The Braden Scale: Risk Assessment and Pressure Ulcer Prevention

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Success Through:
- Assessment
- Management
- Prevention

Today’s Speakers

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Jody is a Clinical Nurse Specialist/Nurse Practitioner in wound, ostomy continence nursing at Albany Medical Center in Albany, NY. Her scope of practice includes the inpatient department as well as the outpatient clinic in the Department of Surgery.
She is a member of the Clinical Work Group for the GoldSTAMP project and assisted with the development of the Resource Guide and the Self-Assessment Tool.
Jody is pursuing a doctorate of nursing practice at Oakland University and is Chair of the Accreditation Committee of the Wound Ostomy Continence Nurses Society. She is the NY Legislative representative for the Northeast region of the WOCN.

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Karen is a Clinical Nurse Specialist in Enterostomal Therapy at Staten Island University Hospital in NY. A good portion of her career has been spent educating nurses about wound care. She also acts as a consultant for local nursing homes and hospice and is an expert nurse witness.
Karen is Chair of the Institutional Sub-Committee that developed the NYS DOH Panel of Pressure Ulcer Experts - an ad hoc group that periodically convenes to explore pressure ulcer issues and develop criteria for solutions.
Karen has written and published several academic and research papers on pressure ulcers. You can access her materials at www.woundexpertmn.com

The Braden Scale – Risk Assessment and Pressure Ulcer Prevention

- How to score your patients
- Develop and implement a pressure ulcer prevention plan

Objectives

- Identify the purpose and benefits of using the Braden Scale risk assessment scale.
- Evaluate pressure ulcer risk by using the Braden Scale.
- Identify interventions that can be implemented based on the patient’s Braden Scale score.
Braden Scale and the Gold Stamp project

- Braden scale is the tool selected for use.
- Provides continuity across care settings.
- Ease of communication between caregivers.
- Consistency in measuring outcomes.

Why use a risk assessment tool?

- Structured approach that quantifies level of risk.
- Research supports use of tool as part of pressure ulcer prevention program.
- Consistency of measurement across care settings.
- Knowledge of level of risk can drive appropriate prevention measures.

What is the Braden Scale?

- The Braden Scale is a screening tool used to identify individuals at risk for developing a pressure ulcer for the purpose of planning effective prevention interventions.
- The Braden Scale is based upon the critical determinants of pressure ulcer development
  - intensity and duration of pressure
  - ability of the skin and supporting tissues to tolerate pressure
- There are six subscales that influence these determinants of pressure ulcer development. They are sensory perception, moisture, activity, mobility, nutrition, and friction/shear

Braden scale, cont’d

- Mobility, Activity, and Sensory Perception contribute to the intensity and duration of pressure.
- Tissue tolerance is influenced
  - extrinsic factors (moisture, friction, shear)
  - intrinsic factors (nutrition, age, and arterial pressure).

Braden scale, cont’d

- The nurse uses physical assessment and interviewing to elicit the data needed to complete an accurate Braden score.
- Risk assessment and skin assessment are different, but should be utilized together.
- Skin assessment should include color, temperature, moisture, turgor & integrity.

History & development

- Pancorbo-Hildago (2006) et al meta-analysis comparing Braden, Norton, and Waterlow scales. Found that Braden was tested in largest number of facilities, demonstrated best reliability & validity in a variety of settings, better predictor of pressure ulcers than nursing judgment.
To begin.... www.bradenscale.com

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How to Calculate the Braden Score

- Sensory perception, mobility, and activity address clinical situations that predispose a patient to intense and prolonged pressure
- Moisture, nutrition, and friction/shear address clinical situations that alter tissue tolerance for pressure.
- Each of the subscales is ranked with a numerical score.
- Descriptions of the terms for ranking are provided on the scale.

Calculating the Braden Score, cont'd

- Five of the subscales—sensory perception, mobility, activity, moisture, and nutrition—have scores that range from 1 to 4, with 1 representing the lowest score and 4 representing the highest.
- Friction/shear has a score that ranges from 1 to 3.
- Each of the 6 subscale scores are then totaled to give a final Braden Scale score.
- Scores can range from 6 to 23
  6 is lowest and most at risk, and 23 is the highest score at no risk

Level of risk

Identified incremental changes in risk are as follows:

- 15 to 18, at risk; 13 to 14, moderate risk; 10 to 12, high risk; and 9 or below, very high risk.
- Levels of risk may be helpful in determining how aggressive preventive efforts should be and in evaluating the success of these efforts.
- Clinical judgment is always necessary to interpret the risk. For example, a patient is likely to have a very low score immediately following surgery because he or she would be profoundly immobile and would have a diminished level of consciousness.
- A young patient who is expected to be ambulatory within a few hours is not likely to require intervention to avoid a pressure ulcer.
- Note total score, trend, and particular subscale that might be high priority for the patient/resident.

Additional considerations

- A patient may exhibit risk factors that are not measured by the Braden Scale.
- Researchers have identified advanced age (older than age 80), low diastolic blood pressure (less than 60), increased body temperature, hemodynamic instability, & poor current dietary intake of protein as important predictors of pressure ulcer risk.
- Other risks that should be taken into account are peripheral vascular disease, prolonged surgery (lasting over 3-4 hours), intractable pain, or history of pressure ulcer in the past.
Under y
y

Because
Using y

A

Over

Mr. Long is a 72-year-old man who has right-sided paralysis
subscale score for each of the 6 categories and the total Braden Scale:
The following case study demonstrates how to compute the
Levels, risk.

Score by care setting

• Acute care: The Braden Score should be assessed daily and
whenever there is a change in a patient’s condition. Some critical
care areas completing every shift.
• Long term care: Assess on admission, weekly for 4 weeks, then
quarterly or if resident condition changes.
• Home care: Assess on admission and at every nurse visit.
• Periodic patient evaluation with the Braden Scale is prudent
because a patient’s level of risk may change as his or her condition
changes.
• The patient’s plan of care and preventive interventions must be
adjusted with change in patient condition and Braden Score.

Case study

The following case study demonstrates how to compute the
subscale score for each of the 6 categories and the total Braden Scale:

• Mr. Long is a 72-year-old man who has right-sided paralysis
following a left cerebral vascular accident 2 weeks ago. He can
respond to verbal commands but is not always able to speak and say
what he needs. He is incontinent of urine, usually at least 3 times a
day. Because his ability to walk is greatly impaired, he spends most
of the day in a chair. He is unable to change positions by himself
and needs assistance with all his activities of daily living. He has
difficulty swallowing, lacks an appetite, is unable to use his right
arm to feed himself, and is only eating half of his meals.

How to Calculate the Braden Score

• Using this information, compute the subscale score for each of the 6
categories on the Braden Scale:

  • Sensory Perception. This subscale has 2 levels: the top descriptors measure
level of consciousness and the bottom descriptors measure cutaneous
sensation.

  • Because this patient can respond to verbal commands but cannot always
speak, his score for this subscale category is 3—slightly limited. He would
score 2 on the bottom level because he is a paraplegic and cannot feel pain
over half of his body. If a patient has different scores on each of these
levels, the lower of the scores should be used.
In this case, the patient would receive a score of 2 for sensory perception.

Calculate

Using the Braden Scale Handout, calculate the
total score for Mr. Long.

☐ Sensory Perception
☐ Moisture
☐ Activity
☐ Mobility
☐ Nutrition
☐ Friction/Shear

Braden Score cont’d

• Moisture. Because the patient is incontinent at least
3 times a day, the score for this subscale category is
2—very moist.
Braden Score cont’d

- **Activity.** The patient is spending most of his day in the chair and not walking; therefore, the score for this subscale category is 2—chairfast.
- **Mobility.** Because the patient is unable to make independent changes of position, the score for this subscale category is 1—completely immobile.

Braden Score cont’d

- **Nutrition.** The patient is eating only half of his food, for a score of 2—probably inadequate—for this subscale category.
- **Friction/shear.** Because the patient needs so much assistance in moving and turning, the score for this subscale category is 1—problem.

Total Score

- To obtain the patient’s Braden Scale score, add up the subscale scores.

In this case, the patient’s score is 10, indicating that he is at high risk for pressure ulcer development.
Sample Plan of Care

• After the Braden Scale score is tallied, link the risk assessment to preventive interventions based on patient assessment.

At risk: 15 to 18—Consider the following interventions:
• Turning in bed and OOB to chair every 2 hours, facilitate maximal remobilization; 30° side lying;
• Protect the patient’s heels by skin prepping and elevating off of the bed;
• Provide a pressure-reducing support surface if the patient is bedfast or chair fast;
• Manage moisture – barrier creams and frequent linen/diaper changes

Managing moisture (cont’d)—
• use absorbent pads that wick moisture away from skin and have a high capacity to hold moisture,
• avoid, reduce diaper use as much as possible.
• address the cause of moisture if possible, and offer a bedpan, urinal, use of commode or toilet in conjunction with turning schedules.
  ➢ consider use of condom catheter for men.
• If patient has fecal incontinence, consider use of fecal pouch or a fecal management system if patient meets the criteria and has a physician order.

Sample Plan of Care cont’d

• Maintain accurate documentation of nutritional intake. If a patient has deceased dietary intake, this is usually preceded by decreased fluid intake.
  ➢ Have aides document urinary incontinence each time the linen is changed.
  ➢ Question aides about loose stools

• Manage friction and shear:
  ➢ Prevent patient from sliding down in bed
  Elevate foot of bed
  ➢ Prevent patient from sliding down in chair
  If patient has poor trunk control/ strength, use geri-chair/recliner, “tilt-in-space” wheelchair

Sample Plan of Care cont’d
Positioning diagrams for the ideal distribution of weight and prevention of shearing. Note: ideal angle for head of bed is 30° for digestion of food and for patients with respiratory insufficiency. Higher elevations are only recommended for ventilator weaning. ©Karen J. Farid (1987)

Sample Plan of Care

**High risk: 10 to 12**—Consider these interventions:
- protect the patient’s heels by skin prepping and elevating off the bed; heel protectors (foam or inflated, not sheepskin!) are very helpful for contracted patients and patients not moving at all.
- provide high pressure-relief mattress replacement; These are commonly patients who already had or have deep tissue injuries, unstageable, Stage 3 and/or 4 pressure ulcers – make sure the therapeutic weight limit is appropriate for heavier patients.

**Moderate risk: 13 to 14**—Consider these interventions:
- provide a pressure-reducing or pressure relief support surface; consider mattress replacement with pressure redistribution sensors
- managing moisture dermatitis: skin erosions r/t corrosive effects of stool and urine:
  - Moisture barrier ointments with absorptive capabilities (Sensicare cream, Criticaid Clear); low-cost alternative: pat on stoma powder (Adapt stoma powder [not Karaya powder], Stomaheal powder) with a piece of gauze to open areas, then apply barrier creams and ointments
  - If fungal component, anti-fungal topical creams are applied before stoma powders and moisture barrier ointment

**“Skin Failure” Risk Factors***

If patient falls into 1 or more of following risk categories he/she is considered at risk for “skin failure”:
1) Fever
2) Systolic b/p below 90; Patient on vasopressor administration
3) Unintended weight loss (< 40% average of daily meal intake for >7 days; absence of nutritional intake for >3 days [high gastric residuals, malfunction of feeding tubes, NPO for other reasons] )

**“Skin Failure” Risk Factors*** (cont’d):

4) Acidosis (Increased Anion Gap [AG] on BMP)
5) Coagulopathy (Infarcts [heart, LE, brain,], DVTs)

*DOH New York State Patient Advisory and Safety Enhancement Committee (NYPASE) Panel of Pressure Ulcer Experts, 2009

**General Care Issues**

- Do not massage reddened bony prominences
- Do not use doughnut-type devices
- Maintain good hydration and avoid drying out the patient’s skin. Moisturize skin daily.
QUESTIONS???

References


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