED.
- When pulling a patient up in bed, the bed should be flat or Trendelenburg position to aid in gravity, with the side rail down.
- For patient with Stage III or IV pressure ulcers, care should be taken to avoid shearing force.
- The height of the bed should be appropriate for staff safety (at the elbows).
- If the patient can assist when repositioning “up in bed,” ask the patient to flex the knees and push on the count of three.

### TURNING & POSITIONING SYSTEM COMPETENCY CHECKLIST

Date:  
Facility Name:  
Operator:  
Department:  
Instructor:  

<table>
<thead>
<tr>
<th>System Components:</th>
<th>Sheet</th>
<th>Wedges</th>
<th>Absorbent Pad</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The operator has shown proficiency in the following activities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepares the bed for proper application</td>
<td>N/A</td>
<td>Satisfactory</td>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>Unfolds the sheet and pad along the side of the patient lengthwise and positions top of the sheet directly above patient’s shoulders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Properly positions sheet and pad underneath patient with handles draped over side of the bed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grabs handles at level of patient’s shoulders and hips</td>
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</tr>
<tr>
<td>Stands with a wide base of support with one foot in front of the other</td>
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<td></td>
</tr>
<tr>
<td>Places weight on forward foot and bends from the hips and knees</td>
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</tr>
<tr>
<td>Instructs the patient that the turn will occur on the count of three</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrates proper application of sacral locator sticker</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Places wedges to maintain patient in lateral position and off-load sacrum</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Returns the bed to original position, raises the side rails, and places call light within reach</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrates knowledge of cleaning instructions and utilizes replacement components as needed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**I understand my facility’s policy/protocol regarding the use of the PRUventor TurnPRO™ device:**

Signature: __________________________  Date: ______________________

**Notes:**
This quick reference guide does not supersede the instructions given by a prescriber or the information contained in the Instructions For Use (IFU) which accompany this device. Please refer to the IFU for all warnings, cautions, and complete instructions.

System Components:
- Sheet with secure, comfortable handles and Sacral Locator Sticker
- TurnGRIP™ positioning wedges with anti-slip feature
- Absorbent pad with temperature management and moisture wicking technology

Quick Application Card

- Securing the Handles
- Applying Wedges
- Maintaining Lateral Position

Turn Schedule Clock

Date: ____________________________
Patient Room Number: ____________________________
Start Time: ____________________________ End Time: ____________________________
Clinician Name: ____________________________

Check for the following prior to use:
- Patient is maintaining a lateral position
- Sacrum is pressure free
- Clean absorbent pad is in place
- Proper documentation initiated

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