Training is an essential component to a successful pressure ulcer prevention and treatment program. This training is designed to assist nurses in developing basic skills necessary to prevent and treat pressure ulcers. The program is interactive meaning the nurse learner will be reading, listening, and engaging in hands-on practice.

Some preparation is required on the part of the facilitator to promote a successful training experience, but it is not necessary for the facilitator to be present during the training. Upon completion of the training, a facilitator may administer a quiz to aide in determining competency in the skills necessary for basic prevention and treatment of pressure ulcers. A sample quiz has been provided.

Each nurse taking the training needs to have the handouts listed below. Master hard copies of all handouts should be provided in a training manual the nurse learner will review as they proceed through the course.

1. Braden Scale for Predicting Pressure Ulcer Risk
2. Braden Interventions
3. Selected Characteristics of Support Surfaces
4. Support Surfaces: Characteristics and Considerations
5. Managing Tissue Loads
6. Braden Case Study
7. Pressure Ulcer Definition and Stages
8. Clinical Fact Sheet Quick Assessment of Leg Ulcers
9. Measuring a Pressure Ulcer
10. Treatment Product Categories
11. Dressing Change Exercise
12. Communication with Physician
13. Competency Quiz

The training may begin when the nurse learner is comfortable, has the manual and copies of handouts, and has the supplies they will use to practice. The training session is self paced and the nurse learner can pause the training at anytime and resume it when they are able.

Software/Hardware requirements- DVD player or computer to play the DVD on. If you are playing on a computer, be sure that you are using a DVD drive.
Supplies- In addition to copies of handouts, you will need to provide the nurse learner with items they will use to practice measuring a wound and doing a dressing change. The items are as follows:

**Measuring a Wound**
1. Q tip

**Dressing Change**
1. Box of gloves
2. Potato with a space carved out of it to mimic an open pressure ulcer. Note, the facilitator may apply glitter, sand, or other foreign material inside the potato to represent non viable tissue that needs to be cleaned from the wound bed during the dressing change.
3. Cup of water- water is used in place of normal saline
4. 19 gauge needle with a 35cc syringe or wound cleaners bottle with water
5. 4x4 or 2x2 Gauze
6. Tape
7. 1- non adherent or foam dressing.
8. Q tips- Used in place of a non-cotton tip applicator or a tipped applicator moisten with normal saline
9. 10 cc of glue, liquid soap or other inexpensive semi liquid to represent hydrogel or the application of a product in the wound bed.
10. Wax paper or small towel
11. Trash bag

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**Instructions for Learner**

Welcome to the Primaris Pressure Ulcer Prevention and Treatment Training. This is a comprehensive program designed to provide you with a foundation for preventing and treating pressure ulcers. The training has been designed to be interactive with visual images and opportunities for practice. You will watch a slide show and listen to a narrator explain the slides. Pause the show at any time to read the slides, read handouts, or take notes.

This program is self paced so you can take as long as you need to finish. Prior to starting, you will need the manual containing the handouts, copies of the practice sheets, and the materials listed on the practice sheets. Please make sure you have all the necessary items before beginning the training.
## Braden Scale for Predicting Pressure Sore Risk

**Resident Name (Last, First, Middle)** ____________________________________________

Room #: ___________  Attending Physician: ___________________  Date of Assessment: ____________

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Score/Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensory Perception</strong></td>
<td>Ability to respond meaningfully to pressure-related discomfort</td>
<td>1 = Completely Limited</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Very Limited</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = Slightly Limited</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = No impairment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moisture</strong></td>
<td>Degree to which skin is exposed to moisture</td>
<td>1 = Constantly Moist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Often Moist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = Occasionally Moist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = Rarely Moist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Activity</strong></td>
<td>Degree of physical activity</td>
<td>1 = Bedfast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Chairfast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = Walks Occasionally</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = Walks Frequently</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mobility</strong></td>
<td>Ability to change and control body position</td>
<td>1 = Completely Immobile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Very Limited</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = Slightly Limited</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = No Limitations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nutrition</strong></td>
<td>Usual food intake pattern</td>
<td>1 = Very Poor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Probably Inadequate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = Adequate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = Excellent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Friction and Shear</strong></td>
<td></td>
<td>1 = Problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Potential Problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = No Apparent Problem</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Score**

- **High Risk**: Total score ≤ 12.
- **Moderate Risk**: Total score 13-14.
- **Low Risk**: Total score 15-16 if under 75 years old or 15-18 if over 75 years old

**For Detailed Descriptions, see page 2**

**Assess** | **Date** | **Evaluator signature/title** | **Assess** | **Date** | **Evaluator signature/title**
---|---|---|---|---|---|
1 | | | 3 | | |
2 | | | 4 | | |

*NOTE: This form is copyrighted. Permission to reproduce this form may be obtained at no charge by accessing www.bradenscale.com/copyright.asp*
Sensory Perception

1 = Completely Limited. Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body.

2 = Very Limited. Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR has a sensory impairment which limits the ability to feel pain or discomfort over ½ of body.

3 = Slightly Limited. Responds to verbal commands, but cannot always communicate discomfort or the need to be turned OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.

4 = No impairment. Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.

Moisture

1 = Constantly Moist. Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.

2 = Often Moist. Skin is often, but not always moist. Linen must be changed at least once a shift.

3 = Occasionally Moist. Skin is occasionally moist, requiring an extra linen change approximately once a day.

4 = Rarely Moist. Skin is usually dry; linen only requires changing at routine intervals.

Activity

1 = Bedfast. Confined to bed.

2 = Chairfast. Ability to walk severely limited or nonexistent. Cannot bear own weight and/or must be assisted into chair or wheelchair.

3 = Walks Occasionally. Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.

4 = Walks Frequently. Walks outside room at least twice a day and inside room at least once every 2 hours during waking hours.

Mobility

1 = Completely Immobile. Does not make even slight changes in body or extremity position without assistance.

2 = Very Limited. Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.

3 = Slightly Limited. Makes frequent though slight changes in body or extremity position independently.

4 = No Limitations. Makes major and frequent changes in position without assistance.

Nutrition

1 = Very Poor. Never eats a complete meal. Rarely eats more than ½ of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement OR is NPO1 and/or maintained on clear liquids or IV2 for more than 5 days.

2 = Probably Inadequate. Rarely eats a complete meal and generally eats only about ½ of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement OR receives less than optimum amount of liquid diet or tube feeding.

3 = Adequate. Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) per day. Occasionally will refuse a meal, but will usually take a supplement if offered OR is on a tube feeding or TPN3 regimen, which probably meets most of nutritional needs.

4 = Excellent. Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.

Friction and 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.

2 = Potential Problem. Moves feebly or requires minimum assistance. 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.

3 = No Apparent Problem. Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.
<table>
<thead>
<tr>
<th>AT RISK (15-18)*</th>
<th>MANAGE MOISTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREQUENT TURNING</td>
<td>USE COMMERCIAL MOISTURE BARRIER</td>
</tr>
<tr>
<td>MAXIMAL REMOBILIZATION</td>
<td>USE ABSORBANT PADS OR DIAPERS THAT WICK &amp; HOLD MOISTURE</td>
</tr>
<tr>
<td>PROTECT HEELS</td>
<td>ADDRESS CAUSE IF POSSIBLE</td>
</tr>
<tr>
<td>MANAGE MOISTURE, NUTRITION AND FRICTION AND SHEAR</td>
<td>OFFER BEDPAN/URINAL AND GLASS OF WATER IN CONJUNCTION WITH TURNING SCHEDULES</td>
</tr>
<tr>
<td>PRESSURE-REDUCTION SUPPORT SURFACE IF BED- OR CHAIR-BOUND</td>
<td></td>
</tr>
</tbody>
</table>

* If other major risk factors are present (advanced age, fever, poor dietary intake of protein, diastolic pressure below 60, hemodynamic instability) 
advance to next level of risk

<table>
<thead>
<tr>
<th>MODERATE RISK (13-14)*</th>
<th>MANAGE NUTRITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TURNING SCHEDULE</td>
<td>INCREASE PROTEIN INTAKE</td>
</tr>
<tr>
<td>USE FOAM WEDGES FOR 30E LATERAL POSITIONING</td>
<td>INCREASE CALORIE INTAKE TO SPARE PROTEINS.</td>
</tr>
<tr>
<td>PRESSURE-REDUCTION SUPPORT SURFACE</td>
<td>SUPPLEMENT WITH MULTI-VITAMIN (SHOULD HAVE VIT A, C &amp; E)</td>
</tr>
<tr>
<td>MAXIMAL REMOBILIZATION</td>
<td>ACT QUICKLY TO ALLEVIATE DEFICITS</td>
</tr>
<tr>
<td>PROTECT HEELS</td>
<td>CONSULT DIETITIAN</td>
</tr>
<tr>
<td>MANAGE MOISTURE, NUTRITION AND FRICTION AND SHEAR</td>
<td></td>
</tr>
</tbody>
</table>

* If other major risk factors present, advance to next level of risk

<table>
<thead>
<tr>
<th>HIGH RISK (10-12)</th>
<th>MANAGE FRICTION &amp; SHEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCREASE FREQUENCY OF TURNING</td>
<td>ELEVATE HOB NO MORE THAN 30E</td>
</tr>
<tr>
<td>SUPPLEMENT WITH SMALL SHIFTS</td>
<td>USE TRAPEZE WHEN INDICATED</td>
</tr>
<tr>
<td>PRESSURE REDUCTION SUPPORT SURFACE</td>
<td>USE LIFT SHEET TO MOVE PATIENT</td>
</tr>
<tr>
<td>USE FOAM WEDGES FOR 30E LATERAL POSITIONING</td>
<td>PROTECT ELBOWS &amp; HEELS IF BEING EXPOSED TO FRICTION</td>
</tr>
<tr>
<td>MAXIMAL REMOBILIZATION</td>
<td></td>
</tr>
<tr>
<td>PROTECT HEELS</td>
<td></td>
</tr>
<tr>
<td>MANAGE MOISTURE, NUTRITION AND FRICTION AND SHEAR</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VERY HIGH RISK (9 or below)</th>
<th>OTHER GENERAL CARE ISSUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL OF THE ABOVE</td>
<td>NO MASSAGE OF REDDENED BONY PROMINENCES</td>
</tr>
<tr>
<td>+</td>
<td>NO DO-NUT TYPE DEVICES</td>
</tr>
<tr>
<td>USE PRESSURE-RELIEVING SURFACE IF PATIENT HAS INTRACTABLE PAIN</td>
<td>MAINTAIN GOOD HYDRATION</td>
</tr>
<tr>
<td>OR</td>
<td>AVOID DRYING THE SKIN</td>
</tr>
<tr>
<td>SEVERE PAIN EXACERBATRED BY TURNING</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>ADDITIONAL RISK FACTORS</td>
<td></td>
</tr>
</tbody>
</table>

*low air loss beds do not substitute for turning schedules

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### Selected Characteristics for Classes of Support Surfaces

<table>
<thead>
<tr>
<th>Performance characteristics</th>
<th>Air-fluidized</th>
<th>Low Air-loss</th>
<th>Alternating Air</th>
<th>Static Flotation (air or water)</th>
<th>Foam</th>
<th>Standard Mattress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased support area</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Low moisture retention</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Reduced heat accumulation</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shear reduction</td>
<td>Yes</td>
<td>?</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Pressure reduction</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Dynamic</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Cost per day</td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>


### Chair Support Surfaces

<table>
<thead>
<tr>
<th>Support Surface</th>
<th>Characteristics</th>
<th>Cost</th>
<th>Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foam Cushion</td>
<td>• Provides some pressure reduction, depending upon the thickness of the foam (a thickness of no less than four inches is recommended) • Resident still requires repositioning at least every hour</td>
<td>Low Cost</td>
<td>• After laundering, this surface is no longer useful for pressure reduction. A slip cover that can be separately laundered keeps the cushion clean and dry</td>
</tr>
<tr>
<td>Gel Cushion</td>
<td>• Reduces pressure by spreading pressure across the contact surface • Does not replace repositioning</td>
<td>Low to Moderate Cost</td>
<td>• Pressure reduction depends on the cushion’s condition (watch for breaks in the integrity of the cushion, which renders this product ineffective) • Do not attempt to mend any breaks in the cushion</td>
</tr>
<tr>
<td>Air-filled Cushion</td>
<td>• Reduces pressure by evenly distributing weight • Cells fill with air and deflate as pressure is applied. Does not replace repositioning</td>
<td>High Cost</td>
<td>• Compromised integrity can render this product ineffective. An ineffective air-filled cushion should be replaced</td>
</tr>
</tbody>
</table>
Support Surfaces: Characteristics and Considerations

Specialty Beds

Air-fluidized bed (also known as a “bead bed” or “sand bed ”)

**Product Characteristics:** This is a bed frame containing silicone-coated beads incorporated in Gortex® covering. When air is pumped through the beads, they behave like a liquid, creating air and fluid support. The resident “floats” on a sheet with one third of the body above the surface and the remainder of the body immersed in the warm, dry, fluidized beads. When bed is turned off, the surface becomes firm to allow for repositioning. Helps manage copious wound drainage or incontinence by absorbing fluids into bed of silicone beads. Although there is some evidence that air-fluidized beds enhance pressure ulcer healing rates, surface interface pressure remains sufficiently high to occlude capillary perfusion. Occipital and heel ulcers have been reported to develop in patients while on an air-fluidized bed (Parish & Witkowski, 1980).

**Considerations:**
- Not recommended for mobile patients, patients with pulmonary disease or patients with unstable spine
- Continuous circulation of warm, dry air may dehydrate patient or desiccate wound bed
- Bed may get too hot or make room hot
- Head of bed cannot be raised; semi-Fowler’s position achieved by using foam wedges or movable sling-type device
- Coughing less effective in mobilizing secretions
- Leakage of beads may irritate the eyes and respiratory track and make floor slippery
- Width of bed makes some nursing care difficult, and a step is needed to facilitate care
- Transfer of patient out of bed is difficult
- Bed is heavy and not easily transferable
- Some patients become disoriented or complain of feeling weightless while on surface
- Dependent drainage of catheters may be compromised because the patient is immersed in the bed
- Sharp objects may damage the surface
- Size and weight may be too large for use in home setting
- Set up and maintenance provided by company

Low air-loss bed

**Product Characteristics:** A bed frame with a series of connected air-filled pillows that can be calibrated for varying amounts of pressure to provide maximum pressure reduction for residents. Dry air flow between the patient and bed surface helps control moisture and heat buildup and prevents maceration and friction. Some models are designed to counteract the effects of immobility on pooling of respiratory secretions and urinary stasis by providing oscillation therapy. Other models feature kinetic therapy (rotating slowly side to side), although this is limited to a 20-degree rotation and does not have the same effect as manually rotating the resident side-to-side.

**Considerations:**
- Head and foot of bed can be raised and lowered
- Transfers in and out of bed easily accomplished
- Portable motor available to maintain inflation during bed transfers.
  - Motor may be noisy
  - Proper inflation essential to maintain effectiveness
  - Sharp objects may damage the surface
• Bed surface is slippery; patients may slide down or out of bed with being transferred
• Heels need to be “floated” to totally relieve pressure
• Set up and maintenance provided by company

Dynamic Overlays

Alternating air-filled overlay

Product Characteristics: Air is pumped through overlay chambers at regular intervals to provide cyclical pressure changes, creating a low-pressure and a high-pressure area. These surfaces constantly change pressure points and create pressure gradients that enhance blood flow. Cells with larger diameter and depth produce greater pressure relief over the body. A cell depth of not less than 3 inches is recommended.

Considerations:
• Surface is easy to clean
• Assembly required
• Sensation of inflation and deflation may bother patient
• Electricity required
• Motor may be noisy
• Excessive or sudden surface movement may disturb sleep
• Sharp objects may damage the surface
• Bed surface is slippery; patients may slide down or out of bed with being transferred
• Heels need to be “floated” to totally relieve pressure

Static Overlays

Foam Overlay

Product Characteristics: A foam surface applied over the surface of an existing hospital mattress. The following characteristics of foam influence the effectiveness of the overlay: base height, density and indentation load deflection (ILD). Base height refers to the height of the foam from the base to where the foam ridges begin and should be 3 to 4 inches to be effective in reducing pressure. Density refers to the weight per cubic foot and reflects the foam’s ability to support the person’s weight. Foam densities of 1.3 to 1.6 pounds per cubic foot are generally effective in supporting an average size adult. ILD is a measure of the firmness of the foam. It describes the foam’s compressibility and conformability. It also indicates the ability of the foam to distribute the mechanical load. Measurement of ILD is expressed as the number of pounds required to indent a sample of foam with a circular plate to a depth of 25% of the thickness of the foam. An ILD of approximately 30 pounds is recommended. Optimal support and conformability of foam is achieved when the relationship between 60% ILD and 25% ILD is 2.5 or greater (Krouskop & Garber, 1987; Whittemore, 1998).

Considerations:
• Plastic protective sheet is usually required for incontinent patients
• Foam may trap perspiration and be hot
• Washing removes flame-retardant coating
• One-time charge, no reoccurring charges
• No set up or maintenance fees
• Cannot be punctured by needle or metal traction
• Light weight
Support Surfaces: Characteristics and Considerations: page 3

- Requires no maintenance
- No electricity required to operate
- May be hot and trap perspiration
- Foam has a limited life
- Lack of firm edge creates unsure surface when patient transferring on and off surface
- Heels need to be “floated” to totally relieve pressure
- Must be discarded when wet from drainage or incontinence
- Adds height to the bed

Air Overlay

Product Characteristics: Interconnected bubble-like cells that are inflated with an air blower to an appropriate pressure level. Optimum air level is defined as 1 inch or more of uncompressed support surface between bony area of the resident's body and the caregiver's hand when placed under the support surface. Cells with larger diameter and depth produce greater pressure relief over the body. A cell depth of 3 in. or greater is recommended.

Considerations:
- Easy to clean
- Low maintenance
- Repair of some products is possible
- Durable
- Can be damaged by sharp objects
- Requires regular monitoring to determine proper inflation and need for reinflation
- Heels need to be “floated” to totally relieve pressure
- Adds height to bed
- Lacks a firm edge, so transfer on and off surface may be difficult

Water Overlay

Product Characteristics: A vinyl chamber that can be filled with water to appropriate level to distribute body weight evenly over the entire supporting surface. Recommended depth is 3 in. or greater. Some models contain a baffle system to control motion effects.

Considerations:
- Readily available in the community
- Easy to clean
- Requires water heater to maintain comfortable water temperature
- Fluid motion makes procedures difficult (e.g. positioning)
- Patient transfers may be difficult
- Inadvertent needle punctures will create leaks
- Maintenance is needed to prevent microorganism growth
- Surface is heavy
- Cannot raise head of bed unless mattress has compartments
- Can be overfilled (causing too firm a surface) or underfilled (decreasing pressure reducing benefit)
Support Surfaces: Characteristics and Considerations: page 4

Gel Overlay

Product Characteristics: A pad constructed of Silastic, silicone or polyvinyl chloride. Lack air-flow for moisture control and friction control is variable depending on the surface of the gel. Recommended depth for effective support is 2 in. or more. Gel filled pads are particularly useful in wheelchairs.

Considerations:
- Low maintenance
- Easy to clean
- Multiple-patient use
- Impermeable to punctures with needles
- Surface is heavy
- Expensive purchase price
- Heels need to be “floated” to totally relieve pressure
- Research on effectiveness is limited
- Some surfaces may be slippery; patient may slide down or out of bed during transfers

Replacement Mattress

Product Characteristics: Mattress made of foam and gel combinations or layers of different foam densities. Some models have replaceable foam shapes and some have a replaceable foam core. Other replacement mattresses contain a series of air-filled chambers covered with a foam structure. All models are covered with a comfortable, water-repellent, bacteriostatic cover that can be maintained with routine cleaning. Mattresses with foam should be antimicrobial and have appropriate foam ILD with high resiliency. Evidence is increasing that replacement mattresses are superior to standard hospital mattresses and may be more effective than some overlays (Vyhlidal, et al., 1997).

Considerations:
- Reduce use of overlay mattresses
- Reduce staff time
- Do not add height to mattress
- Provide certain level of pressure reduction automatically
- Multiple-patient use
- Easy to clean
- Use standard hospital linens
- Low maintenance
- Initial expense is high
- Some mattresses have removable sections which may be misplaced
- May not control moisture
- Potential for excessive delay in using other support surface
- No objective method for determining when or if product loses effectiveness
- Life of product is not known
Additional References:


Source: National Nursing Home Improvement Collaborative Coordinated by Qualis Health, Learning Session Two, January 2004
Managing Tissue Loads

Appropriate Patient Positioning

- Multiple large, truncal Stage III or IV ulcers?
  - Yes
  - No

- Patient at risk for additional ulcers?
  - Yes
  - No special surface needed
  - No

- Able to keep ulcer off surface?
  - Yes
  - No special surface needed
  - No

- Skin moisture problem?
  - Yes
  - No special surface needed
  - No

- Multiple turning spaces available?
  - Yes
  - Static device
  - No

- Dynamic overlay or mattress
  - Yes
  - Patient bottoms out?
  - Yes
  - Monitor
  - No

- No
  - Ulcer healing properly?
  - Yes
  - Monitor
  - No

- No
  - Ulcer healing properly?
  - Yes
  - Monitor
  - No

- No
  - Ulcer healing properly??
  - Yes
  - Reevaluate plan of care
  - No

Reference: Quick Reference for Clinicians No. 15
Page 10 Developed by AHCPR
Handout: Braden Case Study

After you read this case study, circle the appropriate score for Bessie. Indicate at least one intervention appropriate for her in the space provided.

**Case Study**

Bessie Smith is a 76 year old female who has just moved into your nursing home. She is 5’4” and 100 lbs. She has the following medical diagnosis. COPD, HX CVA on the right side, and HTN. Bessie becomes fatigued during meals and her intake is usually less than 50%. She is continent of bowel but occasionally incontinent of urine and requires her underclothing changed once or twice daily. Due to fatigue and paralysis she needs weight bearing assist to reposition when she is in bed or wheel chair, although she can move from side to side somewhat. Bessie has some limited perception of pressure but when she is uncomfortable she can express her discomfort. She uses 2 liters of oxygen via n/c and has had breakdown behind her ears before. Bessie can walk with a walker for distances less than 5 feet but uses a wheel chair the majority of the time.

| Sensory Perception | 1 = Completely Limited  
|                    | 2 = Very Limited  
|                    | 3 = Slightly Limited  
|                    | 4 = No impairment  

| Moisture | 1 = Constantly Moist  
|          | 2 = Often Moist  
|          | 3 = Occasionally Moist  
|          | 4 = Rarely Moist  

| Activity | 1 = Bedfast  
|          | 2 = Chairfast  
|          | 3 = Walks Occasionally  
|          | 4 = Walks Frequently  

| Mobility | 1 = Completely Immobile  
|          | 2 = Very Limited  
|          | 3 = Slightly Limited  
|          | 4 = No Limitations  

| Nutrition | 1 = Very Poor  
|           | 2 = Probably Inadequate  
|           | 3 = Adequate  
|           | 4 = Excellent  

| Friction and Shear | 1 = Problem  
|                    | 2 = Potential Problem  
|                    | 3 = No Apparent Problem  

**Interventions**

Sensory perception: ________________________________

Moisture: ________________________________

Activity: ________________________________

Mobility: ________________________________

Nutrition: ________________________________

Friction & Shear: ________________________________
Now that you've worked through the case study, below are the scores and a sample of possible interventions.

Sensory Perception - 3
- Assess skin for redness
- Reposition q 2 hours while in bed or 1 hour when in chair

Moisture - 2
- Apply barrier cream
- Offer bed pan or bedside commode
- Toileting plan
- Absorbent pad

Activity - 2
- Cushion in w/c
- Pressure relieving mattress
- Turn schedule

Mobility - 2
- Reposition q 2 hours in bed and q 1 hour when up
- Therapy screening

Nutrition - 2
- Request dietary consult
- Offer high protein snacks
- Request vitamin & protein supplement

Friction & Shear - 1
- Use positioning aides such as a turn sheet, lift pad
- Therapy screening

Total score - 12 or High risk
A pressure ulcer is a localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated.

Pressure ulcers are staged using the system at right.

---

**DEFINITION**

A pressure ulcer is localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction.

---

**PRESSURE ULCER STAGES**

### (SUSPECTED) DEEP TISSUE INJURY

Purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

**Further Description:** Deep tissue injury may be difficult to detect in individuals with dark skin tones. Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar. Evolution may be rapid exposing additional layers of tissue even with optimal treatment.

### STAGE I

Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area.

**Further Description:** The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue. Stage I may be difficult to detect in individuals with dark skin tones. May indicate “at risk” persons (a heralding sign of risk).

### STAGE II

Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled blister.

**Further Description:** Presents as a shiny or dry shallow ulcer without slough or bruising.* This stage should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation.

*Bruising indicated suspected deep tissue injury.

### STAGE III

Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling.

**Further Description:** The depth of a stage III pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and stage III ulcers can be shallow. In contrast, areas of significant adiposity can develop extremely deep stage III pressure ulcers. Bone/tendon is not visible or directly palpable.

### STAGE IV

Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often include undermining and tunneling.

**Further Description:** The depth of a stage IV pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and these ulcers can be shallow. Stage IV ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon or joint capsule) making osteomyelitis possible. Exposed bone/tendon is visible or directly palpable.

### UNSTAGEABLE

Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed.

**Further Description:** Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, and therefore stage, cannot be determined. Stable (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as “the body’s natural (biological) cover” and should not be removed.

---

This staging system should be used only to describe pressure ulcers. Wounds from other causes, such as arterial, venous, diabetic foot, skin tears, tape burns, perineal dermatitis, maceration or excoriation should not be staged using this system. Other staging systems exist for some of these conditions and should be used instead.

Updated 02/2007 Copyright © 2007
## Pressure Ulcers: Clinical Fact Sheet: Quick Assessment of Leg Ulcers

<table>
<thead>
<tr>
<th>Venous Insufficiency (Stasis)</th>
<th>Arterial Insufficiency</th>
<th>Peripheral Neuropathy (Diabetic)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>History</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Previous DVT &amp; Varicosities</td>
<td>• Diabetes</td>
<td>• Diabetes</td>
</tr>
<tr>
<td>• Reduced mobility</td>
<td>• Anemia</td>
<td>• Spinal cord injury</td>
</tr>
<tr>
<td>• Obesity</td>
<td>• Arthritis</td>
<td>• Hansen's Disease</td>
</tr>
<tr>
<td>• Vascular ulcers</td>
<td>• Increased pain</td>
<td>• Relief of pain with ambulation</td>
</tr>
<tr>
<td>• Phlebitis</td>
<td>• with activity and/or</td>
<td>• Parasthesia of extremities</td>
</tr>
<tr>
<td>• Traumatic injury</td>
<td>• elevation</td>
<td></td>
</tr>
<tr>
<td>• CHF</td>
<td>• CVA</td>
<td></td>
</tr>
<tr>
<td>• Orthopedic procedures</td>
<td>• Smoking</td>
<td></td>
</tr>
<tr>
<td>• Pain reduced by elevation</td>
<td>• Intermittent claudication</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Traumatic injury to extremity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Vascular procedures/surgeries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Hypertension</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Hyperlipidemia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Arterial disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Medial aspect of lower leg and ankle</td>
<td>• Toe tips or web spaces</td>
<td>• Plantar aspect of foot</td>
</tr>
<tr>
<td>• Superior to medial malleolus</td>
<td>• Phalangeal heads around lateral malleolus</td>
<td>• Metatarsal heads</td>
</tr>
<tr>
<td></td>
<td>• Areas exposed to pressure or repetitive trauma</td>
<td>• Heels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Altered pressure points/sites of painless trauma/repetitive stress</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• <strong>Color:</strong> base ruddy</td>
<td>• <strong>Color:</strong> base of wound, pale/pallor on elevation; dependent rubor</td>
<td>• <strong>Color:</strong> normal skin tones; trophic skin changes, fissuring and/or callus formation</td>
</tr>
<tr>
<td>• <strong>Surrounding Skin:</strong> erythema (venous dermatitis) and/or brown staining (hyperpigmentation)</td>
<td>• <strong>Skin:</strong> shiny, taut, thin, dry, hair loss of lower extremities, atrophy of subcutaneous tissue</td>
<td>• <strong>Depth:</strong> variable</td>
</tr>
<tr>
<td>• <strong>Depth:</strong> usually shallow</td>
<td>• <strong>Depth:</strong> deep</td>
<td>• <strong>Wound Margins:</strong> well defined</td>
</tr>
<tr>
<td>• <strong>Wound Margins:</strong> irregular</td>
<td>• <strong>Wound Margins:</strong> even</td>
<td>• <strong>Exudate:</strong> variable</td>
</tr>
<tr>
<td>• <strong>Exudate:</strong> moderate of heavy</td>
<td>• <strong>Exudate:</strong> minimal</td>
<td>• <strong>Edema:</strong> cellulitis, erythema and induration common</td>
</tr>
<tr>
<td>• <strong>Edema:</strong> pitting or non-pitting; possible induration and cellulitis</td>
<td>• <strong>Edema:</strong> variable</td>
<td>• <strong>Skin Temp:</strong> warm</td>
</tr>
<tr>
<td>• <strong>Skin Temp:</strong> normal; warm to touch</td>
<td>• <strong>Skin Temp:</strong> decreased/cold</td>
<td>• <strong>Tissue:</strong> granulation frequently present; necrotic tissue variable, gangrene uncommon</td>
</tr>
<tr>
<td>• <strong>Tissue:</strong> granulation frequently present</td>
<td>• <strong>Tissue:</strong> granulation rarely present; necrosis, eschar, gangrene may be present</td>
<td>• <strong>Infection:</strong> frequent</td>
</tr>
<tr>
<td>• <strong>Infection:</strong> less common</td>
<td>• <strong>Infection:</strong> frequent (signs may be subtle)</td>
<td>• Reflexes usually diminished</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Altered gait; orthopedic deformities common</td>
</tr>
</tbody>
</table>
### Venous Insufficiency (Stasis) vs. Arterial Insufficiency vs. Peripheral Neuropathy (Diabetic)

#### Perfusion

<table>
<thead>
<tr>
<th>Venous Insufficiency (Stasis)</th>
<th>Arterial Insufficiency</th>
<th>Peripheral Neuropathy (Diabetic)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pain</strong></td>
<td><strong>Pain</strong></td>
<td><strong>Pain</strong></td>
</tr>
<tr>
<td>- Minimal unless infected or desiccated.</td>
<td>- Intermittent Claudication</td>
<td>- Diminished sensitivity to touch</td>
</tr>
<tr>
<td><strong>Peripheral Pulses</strong></td>
<td><strong>Peripheral Pulses</strong></td>
<td><strong>Peripheral Pulses</strong></td>
</tr>
<tr>
<td>- Present/Palpable</td>
<td>- Absent or diminished</td>
<td>- Palpable/Present</td>
</tr>
<tr>
<td><strong>Capillary Refill</strong></td>
<td><strong>Capillary Refill</strong></td>
<td><strong>Capillary Refill</strong></td>
</tr>
<tr>
<td>- Normal-less than 3 seconds</td>
<td>- Delayed — more than 3 seconds</td>
<td>- Normal</td>
</tr>
</tbody>
</table>

#### Treatment

**Measures To Improve Venous Return**
- Surgical obliteration of damaged veins
- Elevation of legs
- Compression therapy to provide at least 30mm hg compression @ ankle
- **Options:**
  - Short stretch bandages (e.g. Setopress, Surepress, Comprilan)
  - Therapeutic support stockings
  - Unna’s boot
  - Profore 4 layer wrap
  - Compression pumps

**Topical Therapy**
- Absorb exudate (e.g. alginate, foam)
- Maintain moist wound surface (e.g. hydrocolloid)

**Measures To Improve Tissue Perfusion**
- Revascularization if possible
- Medications to improve RBC transit through narrowed vessels
- Lifestyle changes (no tobacco, no caffeine, no constrictive garments, avoidance of cold)
- Hydration
- Measures to prevent trauma to tissues (appropriate footwear at ALL times)

**Topical Therapy**
- Dry uninfected necrotic wound: KEEP DRY
- Dry infected wound: IMMEDIATE referral for surgical debridement/ aggressive antibiotic therapy
- Open wound
  - Moist wound healing
  - Non-occlusive dressings (e.g. solid hydrogels) or cautious use of occlusive dressings
  - Aggressive treatment of any infection

**Measures To Eliminate Trauma**
- Pressure relief for heal ulcers
- “Offloading” for plantar ulcers (bedrest or contact casting or orthopedic shoes)
- Appropriate footwear
- Tight glucose control
- Aggressive infection control (debridement of any necrotic tissue, orthopedic consult for exposed bone, antibiotic coverage)

**Topical Therapy**
- Cautious use of occlusive dressings
- Dressing to absorb exudate/keep surface moist
Handout: Measuring a Pressure Ulcer

**Supplies**

Q-Tip

**Directions**

Practice measuring the wounds below.

A. Depth

B. Length and Width

Centimeter Ruler

*Facilitator: Because of scaling issues when printing, we have not included the measurements. Please check the measurements for accuracy.*
Pressure Ulcers: Treatment Product Categories

Pressure ulcers require consistency in treatment to promote healing. Use this list that includes the major types of products to ensure your nursing center carries an appropriate range of materials. Nursing staff then can choose the most effective dressing type based on wound stage, characteristics and potential concerns.

<table>
<thead>
<tr>
<th>Treatment Products</th>
<th>Description</th>
<th>Appropriate Wound Stage</th>
<th>Characteristics</th>
<th>Concerns</th>
</tr>
</thead>
</table>
| Polyurethane Film   | Adhesive and transparent. | Stages 1-2 | Occlusive and waterproof  
Retains water  
Impermeable to bacteria & contamination  
Promotes moist wound healing  
Nonabsorbent  
May be changed every 3 to 7 days  
May be used as a secondary dressing over a more absorbent product | Should not be used with moderate to heavy exudate wounds  
May macerate surrounding skin |
| Hydrocolloid        | Adhesive wafers composed of gelatin, pectin, and carboxymethyl-cellulose | Stages 1-4 | Occlusive and waterproof  
Retains moisture  
Impermeable  
Promote moist wound healing  
Moderately absorbent  
Easy to apply | Should not be used with heavy exudate wounds  
Should not be used if infection is present  
May have odor upon removal  
May be difficult to remove |
| Hydrogels           | Glycerin or water based gels, wafers, sheets, and impregnated gauze with or without adhesive borders | Stages 2-4 | Non-adherent  
Fills dead space  
Semi-occlusive  
Promotes moist wound healing  
Easy to apply & remove  
Minimally absorbent  
Retains moisture and rehydrates wound | May macerate surrounding tissues  
Secondary dressing required  
Daily application required unless applied with adhesive borders  
Dries out easily  
Risk of candidiases |
| Foams               | Hydrophilic polyurethane foam, available in wafers, sheets, and pillow with foam covering | Stages 2-4 | Non-adherent  
Easy to apply and remove  
Highly absorbent | Can be used on various levels of exudate  
Additional fixation is required unless has an adhesive border |
| Alginates           | Non woven fibers containing calcium sodium salts of alginic acid, available in pads or ropes | Stage 2 wounds with a lot of exudate stages 3-4 | Non-adherent  
Promotes moist wound healing  
Can be used on infected wounds | Should not be used on dry or low exudate wounds, the wound may get dehydrated  
Secondary dressing required  
Typically requires daily application |
### Antimicrobial

<table>
<thead>
<tr>
<th>Products</th>
<th>Description</th>
<th>Appropriate Wound Stage</th>
<th>Characteristics</th>
<th>Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTICOAT◊</td>
<td>Ionic silver and cadexomer iodine that provides sustained antimicrobial barrier to multiple bacteria including strains of MRSA and VRE. Can be found in different types of products including alginates, gels and polyurethane film</td>
<td>Stage 2 wounds when antimicrobial treatment is needed</td>
<td>Manages bacterial burden</td>
<td>Non-cytotoxic</td>
</tr>
<tr>
<td>SilvaSorb®</td>
<td></td>
<td>Stages 3-4</td>
<td></td>
<td>Do not use with a resident with a known sensitivity to silver. Iodine products should be avoided if known sensitivity, or thyroid disorder. Do not use in conjunction with topical antibiotics</td>
</tr>
<tr>
<td>IODOSORB◊</td>
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<tr>
<td>ALLEVYN Ag◊</td>
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<tr>
<td>Optifoam AG®</td>
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</tr>
<tr>
<td>Others</td>
<td></td>
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</tbody>
</table>

### Collagen

<table>
<thead>
<tr>
<th>Products</th>
<th>Description</th>
<th>Appropriates Wound Stage</th>
<th>Characteristics</th>
<th>Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biostep◊</td>
<td>Collagen provides the matrix for the body’s tissue structure. Stimulates wound healing</td>
<td>Wounds that have stalled in healing</td>
<td>Promotes new tissue growth</td>
<td>Wound debridement</td>
</tr>
<tr>
<td>Prisma®</td>
<td>Can be found in different delivery systems: dried collagen matrix, hydrogel with collagen, hydrogel base.</td>
<td>Chronic wounds</td>
<td>Pulls wound edges together</td>
<td>Do not use on dry wounds Do not use with patients sensitive to bovine products</td>
</tr>
<tr>
<td>Promogran®</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puracol®</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
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</tr>
</tbody>
</table>

### Gauze, Dry or Wet

<table>
<thead>
<tr>
<th>Products</th>
<th>Description</th>
<th>Appropriate Wound Stage</th>
<th>Characteristics</th>
<th>Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woven natural cotton fibers, non woven rayon and plastic blends; available in pads and rolls, sterile and non sterile</td>
<td>Stages 2-4, especially if wound is deep or has tissue that needs debridement</td>
<td>May be dampened with saline or water</td>
<td>Inexpensive</td>
<td>Moist to dry debridement can be painful, damaging healthy tissue Woven gauze is abrasive Requires frequent changes Packing may harden, causing further pressure injury</td>
</tr>
</tbody>
</table>

**Related Wound Treatments**

<table>
<thead>
<tr>
<th>Treatment Products</th>
<th>Description</th>
<th>Indications</th>
<th>Contraindications</th>
<th>Concerns/Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum Controlled Assisted Closure (V.A.C.)</td>
<td>System that uses controlled negative pressure to help promote wound healing. VAC system pulls infectious materials and excess interstitial fluid from the wound</td>
<td>Pressure ulcers, Traumatic wounds Post-op-dehisced &amp; surgical wounds</td>
<td>Malignancy, Untreated osteomyelitis Unexplored fistulas into the body cavity or to an organ Necrotic tissue with eschar in the wound abed Exposed arteries or veins Uncontrolled pain</td>
<td>Active bleeding Difficult hemostasis Anticoagulant therapy</td>
</tr>
<tr>
<td>KCI VAC®</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engenex™</td>
<td></td>
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<tr>
<td>EZCARE◊</td>
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<tr>
<td>V1STA◊</td>
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</tbody>
</table>

**Brands are listed for reference purposes only. We do not recommend use of one brand over another.**
Handout: Dressing Change Exercise

**Supplies**

1. Box of gloves
2. Potato with a space carved out of it to mimic an open pressure ulcer. Note, the facilitator may apply glitter, sand, or other foreign material inside the potato to represent non viable tissue that needs to be cleaned from the wound bed during the dressing change.
3. Cup of water- water is used in place of normal saline
4. 19 gauge needle with a 35cc syringe
5. Gauze
6. Tape
7. 1- non adherent dressing
8. Q tips- Used in place of a non-cotton tip applicator or a tipped applicator soaked in normal saline
9. 10 cc of glue or other inexpensive semi liquid to represent a medicated ointment and/or other materials to simulate wound care products.
10. Small towel or wax paper
11. Trash bag

**Directions**

Follow the directions you hear and see in the video to change a dressing. You may also use the directions found in a nursing fundamental text book or your policy and procedure manual for clean dressing change technique.
Directions: Fill out both sides of this form before calling the physician to obtain orders. When talking with physician: greet physician by name, state your name and facility name, state nature of the call, identify resident by name, give detailed description of the pressure ulcer and related factors using the data collected. Suggest a solution (based on clinical practice guideline, if possible). Fax this form to the physician. When signed by physician and returned to your facility, this form may be used as the direct physician order.

Resident: _____________________________________________  Room #:  __________  Date: __________
Diagnoses: ________________________________________________
Allergies: __________________________________________________

**Pressure Ulcer Description**

Site: __________________________________________  Site: __________________________
Size (length x width x depth): __________________________  Size (length x width x depth): __________________________
Stage #: __________________________  Stage #: __________________________

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Condition</th>
<th>Yes</th>
<th>No</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Exudate</td>
<td></td>
<td></td>
<td>Exudate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Serous</td>
<td></td>
<td></td>
<td>Serous</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Serosanguineous</td>
<td></td>
<td></td>
<td>Serosanguineous</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Purulent</td>
<td></td>
<td></td>
<td>Purulent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sinus tract</td>
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<td>Sinus tract</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tunneling</td>
<td></td>
<td></td>
<td>Tunneling</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Undermining</td>
<td></td>
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<td>Undermining</td>
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**Note:** DO NOT clean ulcer wounds with skin cleansers or antiseptic agents (e.g., povidone iodine, iodophor, sodium hypochlorite [Dakin’s Solution], Hydrogen Peroxide or acetic acid) as they are toxic to human fibroblasts, decrease white blood cell viability and phagocytic efficiency.
Dressing/Treatment Orders

Check all that apply:
☐ Normal saline (preferred) ☐ Packing
☐ Consults ☐ Debridement (sharp, mechanical, autolytic, enzymatic)
☐ Dressing ☐ Other

Classification of Pressure Ulcers

Stage 1 – A persistent area of skin redness (without a break in skin). Darker skin, discoloration of the skin, warmth, edema, induration or hardness may also be indicators.

Stage 2 – A partial thickness skin loss of skin layers (involving epidermis, dermis or both) that presents clinically as an abrasion, blister or shallow crater.

Stage 3 – A full thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia. The ulcer presents clinically as a deep crater with or without undermining adjacent tissue.

Stage 4 – A full thickness skin loss with extensive destruction, tissue necrosis or damage to muscle, bone or supporting structures (e.g., tendon or joint capsule).

Related Factors

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<th>Bed Mobility</th>
<th>Comments/Treatment Order</th>
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<th>Comments/Treatment Order</th>
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OT consult for positioning devices ☐ Yes ☐ No

Yes ☐ No ☐ Two urinary incontinent episodes within a two-day period (day of/after pressure ulcer identification)

☐ Has a urinary catheter, indwelling catheter that leaks, or condom catheter

☐ Any bowel incontinent episodes

☐ Inadequate oral intake of nutrition

☐ Recent weight loss: Pounds Lost: Current Weight: BMI: 

☐ Current Height: 

☐ Dietary consult

Nurse signature: 

Physician signature: 

Document available at www.primaris.org

MO-06-02-PU May 2006 This material was prepared by Primaris, the Medicare Quality Improvement Organization for Missouri, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy.
Competency Quiz

Objectives One and Two: Risk Factors

1. Describe one intervention you can work with your CNAs to improve in regards to positioning, pericare, nutrition or mobility for the residents in your care now.

__________________________________________________________________________________________

__________________________________________________________________________________________

2. Select one risk factor for pressure ulcer formation and explain why the resident is at risk in relation to the physiological change of aging.

__________________________________________________________________________________________

__________________________________________________________________________________________

3. Mrs. Smith is a new admission to your home. You conduct a Braden risk assessment and find she scores in the moderate risk range; however, your nursing judgment tells you she is at high risk. What actions will you take?
   a) Ignore your nursing judgment.
   b) Tell the next shift her Braden score.
   c) Make note of the Braden score but also implement interventions that address the risks you have found while conducting your assessment.

Objective Three: Staging

1. Indicate what stage each pressure ulcer picture is.
   a) 
   Hint: Skin is closed.

   b) 
   Hint: Superficial opening.
You are caring for Mrs. Jones, a new resident who is 82 year old and she is due for a weekly assessment of a pressure ulcer above her coccyx. She has a dx of CVA and was recently hospitalized for a bowel impaction. She fell transferring herself from her w/c to her bed and lay in the floor for several hours at home. Mrs. Jones protein levels are within normal limits and she is eating well. Her pain level is well controlled with a routine analgesic as well as an additional analgesic 30 min prior to her dressing change. She is not able to reposition herself in the bed or her chair. She is non ambulatory but does enjoy getting out for activities. Her cognition is intact and she has a wide range of activities she enjoys. She is able to sit on the toilet with assistance and the family reports a toileting schedule was successful at home to maintain continence of urine. Identify the following characteristics.

HEAD

- a) Stage
- b) Size- You may test this skill measuring length and width on above picture or ask the learner to measure the wound you made on the potato.
- c) Location
- d) Drainage
- e) Pain
- f) Wound bed
- g) Wound margins
- h) Peri wound area
- i) Interventions (List three nursing interventions to manage her risks and support the healing of this pressure ulcer).

CMS, (2010). MDS 3.0 Training Materials
Objective Five: Products and Treatment

1) Select which category of product you expect the physicians will order for the pressure ulcer of Mrs. Jones.

Objective Six: Dressing Change

1) Demonstrate a clean technique dressing change for the facilitator.
Competency Quiz Answer Sheet

Objectives One and Two: Risk Factors

1. Describe one intervention you can work with your CNAs to improve in regards to positioning, pericare, nutrition or mobility for the residents in your care now.

   *Accept answers related to interventions appropriate for CNAs to perform.*

2. Select one risk factor for pressure ulcer formation and explain why the resident is at risk in relation to the physiological change of aging.

   *Example of possible answer: Subcataneous tissue thins increasing risk due to lack of protection on bony prominence.*

3. Mrs. Smith is a new admission to your home. You conduct a Braden risk assessment and find she scores in the moderate risk range; however, your nursing judgment tells you she is at high risk. What actions will you take?
   a) Ignore your nursing judgment.
   b) Tell the next shift her Braden score.
   c) Make note of the Braden score but also implement interventions that address the risks you have found while conducting your assessment.

Objectives Three: Staging

a) Stage 1
b) Stage II
c) Stage III
d) Stage IV
e) Unstageable

Objectives Four: Assess a wound and peri wound area

a) Stage - Stage III
b) Size- You may test this skill measuring length and width on picture or ask the learner to measure the wound you made on the potato. *Facilitator will check measurements for accuracy.*
c) Location - Directly above coccyx
d) Drainage - Light
e) Pain - Controlled with analgesics
f) Wound bed - Granulation tissue present
g) Wound margins - No undermining or tunneling
h) Peri wound area - Intact
i) Interventions (List three nursing interventions to manage her risks and support the healing of this pressure ulcer). *Interventions may address pressure relief in w/c during activities, toileting program to maintain continence, assist with position changes, pressure relief surface in bed, etc.*
Objective Five: Products and Treatment

1. Select which category of product you expect the physician will order for the pressure ulcer of Mrs. Jones.

   *Product to maintain moist wound bed would include the category of hydrogels and covered with an occlusive dressing such as a poly urethan film to maintain the moist wound bed environment. If the learner uses an alginate product, review the treatment categories with them.*

Objective Six: Dressing Change

   *Observe the dressing change. Monitor to ensure the learner does not contaminate the field, applies the dressing appropriately and washes hands.*
Glossary

1. Colonization- Presence of bacteria in the pressure ulcer that are not causing damage to the tissue.
2. Debride- Remove non-viable tissue from the wound.
3. Epithelialization- Production of epithelial cells that make up the outer layer of skin.
4. Erythema- Redness
5. Eschar- Dead tissue that may be loose or attached to the skin. It can be brown or black in color and is non-viable.
6. Exudate- Drainage, fluid, or discharge
7. Granulation- Pink, reddish, moist tissue that fills in the wound.
8. Induration- Hardening of tissue.
9. Infection- Invasion of bacteria or other microorganisms that cause harm to the tissue.
10. Maceration- Softening and eventual breakdown of tissue due to constant moisture in normal skin tissue.
11. Peri wound- Area around the wound.
12. Sinus tract- Tunneling of damaged tissue under the skin with an opening at the wound.
13. Slough- Necrotic or non-viable tissue that is separating from healthy tissue.
14. Undermining- Edges of the wound are rolled under due to damage and do not allow for epithelization to occur.
15. Denuded skin- Loss of epidermis due to irritants such as feces and urine or friction.
16. Excoration- Skin that has been traumatized and is abraded from rubbing or scratching.