

Predicting Pressure Ulcer Risk

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WHY: Pressure ulcers (PUs) occur frequently in hospitalized, community-dwelling and nursing home older adults, and are serious problems that can lead to sepsis or death. Prevalence of PUs ranges from 10-17% in acute care, 0-29% in home care, and 2.3-28% in institutional long-term care (LTC); incidence ranges from 0.4-38% in acute care, 0-17% in home care, and 2.2-23.9% in institutional LTC. A key to prevention is early detection of at risk patients with a valid and reliable PU risk assessment instrument and timely interventions.

BEST TOOL: The Braden Scale for Predicting Pressure Sore Risk is among the most widely used tools for predicting the development of PUs. Assessing risk in six areas (sensory perception, skin moisture, activity, mobility, nutrition and friction/shear), the Braden Scale assigns an item score ranging from one (highly impaired) to three/four (no impairment). Summing risk items yields a total overall risk, ranging from 6-23. If a patient has major risk factors such as fever, diastolic pressure below 60, hemodynamic instability, advanced age, then move them to the next level of risk. Scores 15 to 18 indicate at risk, 13 to 14 indicate moderate risk, 10 to 12 indicate high risk, ≤ 9 indicate very high risk. In addition to assessing total overall risk, basing prevention protocols on low sub-scores are required by Centers for Medicare and Medicaid Centers in the revised Tag F 314 for long term care. Targeting specific prevention interventions that address low risk sub-scores can offer effective resource use.

TARGET POPULATION: The Braden Scale is commonly used with medically and cognitively impaired older adults. It has been used extensively in acute, home, and institutional LTC settings. New PUs are more common in the first two weeks of admission to a hospital or LTC. Recommendations for assessment are on admission or when the patient's condition changes (including cognition or functional ability) and at the following intervals: acute care-every 48 hours; critical care-every 24 hours; home care-every RN visit; institutional LTC-weekly first 4 weeks after admission, monthly to quarterly.

VALIDITY AND RELIABILITY: The ability of the Braden Scale to predict the development of PUs (predictive validity) has been tested extensively. Inter-rater reliability between .83 and .99 is reported. The tool has been shown to be equally reliable with Black and White patients. Sensitivity ranges from 83-100% and specificity 64-90% depending on the cut-off score used for predicting PU risk. A cut-off score of 18 should be used for identifying Black and White patients at risk for pressure ulcers.

STRENGTHS AND LIMITATIONS: When utilized correctly and consistently, the Braden Scale will help identify the associated risk for PU so that appropriate preventive interventions can be implemented. Although the Braden Scale has been used primarily with White older adults, research addressing Braden Scale efficacy in Black and Latino populations suggests that a cut-off score of 18 or less prevents under-prediction of PU risk in these populations.

MORE ON THE TOPIC:

Best practice information on care of older adults: www.ConsultGerIRN.org.

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BRADEN SCALE FOR PREDICTING PRESSURE SORE RISK

Patient's Name _____	Evaluator's Name _____	Date of Assessment _____			
SENSORY PERCEPTION ability to respond meaningfully to pressure-related discomfort	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 1/2 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 degree to which skin is exposed to 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. Very 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 degree of physical activity	1. Bedfast Confined to bed.	2. Chairfast Ability to walk severely limited or non-existent. 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 two hours during waking hours	
MOBILITY ability to change and control body position	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 Limitation Makes major and frequent changes in position without assistance.	
NUTRITION usual food intake pattern	1. Very Poor Never eats a complete meal. Rarely eats more than 1/3 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 NPO and/or maintained on clear liquids or IV's for more than 5 days.	2. Probably Inadequate Rarely eats a complete meal and generally eats only about 1/2 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 when offered OR is on a tube feeding or TPN 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 & 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.		
				Total Score	

NPO: Nothing by mouth; IV: Intravenously; TPN: Total Parenteral Nutrition
SCORE: 15-18 AT RISK; 13-14 MODERATE RISK; 10-12 HIGH RISK; ≤9 VERY HIGH RISK

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