



INSTITUTE FOR CLINICAL
SYSTEMS IMPROVEMENT

Health Care Protocol:

Skin Safety Protocol: Risk Assessment and Prevention of Pressure Ulcers

Second Edition
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ICSI Health Care Protocol Development:

- A topic is selected by The Committee on Evidence-Based Practice based on its relevance to member organizations.
- A work group of physicians and other health care professionals, usually 5-8, who are experts in the topic area is identified (with a formally designated leader).
- Prospective work group members are asked to disclose any potential conflicts of interest relevant to the topic of the report; disclosure forms are reviewed for unacceptable conflicts.
- The literature search is completed and pertinent research, regulatory statements, and protocols that may have already been developed and identified. In addition, work group members are asked to provide key references and current protocols from their organizations.
- ICSI staff prepares a draft protocol for the work group.
- The work group meets to review the draft protocol under the facilitation of an ICSI staff person.
- After approval of the protocol by the work group, it is sent to the member organizations for review and comment.
- Following review, the work group reconvenes to review and respond to member comments and revise the protocol as necessary.
- The work group leader represents the group to the steering committee. Committee members review the report to determine whether the conclusions are supported by the evidence cited and if member responses have been adequately answered.
- After steering committee approval, the protocol is distributed to members. Newly approved protocols are posted at <http://www.icsi.org>.
- Protocols are reviewed regularly and revised, if warranted.

A Health Care Protocol is a step-by-step statement of a procedure routinely used in the care of individual patients to assure that the intended effect is reliably achieved.

An implementation tool for the protocol is created in MS Word and is available as a separate download. The MS Word protocol implementation tool is designed to utilize the forms function in MS Word version 98 and newer. It is expected that organizations may need to customize the implementation tool to meet specific organization processes.

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Foreword

Scope and Target Population

All patients who enter acute health care facilities, both inpatient and outpatient, are covered under the scope of this protocol. Current evidence does not identify any population exempt from this protocol. While this protocol does not specifically address settings outside of the acute care facility, its use by them is not limited by this.

The purpose of this protocol is to decrease the incidence and/or progression of pressure ulcer development. To be successful, all health care team members, the patient and patient's family members need to be involved.

This protocol covers the steps used by the health care team for evaluating patient risk and keeping skin safe from pressure ulcer development.

The goals of the protocol are that pressure ulcer risk assessment, skin inspections and skin safety plans will occur consistently for patients receiving care at acute health care facilities. Also, that pressure ulcer risk assessment will become a patient care vital sign (*Reddy, 2006*).

Clinical Highlights and Recommendations

- **Risk assessment** should be performed in both the outpatient and inpatient settings. For outpatient, a set of questions answering yes or no should be used. For inpatient, use of a standardized risk assessment tool is recommended. The work group recommends the Braden Scale. (*Footnote #1*)
- A head-to-toe **skin inspection** should be done on every patient within six hours of admission, and re-inspection should occur every 8-24 hours, depending on the status of the patient. (*Footnote #2*)
- The **skin safety plan** should include interventions that minimize or eliminate friction and shear, minimize pressure, manage moisture, and maintain adequate nutrition/hydration. (*Footnote #3*)
- Document all risk assessments, skin inspection findings and skin safety plans. Utilize a consistent documentation format. (*Footnote #4*)
- Communication of pressure ulcer development, risk assessment and skin inspection results should be done consistently. Any change in skin condition should be communicated as soon as observed. (*Footnote #5*)

Priority Aims

1. Decrease the incidence of pressure ulcer development.
2. Assess all patients for risk of developing a pressure ulcer.
3. All patients will have a head-to-toe skin inspection.
4. All patients will have a pressure ulcer prevention skin safety plan documented in the medical record.
5. All patients and families will receive education in the prevention of/progression of pressure ulcers.

Evidence Grading

Individual research reports are assigned a letter indicating the class of report based on design type: A, B, C, D, M, R, X.

A full explanation of these designators is found in the Supporting Evidence section of the protocol.

Disclosure of Potential Conflict of Interest

In the interest of full disclosure, ICSI has adopted the policy of revealing relationships work group members have with companies that sell products or services that are relevant to this guideline topic. The reader should not assume that these financial interests will have an adverse impact on the content of the guideline, but they are noted here to fully inform readers. Readers of the guideline may assume that only work group members listed below have potential conflicts of interest to disclose.

Sonja Rivers and the nursing foundation of North Memorial received a grant from the Critical Care nurses Association for research on incontinence skin care.

No other work group members have potential conflicts of interest to disclose.

ICSI's conflict of interest policy and procedures are available for review on ICSI's Web site at <http://www.icsi.org>.

Definitions and Specifications

Braden Scale for Predicting Pressure Score Risk® (Braden Scale) – a standardized tool for determining level of risk for pressure ulcer development in adult patients. The following are the risk levels based on score: Mild risk 15-18, Moderate risk 13-14, High risk 10-12, Very High risk 9 or below. Reprinted with permission from Barbara Braden and Nancy Bergstrom.

Braden Q Scale® – a modified version of the Braden Scale for use with pediatric patients. The scale is appropriate for identifying pressure ulcer risk in children eight years old and under. Mild risk 22-25, Moderate risk 17-21, High risk 16 or below. Reprinted with permission from Dr. Martha Carley.

Capillary closure pressure – the amount of pressure required to collapse a capillary. To prevent pressure ulcer development, the goal of 32 mmHg or below is the "standard" value.

Interface pressure – a method used to measure capillary closure pressure; a perpendicular force measured between the body and a support surface

Pressure redistribution – pressure relief and reduction are interventions, not a support surface capability, therefore, this new term is being used to define the ability of a support surface to redistribute tissue load over contact areas of the body.

Special Considerations

Pressure ulcer prevention should be provided for all patients at risk of pressure ulcer development and those individuals who have a pressure ulcer (*Reddy, 2006*). There may be some patient conditions that may impede interventions from this protocol being implemented. Individualize the interventions as appropriate for these patients.

Risk assessment should be provided for all patients. The frequency and extent of this assessment varies based on the patient's risk factors.

The risk assessment and skin inspection must be documented in the patient record and "Not Assessed" should be written if not completed. The skin safety plan must be documented in the patient record and "Not Applicable" written if patient is not at risk. The other communication and education steps of the protocol still apply.

All personnel involved in the process must take an active role in this protocol. If at any time, a particular section of the protocol cannot be performed (e.g., maintain nutrition), the other assessment, verifications and consent steps still apply.

Supporting evidence is of class: M

Protocol

Risk Assessment Outpatient (See Footnote #1)

- Assess all patients for risk of pressure ulcer development. This includes areas such as outpatient, less than 24-hour stay, same-day surgery, emergency room, catheter lab and similar settings.

Risk Assessment Inpatient (See Footnote #1)

- At time of admission, assess all inpatients for risk of pressure ulcer development with a validated risk assessment tool.
- Re-evaluate risk of pressure ulcer development daily and with change in condition.

Inpatient Skin Inspection (See Footnote #2)

- Upon admission to the hospital, inspect the skin of every patient head-to-toe; palpate when indicated.
- Look for alteration in skin moisture, texture, temperature, color or consistency.
- Look for purplish/bluish localized areas and/or localized warm areas that become cool.

Initiate Skin Safety Plan (See Footnote #3)

- Minimize or eliminate friction and shear.
- Minimize pressure.
- Manage moisture.
- Maintain adequate nutrition/hydration.

Footnotes

1. Risk Assessment: Outpatient and Inpatient

Outpatient

Assess risk of pressure ulcer development for all patients receiving care in areas such as outpatient, ambulatory care, less than 24-hour stay, same-day surgery, emergency room, catheter lab or similar settings.

Increases in population age, severity of illness and comorbidities result in outpatient areas providing care for more patients at risk of pressure ulcer development. Health care services and triage processes may immobilize patients for two or more hours and place the patient at risk of pressure ulcer development.

Assess patient using the following questions:

- Is the patient bed- or wheelchair-bound, or does he/she require assistance to transfer? (*Reddy, 2006*)
- Will the patient be immobile or sedated for more than two hours?
- Is the patient incontinent of urine and/or stool?
- Does the patient have existing pressure ulcers, history of pressure ulcers or comorbidities?
- Is the patient under 5 years of age or over 65 years of age? (*Bergstrom, 1992; Quigley, 1996*)
- Does the patient have poor nutritional status (i.e., malnutrition)? (*Reddy, 2006*)
- Does the patient have hemodynamic instability?

In addition, for young children, assess risk of pressure ulcer development by checking:

Is the baby/child:

- moving extremities and/or body inappropriately for developmental age?
- responding to discomfort in developmentally inappropriate manner?
- demonstrating inadequate tissue perfusion with evidence of skin breakdown?

For a Yes response to any question above, initiate Skin Safety Plan. See Footnote #3, "Skin Safety Plan" and Appendix D, "Skin Safety Plan."

Although research has identified those younger than 5 years and older than 65 years of age as being at high risk for developing pressure ulcers, those in between these ages should not be automatically excluded from evaluation. The existence of comorbid conditions such as cardiovascular and endocrine diseases may contribute to increased vulnerability for the development of pressure ulcers.

Individuals who undergo operative procedures may be at increased risk for pressure ulcers. This risk may be related to length of time on the operating room/procedure table, hypotension or to the type of procedure (*Aronovitch, 1998; Price, 2005*).

Inpatient

Full risk assessment includes determining a person's risk for pressure ulcer development and inspection of skin condition, particularly of pressure points.

For all inpatients, assess risk of pressure ulcer development at time of admission using a validated risk assessment tool. The literature and work group recommend the Braden Scale for Predicting Pressure Score Risk© (Braden Scale) and the Braden Q Scale©.

There are several tools available for risk assessment of pressure ulcer prevention. The Braden Scale for Predicting Pressure Score Risk (Braden Scale) is the most commonly used validated tool for predicting patients at risk for pressure ulcer development. Although the sensitivity and specificity for predicting pressure ulcer risk is high for the Braden scale, it serves as an adjunct to clinical judgment regarding each individual. It is important for the health care team to use the Braden score as a guideline in planning interventions aimed at prevention (Ayello, 2002). Other tools available include the Norton Scale and Waterlow Scale (Pancorbo-Hidalgo, 2006).

The Braden Scale was developed and tested for the adult population. The Braden Q modified the Braden Scale for use in pediatrics. The Braden Q is made up of seven subscales: mobility, activity, sensory perception, skin moisture, friction and shear, nutrition and tissue perfusion/oxygenation (Quigley, 1996). The Braden Q was tested in a cohort study with children ages 21 days to 8 years in three sites (Curley, 2003).

Re-evaluate the risk of pressure ulcer development daily and with any change in condition such as surgery, change in nutritional status or level of mobility.

See Appendix A, "Braden Scale for Predicting Pressure Score Risk© (Braden Scale)," Appendix B, "Braden Q Scale©" and Appendix C, "Risk Assessment Plan."

Patients at Increased Risk

It is important for members of the health care team to become familiar with patient populations at increased risk for pressure ulcer development (Price, 2005; Whittington, 2004; Wolverson, 2005). High-risk diagnoses may include but are not limited to (Wound, Ostomy, and Continence Nurses Society, 2003):

- Peripheral vascular disease
- Myocardial infarction
- Stroke
- Multiple trauma
- Musculoskeletal disorders/fractures
- GI bleed
- Spinal cord injury
- Neurological disorders (e.g., Guillain Barre', multiple sclerosis)
- Unstable and/or chronic medical conditions (e.g., diabetes, renal disease, cancer, COPD, CHF, dementia).
- History of previous pressure ulcer
- Preterm neonates
- Dementia

Patients 75 years of age or greater and/or patients with multiple high-risk diagnoses should be advanced to the next level of risk (Wound, Ostomy, and Continence Nurses Society, 2003).

Individuals who undergo operative procedures may be at increased risk for pressure ulcers. This risk may be related to length of time on the operating room/procedure table, hypotension or to the type of procedure (Aronovitch, 1998; Price, 2005).

Supporting evidence is of classes: B, C, D, M, R

2. Inpatient Skin Inspection

A head-to-toe skin inspection should be done on every patient upon admission to the hospital; palpate particularly over pressure points.

The condition of the skin is an indicator of the general health of the patient. A head-to-toe skin inspection should be done on every patient within six hours of admission to the hospital (*National Institute for Clinical Excellence, 2001; National Institute for Clinical Excellence, 2003*).

- For all patients regardless of skin pigmentation, inspect and palpate for:
 - alteration in skin moisture;
 - change in texture, turgor;
 - change in temperature compared to surrounding skin (warmer or cooler);
 - color changes, such as pale, red or purplish hues;
 - non-blanchable erythema;
 - consistency, such as boggy (soft) or induration (hard);
 - edema; and
 - open areas, blisters, rash, drainage.
- In addition, for darkly pigmented skin, look for purplish/bluish localized areas and/or localized warm areas that become cool.

Skin should be observed in good lighting and any areas of discoloration or redness should be palpated for change in temperature compared to surrounding skin, or feeling of boggy (soft) or induration (hard). Pay particular attention to areas over bony prominences. Blanching erythema is an early indicator of the need to redistribute pressure, non-blanching erythema is suggestive that tissue damage has already occurred or is imminent, and indurated or boggy skin is a sign that deep tissue damage has likely occurred.

Ask the patient about:

- areas with lack of sensation;
- areas of pain;
- location of current or previous ulcers;
- fragile skin, easy bruising; and
- medications or medical condition putting at higher risk for breakdown.

Re-inspect and palpate skin of all patients every 8-24 hours, depending on status of patient. Patients at high risk of breakdown, as determined by either Braden Scale score, may need to be assessed every eight hours or more frequently as condition changes.

The head-to-toe inspection can be performed at the same time as other assessments. Start at the top and work downward. A full body skin inspection doesn't have to be visualizing all aspects of the patient in the same time period.

- When applying oxygen, check the ears for pressure areas from the tubing.
- If on bedrest, don't forget to look at the back of the head during repositioning.

- When auscultating lung sounds or turning the patient, inspect the shoulders, back and sacral/coccyx region.
- When checking bowel sounds, look into skin folds.
- When positioning pillows under calves, check the heels and feet (using a hand-held mirror makes this easy).
- When checking IV sites, check the arms and elbows.
- Examine the skin under equipment with routine removal (i.e., teds, restraints, splints, etc).
- Each time you get a patient up or provide care be looking at the exposed skin, especially on bony prominences.
- Pay special attention to areas patient lacks sensation to feel pain and/or has had a breakdown in the past.

Supporting evidence is of class: R

3. Skin Safety Plan

The skin safety plan for prevention of pressure ulcers incorporates the interventions below:

- Minimize or eliminate friction and shear (*Reddy, 2006*)
- Minimize pressure (*Reddy, 2006*)
- Manage moisture
- Maintain adequate nutrition/hydration (*Reddy, 2006*)

The interventions and information presented are to be utilized for prevention of pressure ulcer development. See Appendix D, "Skin Safety Plan."

Minimize or Eliminate Friction and Shear

Concepts for minimizing:

- Utilize transfer or assistive devices to reduce friction and/or shear.
- Use lift sheets or devices to turn, reposition or transfer patients, etc.
- Maintain head of bed at, or below, 30 degrees, or lowest possible level based on medical condition. Match knee angle with angle of head of bed (use knee gatch).
- Keep skin clean and dry.
- Use trapeze when not contraindicated.

The effect of pressure on underlying structures and tissue is magnified when shear forces are added. Shear forces occur when patients are positioned in such a way that they tend to slide, for example, when the head of the bed is elevated without elevating the feet as well. Shear forces plus pressure cause stretching and kinking of capillaries and tissue, resulting in more tissue ischemia than would have occurred with pressure alone.

Friction affects only the outermost skin layers by movement of the epidermis against an external surface. Clinically, friction presents as a superficial abrasion or blister (i.e., heel rubbing on sheets). Shear and friction often go hand in hand.

Actions:

- Lift body off the bed/chair rather than dragging as the patient is moved up in bed/chair.
- Avoid elevating head of the bed more than 30 degrees unless contraindicated. Sitting at a 90-degree angle when in the chair decreases shear/friction.
- Use transfer devices such as mechanical lifts, hover surgical mattress, slider boards and surgical slip-sheets.
- Pad between skin surfaces that may rub together.
- Heel and elbow pads reduce friction but not pressure.
- Frequent use of hypoallergenic lubricating oils, creams or lotions lowers the surface tension on the skin and reduces friction (*Reddy, 2006*).
- Use transparent film, hydrocolloid dressings or skin sealants on bony prominences (such as elbows) to decrease friction.
- Keep skin well hydrated and moisturized.
- Lubricate or powder bedpans prior to placing under patient. Roll patients to place bedpan rather than pushing and pulling it in and out.
- Protect skin from moisture. Excessive moisture weakens dermal integrity and destroys the outer lipid layer. Therefore, less mechanical force is needed to wound the skin and cause a physical opening (*Baronoski, 2004*).

Minimize Pressure

Immobility is the most significant risk factor for pressure ulcer development. Patients who have any degree of immobility should be closely monitored for pressure ulcer development (*Wound, Ostomy, and Continence Nurses Society, 2003*).

Patients in bed:

- Make frequent, small position changes.
- Use pillows or wedges to reduce pressure on bony prominences.
- At a minimum, turn every two hours (*Reddy, 2006*).
- When the patient is lying on one side, do not position directly on trochanter (hip).
- Use pressure redistribution mattresses/surfaces (*Reddy, 2006*).

Patients in sitting position:

- Encourage patients to weight shift every 15 minutes (i.e., chair push ups, if able to reposition self; have patient stand and reseat self if able; make small shift changes such as elevating legs).
- Reposition every hour if patient unable to reposition self.
- Utilize chair cushions for pressure redistribution.

All patients:

- Use pressure support surfaces to redistribute pressure as indicated for beds and chairs (*Reddy, 2006*).

Footnotes

- Consider patient's weight in bed selection. For patients over 300 pounds, evaluate need for bariatric bed/appropriate size support surface.
- Use pressure support surfaces as indicated. Free-float heels by elevating calves on pillows and keeping heels free of all surfaces.
- Minimize/eliminate pressure from medical devices such as oxygen masks and tubing, catheters, cervical collars, casts, IV tubing and restraints.
- Limit the number of layers between the support surface and patient.
- Maintain or enhance patient's level of activity.

Patients have greater intensity of pressure over the bony prominences when sitting in a chair, as there is less distribution of weight. Along with increased weight over the bony prominences, there is a tendency for the body to slide in a downward motion, causing shearing and destruction of the soft tissue over the bony prominences. A sitting position includes sitting in bed greater than 30 degrees, a cardiac chair, recliner or wheelchair. When in this position, it is important for the patient to shift weight every 15 minutes if he/she is able to do so independently. This includes "small shifts of weight" such as pushing up on their arms, raising or lowering head slightly to redistribute the weight or lifting from side to side. If the patient is unable to shift weight independently, his/her position should be changed by care providers on an hourly basis. Remember to utilize chair cushions and consult Physical Therapy/Occupational Therapy for assistance with seating and positioning (*Baranoski, 2004*).

Manage Moisture

Concepts for managing moisture:

- Implement toileting schedule or bowel/bladder program as appropriate.
- Communicate incontinent episodes to primary care giver/team.
- Cleanse skin gently with pH-balanced cleansers and apply moisture barrier.
- Contain urine and stool.
- Contain wound drainage.
- Prevent accumulation of moisture, specifically in skin folds.

Management of moisture from perspiration, wound drainage and incontinence are important factors in pressure ulcer prevention. Moisture from incontinence may be a precursor to pressure ulcer development by macerating the skin and increasing friction (*Ratliff, 1999*). Fecal incontinence is a greater risk factor for pressure ulcer development than urinary incontinence because the stool contains bacteria and enzymes that are caustic to the skin. In the presence of both urinary and fecal incontinence, fecal enzymes convert urea to ammonia, raising the skin pH. With a more alkaline skin pH, the skin becomes more permeable to other irritants (*Ratliff, 2005*).

Actions:

- Evaluate type of incontinence-urinary, -fecal or both.
- Check for incontinence a minimum of every two hours, and as needed.
- Cleanse skin gently at each time of soiling with water or pH-balanced cleanser. Avoid excessive friction and scrubbing, which can further traumatize the skin. Cleansers with nonionic surfactants are gentler to the skin than are anionic surfactants in typical soaps (*Jeter, 1996*).

Footnotes

- Use incontinence skin barriers (e.g., creams, ointments, film-forming skin protectants) as needed to protect and maintain intact skin, or to treat non-intact skin.
- Consider use of stool containment devices (e.g., fecal pouch, Flexi-seal, Zassi). Assess the fecal incontinence: quantity, frequency and the effectiveness of the above actions before initiation of devices. Be sure to initiate before skin breakdown occurs. If a fecal pouch is ineffective, begin use a Flex-seal or Zassi device. Note these products require prior training to use. Rectal tubes are not recommended, due to risk of injury or perforation.

Be aware that tube feedings and antibiotics may exacerbate the incidence of diarrhea.

- Assess for candidiasis, and treat as appropriate (*Evans, 2003*).
- Prolonged exposure to moisture is a risk factor, as well as antibiotic therapy over one week, diabetes, obesity, anemia and immunosuppression. Prevention relies on reduction or elimination of moisture. Examples include separation of skin folds, use of a skin sealant, frequent changing of dressings, incontinence containment products, and use of moisture-absorbing topical products (*Wound, Ostomy, and Continence Nurses Society, 2003*).
- Select absorbent underpads and briefs to wick incontinence moisture away from the skin versus trapping moisture against the skin, causing maceration.
- Frequent linen change for excessive perspiration

Maintain Adequate Nutrition/Hydration

Concepts for maintaining nutrition/hydration

- Provide nutrition compatible with individual's wishes or condition.
- Alert caregiver/unit when nourishment is delayed, or promptly provide food and fluids following a procedure in which nutrition has been withheld.
- Consult/refer to Nutrition Therapy when nutrition score on either Braden Scale or patient's condition indicates (*Reddy, 2006*).
- Advance diet providing and encouraging intake of supplements/fluids as medically indicated.

Patients who are malnourished and/or dehydrated are at greater risk for developing pressure ulcers. Encouraging hydration, as well as high-protein, high-calorie supplements are suggested for the patient who presents with multiple risk factors for developing pressure ulcers.

Lab values may not reflect current risk of pressure ulcer development. Low serum albumin levels may reflect a chronic disease state versus overall poor nutritional status (*National Pressure Ulcer Advisory Panel, 1992*). Serum albumin is not a sensitive measure of the effects of intervention due to its 20-day half-life. Pre-albumin is a more current reflection of protein stores (*Wound, Ostomy, and Continence Nurses Society, 2003*). Serum prealbumin levels in malnutrition can be interpreted by the following:

- Less than 5 mg/dL predicts a poor prognosis.
- Less than 11 mg/dL predicts high risk and requires aggressive nutritional supplementation.
- Less than 15 mg/dL predicts an increase risk of malnutrition, and monitoring twice weekly is recommended (*Evans, 2005*).

Supporting evidence is of class: R

4. Documentation

Document risk assessment, skin inspection and skin safety plan in the patient record. Utilize a consistent documentation format to support care provision, communication and measurement.

"Not assessed" should be written if the risk assessment and skin inspection is delayed or not completed. "Not applicable" should be written for the Skin Safety Plan if the patient is not at risk. Define a procedure for documentation of a patient refusal of skin inspection. The communication and education steps of the protocol apply even if skin inspection is refused by the patient.

A paper checklist or process within an electronic medical record system could be a tool to support documentation of risk assessment and skin inspection.

All personnel involved in the process must take an active role in this protocol. If at any time, a particular section of the protocol cannot be implemented (e.g., maintain nutrition), the other interventions still apply. A defined procedure should be in place for documentation of patient refusal of skin safety strategy.

5. Communication

All health care team members need to be aware of patients who are at risk for pressure ulcers and those with active safety plans. Communicate skin status and safety plan interventions when transferring care to another provider such as change of shifts, transporting between departments and patient transfer to another facility or unit. Develop a method to communicate skin care concerns to all members of the health care team. Use consistent methods for communication, such as identifying the Braden score and skin inspection results on the interdisciplinary transfer form.

6. Patient Education

Educate staff, patients, family members and caregivers about risk assessment, skin inspection techniques, and skin safety interventions. Discuss current status of pressure ulcer risk, skin inspection findings and planned interventions. Involve patients, family members and caregivers in care planning.

Appendix A – Braden Scale for Predicting Pressure Score Risk© (Braden Scale)

Risk Score: Mild risk 15-18, Moderate risk 13-14, High risk 10-12, Very High risk 9 or below

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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 □ 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 □ 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 □ 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.	
© Copyright Barbara Braden and Nancy Bergstrom, 1988 All rights reserved				Total Score

Appendix B – Braden Q Scale©

Risk Score: Mild risk 22-25, Moderate risk 17-21, High risk 16 or below

Braden Q Scale					
	Intensity and		Duration of	Pressure	Score
Mobility The 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 completely turn self 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.	
Activity The degree of physical activity	1. Bedfast: Confined to bed.	2. Chairfast: Ability to walk severely limited or nonexistent. Cannot bear own weight and/or must be assisted in to 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. All patients too young to ambulate OR walks frequently: Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.	
Sensory Perception The ability to respond in a developmentally appropriate way 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 surface.	2. Very Limited: Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR has 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 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 communicate pain or discomfort.	
Tolerance of		The Skin and		Supporting	Structure
Moisture Degree to which skin is exposed to moisture	1. Constantly Moist: Skin is kept moist almost constantly by perspiration, urine, drainage, 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 every 8 hours.	3. Occasionally moist: Skin is occasionally moist, requiring linen change every 12 hours.	4. Rarely moist: Skin is usually dry, routine diaper changes, linen only requires changing every 24 hours.	
Friction-Shear <i>Friction:</i> occurs when skin moves against support surfaces <i>Shear:</i> occurs when skin and adjacent bony surface slide across one another.	1. Significant problem: Spasticity, contracture, itching or agitation leads to an almost constant thrashing and friction.	2. 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.	3. Potential Problem: Moves feeble or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relative good position in chair or bed most of the time but occasionally slides down.	4. No apparent problem: Able to completely lift patient during a position change; 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.	
Nutrition Usual food intake pattern	1. Very Poor: NPO and/or maintained on clear liquids or IVs for more than 5 days OR Albumin <2.5mg/dl OR Never eats a complete meal. Rarely eats more than 1/2 of any food offered. Protein intake includes only 2 servings of meat or dairy products per day. Takes fluids poorly. Does not take a liquid dietary supplement.	2. Inadequate: Is on liquid diet or tube feedings/TPN which provide inadequate calories and minerals for age OR Albumin<3mg/dl OR 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.	3. Adequate: Is on tube feedings or TPN which provide adequate calories and minerals for age OR eats over 1/2 of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement if offered.	4. Excellent: Is on a normal diet providing adequate calories for age. For example, 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.	
Tissue Perfusion & Oxygenation	1. Extremely compromised: hypotensive (MAP <50mmHg; <40 in a newborn) or the patient does not physiologically tolerate position changes.	2. Compromised: Normotensive; Oxygen saturation may be <95%; Hemoglobin maybe <10mg/dl; Capillary refill may be >2 seconds; serum pH is <7.40	3. Adequate: Normotensive; Oxygen saturation may be <95%; Hemoglobin may be <10mg/dl; Capillary refill may be >2 seconds; serum pH is normal.	4. Excellent: Normotensive; Oxygen saturation >95%; Normal Hgb; Capillary refill<2seconds.	
TOTAL					

From S.M. Quigley and M.A.Q. Curley. Skin integrity in the pediatric population: Preventing and managing pressure ulcers. *Journal of the Society of Pediatric Nurses*, 1(1), 7–18.

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Appendix C – Risk Assessment Plan

1. Outpatient Risk Assessment

Assess all patients for risk of pressure ulcer development. This include areas such as outpatient, ambulatory care, less than 24-hour stay, same day surgery, emergency room, catheter labs and similar settings.

Assess patient using the following questions:

- Is the patient bed- or wheelchair-bound or does he/she require assistance to transfer?
- Will the patient be immobile or sedated for more than two hours?
- Is the patient incontinent of urine and/or stool?
- Does the patient have existing pressure ulcers, history of pressure ulcers or comorbidities?
- Is the patient under 5 years of age or over 65 years of age?
- Does the patient have poor nutritional status (i.e., malnutrition)?
- Does the patient have hemodynamic instability?

In addition, for young children, assess risk of pressure ulcer development by checking:

Is the baby/child:

- moving extremities and/or body inappropriately for developmental age?
- responding to discomfort in developmentally inappropriate manner?
- demonstrating inadequate tissue perfusion with evidence of skin breakdown?

For a Yes response to any question above, initiate the skin safety plan.

2. Inpatient Risk Assessment

For all inpatients, assess risk of pressure ulcer development at time of admission using a validated risk assessment tool. The literature and work group recommend the Braden Scale for Predicting Pressure Score Risk[®] (Braden Scale) and the Braden Q Scale[®].

Re-evaluate risk of pressure ulcer development daily and with change in condition such as surgery, change in nutritional status or level of mobility.

Upon admission to the hospital, inspect skin of every patient head-to-toe; palpate over pressure points.

- For all patients regardless of skin pigmentation, look for any alteration in skin moisture, texture, temperature, color or consistency.
- In addition, for darkly pigmented skin, look for purplish/bluish localized areas and/or localized warm areas that become cool.

Every 8-24 hours, re-inspect and palpate skin of all patients, depending on patient's status.

Appendix D – Skin Safety Plan

Minimize or Eliminate Friction and Shear

- Utilize transfer or assistive devices to reduce friction and/or shear.
- Use lift sheets or devices to turn, reposition or transfer patients, etc.
- Maintain head of bed at, or below, 30 degrees, or lowest possible level based on medical condition. Match knee angle with angle of head of bed (use knee gatch).
- Keep skin clean and dry.
- Use trapeze when not contraindicated.

Minimize Pressure

Patients in bed:

- Make frequent, small position changes.
- Use pillows or wedges to reduce pressure on bony prominences.
- At a minimum, turn every two hours.
- When the patient is lying on one side do not position directly on trochanter (hip).
- Use pressure redistribution mattresses/surfaces.

Patients in sitting position:

- Encourage patients to weight shift every 15 minutes (i.e., chair push ups, if able to reposition self; have patient stand and reseat self if able; make small shift changes such as elevating legs).
- Reposition every hour if patient unable to reposition self.
- Utilize chair cushions for pressure redistribution.

All patients:

- Use pressure support surfaces to redistribute pressure as indicated for beds and chairs.
- Consider patient's weight in bed selection. For patients over 300 pounds, evaluate need for bariatric bed/appropriate size support surface.
- Use a pressure support surface as indicated. Free-float heels by elevating calves on pillows and keeping heels free of all surfaces.
- Minimize/eliminate pressure from medical devices such as oxygen masks and tubing, catheters, cervical collars, casts, IV tubing and restraints.
- Limit the number of layers between the support surface and patient.
- Maintain or enhance patient's level of activity.

Appendix D – Skin Safety Plan

Manage Moisture

- Implement toileting schedule or bowel bladder program as appropriate.
- Communicate incontinent episodes to primary caregiver.
- Cleanse skin gently with pH-balanced cleansers and apply moisture barrier.
- Contain urine and stool.
- Contain wound drainage.
- Prevent accumulation of moisture, especially in skin folds.

Maintain Adequate Nutrition/Hydration

- Provide nutrition compatible with individual's wishes or condition.
- Alert caregiver/unit when nourishment is delayed, or provide prompt food and fluids following a procedure in which nutrition has been withheld.
- Consult/refer with Nutrition Therapy when nutrition score on either Braden Scale or patient's condition indicates.
- Advance diet, providing and encouraging intake of supplements/fluids as medically indicated.

Supporting Evidence

Evidence Grading System

I. CLASSES OF RESEARCH REPORTS

A. Primary Reports of New Data Collection:

- Class A: Randomized, controlled trial
- Class B: Cohort study
- Class C: Non-randomized trial with concurrent or historical controls
Case-control study
Study of sensitivity and specificity of a diagnostic test
Population-based descriptive study
- Class D: Cross-sectional study
Case series
Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

- Class M: Meta-analysis
Systematic review
Decision analysis
Cost-effectiveness analysis
- Class R: Consensus statement
Consensus report
Narrative review
- Class X: Medical opinion

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Reddy M, Gill SS, Rochon PA. Preventing pressure ulcers: a systematic review. *JAMA* 2006;296:974-84. (Class M)

Whittington KT, Briones R. National prevalence and incidence study: 6-year sequential acute care data. *Adv Skin Wound Care* 2004;17:490-94. (Class C)

Wolverton CL, Hobbs LA, Beeson T, et al. Nosocomial pressure ulcer rates in critical care: performance improvement project. *J Nurs Care Qual* 2005;20:56-62. (Class C)

Wound, Ostomy, and Continence Nurses Society: WOCN Clinical Practice Guideline Series. Guideline for Prevention and Management of Pressure Ulcers. Glenview, IL: WOCN, 2003:1-52. (Class R)

This section provides resources, strategies and measurement specifications for use in closing the gap between current clinical practice and the recommendations set forth in the guideline.

The subdivisions of this section are:

- Priority Aims and Suggested Measures
 - Measurement Specifications
- Key Implementation Recommendations
- Knowledge Products and Resources
- Other Resources Available

Priority Aims and Suggested Measures

1. Decrease the incidence of pressure ulcer development.

Possible measure for measuring this aim:

- a. Percentage of patients with documentation in the medical record that communication took place for reporting of skin status and safety plan occurred when transferring patient care to another care provider:
 - Change of shifts
 - Transfers between departments
 - Transfer to another unit or facility
 - At time of discharge

2. Assess all patients for risk of developing a pressure ulcer. (See Risk Assessment, Footnote #1)

Possible measures for measuring this aim:

- a. (Inpatient) Percentage of patients with documentation in the medical record indicating a risk assessment (using a validated tool) was completed (see Footnote #1).
- b. (Outpatient) Percentage of patients with documentation in the medical record indicating a risk assessment was done, using the following questions: (see Footnote #1).
 - Is the patient bed- or wheelchair-bound or does he/she require assistance to transfer?
 - Will the patient be immobile or sedated for more than two hours?
 - Is the patient incontinent of urine and/or stool?
 - Does the patient have existing pressure ulcers, history of pressure ulcers or other comorbidities?
 - Is the patient under 5 years of age or over 65 years of age?
 - Does the patient have poor nutritional status?
 - Does the patient have hemodynamic instability?

For younger children, assess risk of pressure ulcer development with these additional questions:

Is the baby/child:

- moving extremities and/or body inappropriately for developmental age?
- responding to discomfort in developmentally inappropriate manner?
- demonstrating inadequate tissue perfusion with evidence of skin breakdown?

Priority Aims and Suggested Measures

3. All patients will have a head-to-toe skin inspection. (See Skin Inspection, Footnote #2)

Possible measures for accomplishing this aim:

- a. Percentage of patients with documentation in the medical record that a head-to-toe skin inspection and palpation were completed within six hours of admission. (See Footnote #2)
- b. Percentage of patients with documentation in the medical record that a head-to-toe re-inspection and palpation were completed every 8-24 hours, depending on the status of the patient. (See Footnote #2)

4. All patients will have a Pressure Ulcer Prevention Skin Safety Plan documented in the medical record. (See "Skin Safety Plan," Footnote #3)

Possible measure for accomplishing this aim:

- a. Percentage of patients with documentation in the medical record of a skin safety plan.

5. All patients and families will receive education in the prevention of/progression of pressure ulcers.

Possible measure for accomplishing this aim:

- a. Percentage of patients with documentation in the medical record that education was provided to both patient and family regarding the prevention of/progression of pressure ulcers.

Measurement Specifications

Possible Success Measurement #3a

Percent of patients with documentation in the medical record that a head-to-toe skin inspection and palpation were completed within six hours of admission. (See Footnote #2)

Population Definition

All patients admitted to the hospital (adult and designated children).

Data of Interest

of patient medical records that indicate a head-to-toe skin inspection and palpation were completed within six hours of admission

total # of medical records audited for evidence of head-to-toe skin inspection

Numerator/Denominator Definitions

Numerator: Results of the completed head-to-toe skin inspection and palpation within six hours of admission will identify those patients at risk for development of or progression of pressure ulcers, and will cue care providers to implement skin care strategies.

Denominator: Random (minimal) sample of 20 charts of patients who were admitted to the hospital and stayed for longer than six hours.

Measurement Period

The time of inspection is within six hours of admission. Suggest collecting data monthly.

Explanation of Interventions

- Upon admission to the hospital, inspect the skin of every patient head-to-toe; palpate when indicated.
- Palpation is performed on all areas of discoloration or redness in order to determine any change in temperature compared to surrounding skin, or feeling of boggy (soft) or induration (hard). Particular attention should be paid to bony prominences.
- Look for alterations in skin moisture, texture, temperature, color or consistency.
- Look for purplish/bluish localized areas and/or localized warm areas that become cold.

Method/Source of Data Collection

Records should be selected in a random way, designed to represent a cross section of patients of all ages and gender admitted to the hospital.

Key Implementation Recommendations

The following system changes were identified by the work group as key strategies for health care systems to incorporate in support of the implementation of this protocol.

1. Develop a process of communicating to all health care team members (who need to be aware) of patients at high risk for pressure ulcers and those with active safety plans.
2. Develop a process for educating staff, patients and family members about risk assessment and skin inspection techniques, along with skin safety strategies.
3. Develop a process and/or visual/EMR cue on each admission documentation record for the completion of a head-to-toe skin inspection and risk assessment.
4. It is crucial to have systemwide mechanisms, support and education for successful implementation of skin safety plans for pressure ulcer prevention. Consider the implementation of a skin care team.

Systemwide processes, support and education are needed for successful implementation of skin safety plans for pressure ulcer prevention. Implementing change requires addressing barriers to provide safe skin care.

The ICSI Pressure Ulcer work group identified barriers to implementing any skin safety plan. The work group agreed on the universality of the issues and on the need to address them. The issues and recommendations for addressing them are stated below.

Communication

Gaps in communication exist in varying degrees throughout systems.

Possible activities to address barrier:

- Obtain support from key stakeholders.
- Develop standard protocols for communication between units, facilities and among all care-givers.
- Develop education materials for patients and families.
- Institute standard process for identifying at-risk patients.

Patient Complexity

The ability to prevent pressure ulcer development is affected by the complexity of patient disease states, physical condition, aging population, obesity and malnutrition and necessary supporting equipment.

Possible activities to address barrier:

- Develop processes and tools to identify at-risk patients.
- Consider creation of skin care teams or other mechanisms to develop staff expertise.
- Create pressure ulcer prevention guidelines/protocols/orders for patients at risk.
- Implement support surface/bed decision-making algorithms.

Patient Physical and Behavioral Compliance

The ability of patients to participate in pressure ulcer prevention strategies may be affected by physical and behavioral factors. Non-compliance may be related to inability to participate, lifestyle issues, cultural differences, medical condition, physical condition, lack of trust or knowledge gaps.

Possible activities to address barrier:

- Provide education that increases patient/family knowledge of pressure ulcer risk and appropriate interventions.
- Identify barriers to patient participation and develop strategies to address those barriers.

Technical Components

Equipment and supplies needed for pressure ulcer prevention may not be readily available to prevent pressure ulcers.

Possible activities to address barrier:

- Clarify responsibility and accountability for equipment and supplies needed for pressure ulcer prevention.
- Provide support surface/bed decision-making algorithms.
- Consider the business case for purchase of pressure redistributing equipment versus equipment rentals.

Staffing

Implementing consistent process for pressure ulcer assessment and prevention may be viewed as additional work.

Possible activities to address barrier:

- Educate staff on the impact and costs of pressure ulcers to the patient and health care system.

Knowledge Deficit

Pressure ulcer prevention is complex. Conflicting procedures and protocols may exist. Multiple health care team members may be involved and limited knowledge may result in misunderstanding of equipment or procedures. Consistent risk assessment and initiation of prevention strategies are challenges.

Possible activities to address barrier:

- Initiate staff education during orientation and as ongoing staff training.
- Incorporate pressure ulcer prevention into staff competencies.
- Consider creation of skin care teams or other mechanisms to develop staff expertise.
- Develop pressure ulcer prevention standing orders for patients at risk.
- Create documents outlining pressure ulcer prevention strategies, such as flow diagrams or protocols.

Key Implementation Recommendations

Measurement

Continuous quality improvement strategies may be used to measure the degree to which implementation of the protocol reduces pressure ulcers incidence.

Possible activities:

- Prevalence and incidence studies
- Discharge audits
- Discharge skin assessments
- Review of assessment and prevention documentation

Ensure the pressure ulcer admission assessment of all patients.

1. Establish/improve processes to ensure that risk assessment is conducted within six hours of admission for all patients.
2. Agree on the use of a standard risk assessment tool (for example, Braden Scale).
3. Develop and utilize multiple methods to visually cue staff as to which patients are at risk. (For example, consider using stickers in the patient chart or on the patient's door so that all who enter will realize the patient is at risk for pressure ulcer development.)
4. Build shared pride in progress. Post "Days since Last Pressure Ulcer" data. (IHI: 5 Million Lives Campaign)

What processes can be put in place to ensure daily reassessment of risk?

5. Adapt documentation tools to prompt daily risk assessment, documentation of findings, and initiation of prevention strategies as needed. For example, include this information in daily clinical notes.
6. Educate all levels of staff about potential risk factors of pressure ulcer development and the process for implementing prevention strategies.
7. Use validated risk assessment tools for staff to easily identify degree of risk and potential prevention strategies. (IHI: 5 Million Lives Campaign)

What processes can be put in place to ensure daily inspection of the skin?

8. Adapt documentation tools to prompt daily skin inspection, documentation of findings, and initiation of prevention strategies as needed.
9. Educate all levels of staff to inspect the skin any time they are assisting the patient, for example, when assisting patient to the chair, moving from one area to the other, and while bathing. Upon recognition of any change in skin integrity, notify staff so that appropriate interventions can be put in place. (IHI: 5 Million Lives Campaign)

What changes can we make to ensure effective management of moisture?

10. Look for opportunities to design a process for periodic activities such as repositioning, assessing for wet skin, applying barrier agents, offering toilet opportunities and even offering P.O. fluids (water). For example: By combining routine activities in a protocol such as a "pressure ulcer prevention protocol" (a care efficiency), staff can complete multiple tasks while in the room every two hours and document them all at once.

Key Implementation Recommendations

11. Keep supplies at the bedside of each at-risk patient who is incontinent. This provides the staff with the supplies they need to immediately clean, dry and protect the patient's skin after each episode of incontinence.
12. Provide underpads that pull the moisture away from the skin, and limit the use of disposable briefs or containment garments if at all possible.
13. Provide pre-moistened, disposable barrier wipes to help cleanse, moisturize, deodorize and protect patients from perineal dermatitis due to incontinence. (IHI: 5 Million Lives Campaign)

What changes can we make to optimize nutrition and hydration?

14. Assist patient with meals, snacks and hydration. Every effort should be made to allow patient preferences when medically appropriate.
15. Document the amount of nutritional intake, and notify the dietitian or physician if the patient does not have adequate intake. (IHI: 5 Million Lives Campaign)

What changes can we make to minimize pressure?

See Footnote #3 of this protocol.

What changes can we make to minimize or eliminate friction and sheer?

See Footnote #3 of this protocol.

Knowledge Products and Resources

Criteria for Selecting Resources

The following resources were selected by the Skin Safety Protocol: Risk Assessment and Prevention of Pressure Ulcers work group as additional resources for providers and/or patients. The following criteria were considered in selecting these sites.

- The site contains information specific to the topic of the protocol.
- The content is supported by evidence-based research.
- The content includes the source/author, and contact information.
- The content clearly states revision dates or the date the information was published.
- The content is clear about potential biases, noting conflict of interest and/or disclaimers as appropriate.

Resources Available to ICSI Members Only

The following materials are available to ICSI members only. Also available is a wide variety of other knowledge products including tool kits on CQI processes and Rapid Cycling that can be helpful. To obtain copies of these or other Knowledge Products, go to <http://www.icsi.org/knowledge>.

To access these materials on the Web site you must be logged in as an ICSI member.

Educational Resources

Tool kits

- Pressure Ulcer Tool Kit (Prevention and Assessment)

(This tool kit can be found on the ICSI Web site at <http://www.icsi.org>)

Tool Kit Contents:

- Prevention Protocol: Nursing Standard of Care
- Prevention Protocol: Nursing Care Plans and Interventions (PowerPoint presentation)
- Prevention Protocol: Documentation Tool
- Prevention Protocol: Bed Selection
- Prevention protocol: Specialty Bed Training (PowerPoint presentation)
- Prevention Protocol: Position Guide for Patients and Families
- Prevention Protocol: Patient and Family Guide to Pressure Ulcer Prevention
- Assessment Protocol: Braden Scale Training – Adult Health Care Training (PowerPoint presentation)
- Assessment Protocol: Braden Scale Training – OR/PACU Training (PowerPoint presentation)
- Assessment Protocol: Braden Scale Training – Non-licensed Staff (PowerPoint presentation)
- Assessment Protocol: Braden Scale Training – Group Scenarios
- Assessment Protocol: Braden Scale Training – Quiz
- Assessment Protocol: Braden "Skin Safety" Interventions
- Assessment Protocol: Position Guide for Patients and Families
- Assessment Protocol: Patient and Family Guide to Pressure Ulcer Prevention

Other Resources Available

Title/Description	Audience	Author/Organization	Web Sites/Order Information
Skin Safety Plan - MS Word version of the one-page skin safety plan	Health Care Professionals	ICSI	http://www.ICSI.org
Outpatient and Inpatient Risk Assessment Plan - MS Word version of the one-page Risk Assessment Plan	Health Care Professionals	ICSI	http://www.ICSI.org