

ASSESSMENT AND PREVENTION OF PRESSURE ULCERS

- 1. REASON FOR ISSUE:** This Veterans Health Administration (VHA) Handbook provides comprehensive guidance for the assessment and prevention of healthcare associated pressure ulcers. This has relevance to all areas of clinical practice (inclusive of Inpatient, Long Term Care Patients, and Outpatient).
- 2. MAJOR CHANGES:** This is a new Handbook establishing procedures for assessment and prevention of pressure ulcers in VHA.
- 3. RELATED ISSUES:** VHA Directive 1180 (to be published).
- 4. RESPONSIBLE OFFICE:** The Office of Nursing Services (108) in collaboration with Patient Care Services (11) is responsible for the contents of this VHA Handbook. Questions may be referred to 202-273-9237.
- 5. RESCISSIONS:** None.
- 6. RECERTIFICATION:** This VHA Handbook is scheduled for recertification on or before the last working day of June 2011.

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DISTRIBUTION: CO: E-mailed 6/30/06
FLD: VISN, MA, DO, OC, OCRO, and 200 – E-mailed 6/30/06

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ASSESSMENT AND PREVENTION OF PRESSURE ULCER

1. PURPOSE

This Veterans Health Administration (VHA) Handbook provides mandated procedures for assessment and prevention of pressure ulcers in all clinical settings, including assessment of patients at the time of admission to a VHA health care facility, upon inter or intra-facility transfer, discharge, and other times as appropriate. **NOTE:** *Outpatients who present with pressure ulcers, a history of pressure ulcers, or who are identified as potentially high risk need to be referred to the Interdisciplinary Team for comprehensive assessment.*

2. BACKGROUND

a. A pressure ulcer is defined as any lesion caused by unrelieved pressure that results in damage to underlying tissue(s). Pressure ulcers usually occur over bony prominences and are staged to classify the degree of tissue damage observed. Each pressure ulcer is to be staged in accordance with the National Pressure Ulcer Advisory Panel's guidelines (see App. B). Other terms referring to the same phenomena are: pressure sores, bedsores, deep tissue injury under intact skin, and decubitus ulcers.

b. In hospitalized patients, the pressure ulcer incidence (new cases appearing during a specified time period) and prevalence (account of the number of all cases, both old and new, at a specific point in time) of pressure ulcers in acute care hospitals were as high as 30 percent. Some subpopulations may be at higher risk, including patients with spinal cord injury, patients of long-term care facilities, and critical care patients. In the United States, the cost of treating each newly developed pressure ulcer, based on 1994 Medicare data, has been estimated to be over \$50,000 per patient. The estimate for treatment of pressure ulcers is estimated to cost \$1.3 to \$3.6 billion annually in all hospitalized patients.

c. Pressure ulcers are a common cause of morbidity in hospitalized, institutionalized, or mobility compromised patients, and can be an indicator of quality of care only if the pressure ulcers are avoidable. Both hospital cost and length of stay are significantly higher for patients with pressure ulcers. Patients may also suffer physical pain from pressure ulcers, emotional pain from altered body image, and infectious complications such as cellulitis, sepsis, and osteomyelitis.

d. Pressure ulcers, like all chronic wounds, are symptomatic of underlying disease processes. Sometimes the underlying disease burden can be managed and pressure ulcers can be avoided or healed. In other instances the disease burden is so great that pressure ulcers will occur or cannot heal despite the best of care. Mortality has been reported to be increased in patients with pressure ulcers but the increased risk of death is largely related to the frailty and high disease burden rather than being a direct result of the pressure ulcer itself.

e. Although considerable research has been devoted to assessment and prevention, many health facilities have not implemented a comprehensive skin care program that provides clinicians and managers with the appropriate resources, tools, and standards to deliver optimum

patient care. Inconsistent levels of care subject patients to risk for compromised skin integrity and avoidable pressure ulcer development. Adhering to consistent and acceptable skin care practices will promote improved quality of care and better management of resources. The benefits include improving patient outcomes by promoting skin care practices that are consistent with evidence-based standards and the Agency for Health Care Research and Quality (AHRQ), formerly the Agency for Health Care Policy and Research (AHCPR), currently known as the guideline, as well as, evidence-based standards of the AHRQ and the clinical guidelines of the Wound Ostomy and Continence Nurses Society.

d. Different strategies have been used for prevention of pressure ulcer. These preventive practices include regular skin inspection and assessment, use of appropriate pressure-relief surfaces, improved mobility, adequate nutritional intake, and documentation of skin examination. Turning and repositioning patients are practices with high face validity, but there are no controlled trials that examine this effort in the absence of other interventions.

3. DEFINITIONS

a. **Cleansing.** Cleansing is the use of an appropriate device and solution to clean the surface of the wound bed and to remove loose foreign debris or contaminants in order to decrease microbial growth.

b. **Colonized.** Colonized is the presence of bacteria on the skin or on the surface of the tissue of a wound without the signs and symptoms of an infection.

c. **Debridement.** Debridement is the removal of devitalized/necrotic tissue and foreign matter from a wound to improve or facilitate the healing process. Debridement methods include:

(1) **Autolytic Debridement.** Autolytic debridement is the use of moisture retentive dressings to cover a wound and allow devitalized tissue to self-digest by the action of enzymes present in the wound fluids. Note: this technique should not be used if wound is infected.

(2) **Biological Debridement (Maggot).** Biological debridement is a type of sterile intentional biological larval or biosurgical debridement that uses disinfected (sterile) maggots to clean wounds by dissolving the dead and infected tissue and by killing bacteria.

(3) **Enzymatic (chemical) Debridement.** Enzymatic debridement is the topical application of substances e.g., enzymes to break down devitalized tissue.

(4) **Mechanical Debridement.** Mechanical debridement is the removal of foreign material and devitalized or contaminated tissue from a wound by physical means such as:

(a) **Sharp or Surgical Debridement.** Sharp or surgical debridement is the removal of foreign material or devitalized tissue by a surgical instrument.

(b) **Irrigation.** Irrigation is a type of mechanical debridement, which uses an appropriate solution delivered under pressure to the wound bed to vigorously attempt to remove debris from the wound bed (not to exceed 8-15 pounds per square inch (psi)).

(c) **Wet to Dry.** Wet to dry is a type of mechanical debridement which removes tissue adhering to the dressing. It is non-selective in that both healthy granulation and devitalized tissue may be removed. Wet to dry dressings should not be considered as a type of continuously moist saline dressings.

d. **Exudate.** Exudate is any fluid that has been forced out of the tissues or its capillaries because of inflammation or injury. It may contain serum, cellular debris, bacteria and leukocytes.

(1) **Purulent Exudate or Discharge.** Purulent exudate or discharge refers to any product of inflammation that contains pus (e.g., leukocytes, bacteria, and liquefied necrotic debris).

(2) **Serous Drainage or Exudates.** Serous drainage or exudates is watery, clear, or slightly yellow, tan, or pink fluid that has separated from the blood and presents as drainage.

(3) **Serosanguinous.** Serosanguinous refers to containing or consisting of both blood and serous fluid.

e. **Eschar.** Eschar is described as thick, leathery, frequently black or brown in color, necrotic (dead) or devitalized tissue that has lost its usual physical properties and biological activity. Eschar may be loose or firmly adhered to the wound.

f. **Evidence-based Guidelines.** Evidence-based guidelines are clinical practice guidelines that have been developed using research findings that have been graded for scientific strength.

g. **Friction.** Friction is the mechanical force exerted on skin that is dragged across any surface.

h. **Granulation Tissue.** Granulation tissue is pink-red moist tissue that fills an open wound, when it starts to heal. It contains new blood vessels, collagen, fibroblasts, and inflammatory cells. It is mostly seen in healing full thickness wounds (stage III and IV).

i. **Infected Wound.** An infected wound indicates the presence of micro-organisms in sufficient quantity to overwhelm the defenses of viable tissues and produce the signs and symptoms of infection (e.g., induration, fever, edema, erythema, odor, increased drainage).

j. **Interdisciplinary Team.** The Interdisciplinary Team must be comprised at least the following: Nursing (preferred Registered Nurse, Licensed Practical Nurse, and/or Nursing Assistant), Primary Provider (Physician, Physician Assistant, Advanced Practice Nurses), Dietitian, Clinical Pharmacist Specialist, Rehabilitation Staff (e.g., Occupational Therapist, Physical Therapist), and a Wound Care Specialist.

k. **Parenteral Nutrition.** Parenteral Nutrition are sterile solutions, containing some or all of the nutrients necessary to support life, are administered intravenously, using either a central or peripheral line. This nutritional component may be either temporarily or for long term treatment.

l. **Patients.** The term "patients" is inclusive of inpatients, long-term care residents, and outpatients unless otherwise specified.

m. **Pressure Ulcer.** A pressure ulcer is any lesion caused by unrelieved pressure those results in damage to the underlying tissue(s). Although friction and shear are not primary causes of pressure ulcers, friction and shear are important contributing factors to the development of pressure ulcers.

(1) **Potentially Avoidable Pressure Ulcer.** An avoidable pressure ulcer means that the patient developed a pressure ulcer and that the facility did not do one or more of the following: evaluate the patient's clinical condition and pressure ulcer risk factors; define and implement interventions that are consistent with patient needs, patient goals, and recognized standards of practice; monitor and evaluate the impact of the interventions; or revise the interventions as appropriate.

(2) **Unavoidable Pressure Ulcer.** An unavoidable pressure ulcer is when the staff had evaluated the patient's clinical condition and pressure ulcer risk factors; defined and implemented interventions that are consistent with patient needs and recognized standards of practice; monitored and evaluated the impact of the interventions; and revised the approaches as appropriate, and a pressure ulcer appears. *NOTE: Pressure ulcers may also develop due to patient poor judgment and/or lack of compliance with appropriate preventive measures.*

n. **Shearing.** Shearing is the interaction of both gravity and friction against the surface of the skin. Friction is always present when shear force is present. Shear occurs when layers of skin rub against each other or when the skin remains stationary and the underlying tissue moves and stretches and angulates or tears the underlying capillaries and blood vessels causing tissue damage.

o. **Slough.** Slough is a necrotic and/or avascular tissue in the process of separating from the viable portions of the body and is usually light (yellow) colored, soft, moist, and stringy (at times).

p. **Tunnel and/or Sinus Tract and/or Undermining.** *NOTE: The tunnel and sinus tract are often used interchangeably.*

(1) **Tunneling.** Tunneling is a passageway of tissue destruction under the skin surface that has an opening at the skin level from the edge of the wound.

(2) **Sinus tract.** The sinus tract is a cavity or channel underlying a wound that involves an area larger than the visible surface of the wound.

(3) **Undermining.** Undermining is the destruction of tissue or ulceration extending under the skin edges (margins) so that the pressure ulcer is larger at its base than at the skin surface. Undermining often develops from shearing forces and is differentiated from tunneling by the larger extent of the wound edge involved in undermining and the absence of a channel or tract extending from the pressure ulcer under the adjacent intact skin.

q. **Wound Care Specialist.** The term "Wound Care Specialist" is inclusive of credentialed Wound Ostomy Continence Nurse and/or Advanced Practice Nurse, Clinical Pharmacist Specialist, Rehabilitation Staff, and/or any Clinician with specialized training in wound care.

4. SCOPE

a. This Handbook identifies basic requirements for interdisciplinary approaches to assessment, reassessment, prevention and documentation of pressure ulcer. It has relevance in all areas of clinical practice, inclusive though not limited to acute care, long-term care, mental health, rehabilitation, and spinal cord injury. Pressure ulcer assessment, prevention, and monitoring are an interdisciplinary responsibility. Collaborative assessment and treatment planning with the patient, the patient's family, the patient's surrogate, or the authorized decision maker is essential and should accommodate patients and/or family wishes and facility resources.

b. This handbook is designed to:

(1) Assist the interdisciplinary team in identifying those patients at risk of developing pressure ulcers and the specific factors placing patients at risk.

(2) Assist the interdisciplinary team to identify intrinsic (e.g., age, mobility, skin sensation, cognition, and nutritional status) and extrinsic factors (e.g., pressure, friction, moisture, and shear forces) that may place veterans at risk of developing pressure ulcers.

(3) Outline a standardized approach for assessment and prevention of pressure ulcers.

(4) Outline evidence-based strategies for assessment and prevention of pressure ulcers in all clinical practice settings.

(5) Implement the Braden Scale in all clinical practice settings for initial and ongoing assessment, and risk factors (see App. A).

(6) Outline a standardized minimum documentation requirement for assessing and preventing pressure ulcers.

5. RESPONSIBILITIES OF THE MEDICAL CENTER DIRECTOR

The Medical Center Director is responsible for ensuring that:

a. A patient at risk for, and/or with, a pressure ulcer receives professionally managed and individualized care by qualified staff of the interdisciplinary team, with ongoing assessment and intervention to maintain or restore skin integrity, prevent skin breakdown, and promote healing.

b. A patient with pressure ulcers receives the treatment and services to promote healing, prevent infection, and prevent new pressure ulcers from developing.

c. A system and/or procedure is in place to ensure:

- (1) Assessments are timely and appropriate;
- (2) Interventions are implemented, monitored, and revised as appropriate; and
- (3) Changes in condition are recognized, evaluated, reported to the practitioner, and are addressed.
- (4) The Interdisciplinary Team is educated on the elements of skin assessment, pressure ulcer risk factors, and documentation of skin care programs, including outcomes.
- (5) Monitoring of clinical outcomes for ongoing performance improvement activities, with regards to pressure ulcer.

6. RESPONSIBILITY OF THE INTERDISCIPLINARY CLINICAL TEAM

The Interdisciplinary Clinical Team is responsible for:

- a. Implementing education to staff, patient and/or caregiver, and/or significant other to promote best practices.
- b. Assessing the patient. Assessment must be performed by a qualified member of the interdisciplinary team. It is recommended that the licensed members of the interdisciplinary team be given privileges or scope of practice to order prevention strategies consistent with their education and training.
- c. Performing a skin risk assessment on all patients at the time of admission to a VA health care facility: upon inter or intra-facility transfer; discharge; and other times as appropriate, utilizing the Braden Scale. Outpatients who present with pressure ulcers, a history of pressure ulcers, or who are identified as potentially high-risk need to be referred to the Interdisciplinary Team for comprehensive assessment.
- d. Documenting the results of the skin risk assessment and/or inspection will be on an interdisciplinary assessment form and retaining it thereafter in the Computerized Patient Record System (CPRS).
- e. Formulating a plan of care based upon skin risk assessment and inspection.
 - (1) All acute care patients identified as being at high-risk on the Braden Scale must be reassessed every 48 hours and more frequently if risk potential is increased. All long-term care patients must be reassessed weekly for the first 4 weeks of admission and thereafter monthly.
 - (2) Nutritional status must be assessed and nutritional support must be provided, as necessary to maintain skin integrity.
 - (3) The potential for skin injury due to friction and shear forces must be minimized through proper positioning, transferring, and turning techniques. Friction injuries may also be reduced by

the use of lifting devices (e.g., trapeze, lifting sheet), lubricants, protective film dressings, and other protective dressings.

(4) Wound Care Specialist (prefer Wound Ostomy Continence Nurse, though not required and/or any clinician with specialized training in wound care) consultation must be obtained on all patients assessed with pressure ulcers. The wound care specialist may include one of the following: Advanced Practice Nurse, Clinical Pharmacist Specialist, Rehabilitation Staff, or any Clinician with specialized training in wound care.

f. Recording all treatment on the continuing treatment record and/or progress note, as appropriate.

g. Completing, upon transfer and at discharge, an evaluation summary of each patient's progress concerning wound care and outcome.

h. Documenting the process to support tracking patient outcome measures.

7. RISK ASSESSMENT

Pressure ulcers most commonly occur on the lower body, primarily the sacral region and heels. Pressure ulcer risk assessment is an integral part of preventing pressure ulcers. Factors that have been determined to place patients at an increased risk of pressure ulcers are sometimes grouped into intrinsic and extrinsic factors.

a. Intrinsic factors may include: advanced age, immobility, impaired cognition, loss of sensation (e.g. diabetes or spinal cord injury), poor nutritional status and incontinence.

b. Extrinsic factors include: pressure, friction, adaptive equipment (e.g., casts, splints, wheelchair), and shear forces.

c. For patients with an activity or mobility deficit, pressure ulcer assessment and prevention begin upon admission (see App. B).

(1) Initial assessment of the patient includes a review of any records available, interdisciplinary history and physical evaluations, and information from the patient and family members.

(2) Initially, the Wound Care Specialist, or other member of the Interdisciplinary team, needs to determine the location, stage, and size of any known or newly identified pressure ulcer.

d. Risk assessment is repeated on a regularly scheduled basis or when there is a significant change in the individual's condition.

8. RISK FACTORS

a. Evidence suggests that risk factors include immobility and the associated friction and shearing, incontinence, cognitive impairment, and poor nutritional status.

b. An admission evaluation distinguishes the patient at risk of developing a pressure ulcer, and identifies the patient with existing pressure ulcer(s) or areas of skin that are at risk for breakdown. *NOTE: Because a patient at risk can develop a pressure ulcer within 2 to 6 hours of the onset of pressure, the at-risk patient needs to be identified and have interventions implemented promptly in an attempt to prevent pressure ulcers.*

c. The admission evaluation helps define those initial care approaches, and may identify pre-existing signs (such as a purple or very dark area that is surrounded by profound redness, edema, or induration) suggesting that deep tissue damage has already occurred and additional deep tissue loss may occur.

9. COMPREHENSIVE ASSESSMENT

A complete assessment is essential to an effective pressure ulcer prevention and treatment program. A comprehensive individual evaluation helps the facility to identify the patient at risk of developing pressure ulcers, the level and nature of risk(s); and identify the presence of pressure ulcers. The comprehensive assessment, evaluates the patient's intrinsic risks, the patient's skin condition, other factors (including causal factors) which place the patient at risk for developing pressure ulcers and/or experiencing delayed healing, and identifies the nature of the pressure to which the patient may be subjected.

a. The assessment needs to identify which risk factors can be removed or modified. This comprehensive assessment should also address those factors that have been identified as having an impact on the development, treatment and/or healing of pressure ulcers, including, at a minimum: risk factors, pressure points, nutrition and hydration deficits, exposure to moisture and the impact of moisture on skin.

b. Pressure ulcers are to be assessed in the context of the patient's overall physical and psychological health. Pressure ulcers must be assessed and documented routinely, but deterioration either in the patient's overall condition or in the pressure ulcer itself mandates more immediate reassessment as well as a reevaluation of the treatment plan.

10. BRADEN SCALE

The Braden Scale is a clinically reliable and valid instrument utilized by healthcare personnel to score or predict an individual's level of risk for developing pressure ulcers. The Braden Scale assesses six domains: activity, dietary intake, friction, mobility, sensory perception, and skin moisture (see App. A).

11. PREVENTION

a. The first step in prevention is the identification of the patient at risk of developing pressure ulcers using the Braden Scale risk level (see App. C). This is followed by implementation of appropriate individualized interventions and monitoring for the effectiveness of the interventions. Intensification of these interventions is often required with any change in level of risk as determined on the standardized assessment. Prevention of pressure ulcers is an

interdisciplinary team responsibility. Effective interdisciplinary teams provide systematic risk assessment, implementation of preventive and therapeutic measures, education of patient and/or caregiver and/or significant other, documentation of clinical status, and monitoring of incidence and outcomes.

b. Interdisciplinary team will be comprised at least the following: Nursing (Registered Nurse, Licensed Practical Nurse, and Nursing Assistant), Primary Provider (Physician, Physician Assistant, Advanced Practice Nurses), Dietitian, Clinical Pharmacist Specialist, Rehabilitation Staff (e.g., Occupational Therapist, Physical Therapist), and a Wound Care Specialist.

(1) The Primary Provider needs to be familiar with team function and organization with established protocols. Knowledge of these areas facilitates their role as a team participant, as more effective communicators, and as leaders in therapeutic interventions.

(2) Nursing staff play a major role in coordinating systematic preventive interventions.

(3) Dietitians are valuable resources for nutritional assessments and recommendations for supplements and methods for providing nutrition.

(4) Clinical Pharmacy Specialists can assist with recommendations for ulcer management, product availability, and parenteral nutrition formulation.

(5) Physical and Occupational therapists, as well as, other rehabilitative staff are resources for improving mobility, and devising or recommending protective and pressure-relieving devices.

12. CARE PLANNING

a. In addition to the patient's total risk score, the interdisciplinary team is responsible for the patient's care and will review each risk factor and potential cause(s) individually to:

(1) Identify those factors that increase the potential for the patient to develop pressure ulcers.

(2) Assess nutritional factors to facilitate decreased risk of occurrences, support increased ulcer healing, maintain immune competence, and decrease the risk of infection. **NOTE:** *For any patient identified as being at high risk for pressure ulcers see Appendix D, Best Practices for Nutrition. Assess need for any support surfaces or devices by matching a device's potential therapeutic benefit with the patient's specific situation.*

(3) Decide whether and to what extent the risk factor(s) can be modified, stabilized, removed, etc.

(4) Determine specific provider and interdisciplinary orders for ongoing prevention as well as specific consultations required for each patient.

(5) Identify educational needs specific to each patient's needs.

(6) Document each patient's progress with predetermined goals.

b. Home-based Primary Care patients identified at risk on the Braden Scale must be reassessed at each consecutive visit.

13. EDUCATION

All patients at risk (scoring 18 or below on the Braden Scale) for developing a pressure ulcer or those identified with a pressure ulcer must receive appropriate education to provide the patient with the knowledge to enable the patient to participate in the recommended prevention and treatment regimens.

a. The interdisciplinary team must ensure that it communicates understanding of pressure ulcer assessment and prevention to the patient, caregiver, and/or significant other by the following actions:

(1) Determining the patient's and/or caregivers and/or significant others ability to understand the instructions and their desire to be taught.

(2) Providing the patient and/or caregiver and/or significant other with education that includes, but is not limited to:

(a) Defining pressure ulcers and the reasons they develop.

(b) Listing and explaining risk factors for pressure ulcers.

(c) Describing and demonstrating how to assess the skin.

(d) Demonstrating proper positions in bed and chair to prevent pressure ulcers.

(e) Listing community or hospital resources that can be used to obtain supplies and follow-up care.

(3) Document patient and/or caregiver and/or significant other's response to instructions on multidisciplinary teaching record.

(4) Include patient and/or significant other in prevention and management of pressure ulcers.

(5) Promoting active participation of skin and ulcer care with caregiver and/or significant other, as appropriate, for self-care education in discharge planning.

(6) Providing education regarding nutrition, hydration, mobility, position changes, and pressure reduction/ relief, as well as preventative skin care and wound management.

b. The Interdisciplinary Team must document education and/or materials discussed and/or demonstrated, including the patient's response to education offered, e.g., understanding, competence in provision of care, and willingness to participate.

14. DOCUMENTATION

A pressure ulcer risk assessment using the Braden Scale must be performed and documented on acute care and long term care inpatients at the time of admission, upon inter or intra facility transfer, discharge, and at other times as appropriate. Outpatients who present with pressure ulcers, a history of pressure ulcers, or who are identified as potentially high-risk for pressure ulcers need to be referred to the Interdisciplinary Team for comprehensive assessment.

b. Acute care inpatients identified as being at risk on the Braden Scale (score less than 18) must be reassessed every 48 hours, and more frequently if the risk potential is increased. All long-term care patients must be reassessed weekly for 4 weeks, and then at least monthly, regardless of Braden score.

c. A risk assessment must be documented in a narrative note, including describing any related preventive and/or management measures taken by the appropriate Interdisciplinary Team members. When possible, use the electronic medical record CPRS-Veterans Health Information Systems and Technology Architecture (VistA) imaging package (or other electronic means of storage), to store electronic wound photographs.

d. The documentation must:

- (1) Be clear;
- (2) Be concise;
- (3) Be regular, i.e., weekly;
- (4) Be expressed in consistent language; and
- (5) Indicate improvement or deterioration of pressure ulcer and treatment.

NOTE: *Determination of stage cannot be made until deepest anatomic layer is visible, i.e., healthy tissue is visible. Documentation elements for pressure ulcer monitoring are outlined in Appendix F.*

e. If a pressure ulcer is identified upon examination, a Wound Care Specialist and/or other member of the Interdisciplinary Team, as defined, must be consulted to validate the etiology, location, stage, and size of the pressure ulcer and must initiate the following documentation:

- (1) Location,
- (2) Stage,

- (3) Size (cm),
- (4) Undermining,
- (5) Tunnel,
- (6) Sinus Tract,
- (7) Necrotic Tissue,
- (8) Drainage,
- (9) Granulation,
- (10) Epithelialization,
- (11) Pain (per 5th vital sign criteria),
- (12) Odor,
- (13) Surrounding Skin,
- (14) Erythema,
- (15) Other discoloration,
- (16) Induration (hardness), and
- (17) Maceration.

f. Pressure ulcer and/or wound care orders must be signed by a Primary Provider (Physician, Physician Assistant, Advanced Practice Nurse) as appropriate. Only trained Wound Care Specialists will provide wound care and must document this treatment on the medical record.

g. An appropriate wound care order contains the following:

- (1) Location of ulcer, e.g., right ischial ulcer, left outer ankle ulcer, sacral ulcer.
- (2) Cleansing method, e.g., scrub gently with damp gauze or irrigate with normal saline.
- (3) Solution (NSS) via 25 milliliter (ml) syringe with 18 gauge angio catheter.
- (4) Application of appropriate topical substances to all wound surfaces.
- (5) Application of skin sealant or other product to protect surrounding tissue as needed, e.g., apply skin barrier wipe to wound edge, or apply alcohol-free skin barrier spray to macerated area

- (6) Dress open wound appropriately.
- (7) As needed, add an adhesive layer.
- (8) Frequency of intervention (treatment, dressing change, irrigation, etc.)

h. A pressure ulcer and/or wound care record must be maintained to indicate that wound care was provided by wound care staff.

15. REFERENCES

a. Research into appropriate practices for the prevention, management and treatment of pressure ulcers, continues to evolve. As such, there are many recognized clinical resources regarding the prevention and management of pressure ulcers (including wound care, and complications such as infections and pain). Some of these resources include:

(1) The Clinical Practice Guidelines from the Agency for Healthcare Research and Quality (AHRQ) <http://www.ahrq.gov> (Guideline No. 15: Treatment of Pressure Ulcers and Guideline No.3: Pressure Ulcers in Adults: Prediction and Prevention)(AHRQ was previously known as the Agency for Health Care Policy and Research (AHCPR)),

(2) The National Pressure Ulcer Advisory Panel (NPUAP) <http://www.npuap.org>.

(3) The American Medical Directors Association (AMDA) <http://www.amda.com> (Clinical Practice Guidelines: Pressure Ulcers, 1996 and Pressure Ulcer Therapy Companion, 1999).

(4) The Quality Improvement Organizations, Medicare Quality Improvement Community Initiatives site at <http://www.medqic.org>.

(5) The Wound, Ostomy, and Continence Nurses Society (WOCN) <http://www.wocn.org>.

(6) The American Geriatrics Society guideline “The Management of Persistent Pain in Older Persons”, <http://www.healthinaging.org>.

b. References to non-Centers for Medicare and Medicaid Services (CMS) sources or sites on the Internet are provided as a service and do not constitute or imply endorsement of these organizations or their programs by CMS or the Department of Health and Human Services. CMS is not responsible for the content of pages found at these sites. URL addresses were current as of the date of this publication.

BRADEN RISK ASSESSMENT SCALE

Patients with Total Score of 18 or less are considered to be at risk of developing pressure ulcer. At Risk= 15 – 18; Moderate Risk= 13 – 14; High Risk= ≤12					DATE OF ASSESSMENT			
RISK FACTOR	SCORE / DESCRIPTION				1	2	3	4
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 surface.	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 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. 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 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 into chair or wheelchair.	3. WALKS OCCASIONALLY -Walks occasionally during day but for very short distance, with or without assistance. Spends majority of each shift in bed or chair.	4. WALKS FREQUENTLY -Walks outside the room at least twice a day and inside room at least once every 2 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 LIMITATIONS -Makes major and frequent changes in position without assistance.				
NUTRITION Usual food intake pattern 1 NPO: Nothing by mouth. 2 IV: Intravenously. 3 TPN: Total parenteral nutrition.	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 ¹ and/or maintained on clear liquids or IV ² 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) each day. Occasionally will refuse a meal, but will usually take a supplement if offered, OR Is on a tube feeding or TPN ³ 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.					
TOTAL SCORE	<i>Total score of 12 or less represents HIGH RISK</i>							
ASSESS.	DATE	EVALUATOR SIGNATURE/TITLE	ASSESS.	DATE	EVALUATOR SIGNATURE/TITLE			
1	/ /		3	/ /				
2	/ /		4	/ /				

NAME-Last, First, Middle

ATTENDING PHYSICIAN

ID NUMBER

Source: Barbara Braden and Nancy Bergstrom

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ASSESSMENT AND DIAGNOSIS

Health care professionals identify high-risk individuals and implement preventive measures before pressure ulcers begin. Once a pressure ulcer has developed, ongoing assessment is essential to determine appropriate therapy.

1. CLASSIFICATION OF PRESSURE ULCERS

Definitions and staging are adapted from the United States (U.S.) Department of Health and Human Services, Agency for Health Care Policy and Research (AHCPR), 1992, currently known as the Agency for Health Care Research and Quality (AHRQ) guidelines and are similar to National Pressure Ulcer Advisory Panel's guidelines:

a. **Stage I.** Non-blanchable erythema of intact skin, or discoloration of skin, warmth, edema, induration, or hardness over bony prominence may also be indicators. The ulcer appears as a defined area of persistent redness in lightly pigmented skin, whereas in darker skin tones, the ulcer may appear with persistent red, blue or purple hues. Alteration of intact skin whose indicators as compared to the adjacent or opposite area on the body may include changes in one or more of the following: skin temperature (warmth or coolness), tissue consistency (firm or boggy feel) and/or sensation (pain, itching).

b. **Stage II.** Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion, blister, or shallow crater.

c. **Stage III.** Full thickness skin loss involving damage to, or necrosis of, subcutaneous tissue that may extend down to, but not through, fascia. The ulcer presents clinically as a deep crater with or without undermining adjacent tissue.

d. **Stage IV.** Full thickness skin loss with extensive destruction, tissue necrosis or damage to muscle, bone, or supporting structures (i.e., tendon, joint capsule). Undermining and sinus tracts also may be associated with Stage IV ulcers.

e. **Unstageable.** When eschar is present, accurate staging of the pressure ulcer is not possible until the eschar has sloughed or the wound has been debrided.

2. RISK FACTORS FOR DEVELOPING PRESSURE ULCERS

a. Alteration in sensation or response to discomfort, to include:

- (1) Degenerative neurological disease,
- (2) Cerebrovascular disease,
- (3) Central nervous systems (CNS) injury,

(4) Depression, and

(5) Drugs that adversely affect alertness.

b. Alteration in mobility, to include:

(1) Neurological disease and/or injury,

(2) Fractures,

(3) Pain, and

(4) Restraints.

c. Significant changes in weight (more or less than (\geq) 5 percent in 30 days or \geq 10 percent in the previous 180 days).

(1) Protein-calorie malnutrition, and

(2) Edema.

d. Incontinence

(1) Bowel, and/or

(2) Bladder.

e. Other risk factors

(1) Advanced age among patients who are chair or bedfast.

(2) Impaired ability to self reposition in chair or bed.

(3) Friction and shearing (i.e., unable to pull self up in bed, patient who has involuntary muscle movements that cause rubbing against sheets).

e. Decreased sensory perception (i.e., loss of feeling in certain part of body, patient who is comatose)

(1) Patient non compliance with plan of care, and/or

(2) Weight, either increased or decreased Body Mass Index (BMI).

3. COMORBID CONDITIONS THAT MAY AFFECT HEALING

a. Malnutrition and dehydration.

- b. Diabetes mellitus.
- c. End-stage renal disease.
- d. Thyroid disease.
- e. Congestive heart failure.
- f. Peripheral vascular disease.
- g. Vasculitis and other collagen vascular disorders.
- h. Immune deficiency states.
- i. Malignancies.
- j. Chronic obstructive pulmonary disease.
- j. Depression and psychosis.
- k. Drugs that affect healing (i.e., steroids, chemo).
- l. Contractures at major joints.
- m. Drugs that affect muscle movement.

4. COMMON SITES FOR PRESSURE ULCER

- a. Sacrum and/or coccyx,
- b. Trochanter,
- c. Ischium,
- d. Malleolus,
- e. Heels, and
- f. Occiput.

INTERVENTION USING BRADEN SCALE

<p>At Risk (Score of 15 - 18)</p>	<p>a. Turn every 2 hours (q2h) Schedule: e.g. alternating positions Right/Back/Left q2h. May place pillow under one hip at a time if patient cannot tolerate full turning.</p> <p>b. Maximal Remobilization: Passive range of motion, physical therapist (PT) consult to plan appropriate measures for patient. Spinal Cord Injury and Disorder (SCI&D) patients (or any patient with custom chairs) are to sit in their own wheelchairs and cushions only.</p> <p>c. Protect Heels: Support entire leg with pillows to allow heels to suspend above the mattress or consult PT for special heel protectors. Assess heels everyday for signs of pressure. Consider alternate bed surface.</p> <p>d. Manage Moisture: Correct cause, (e.g., diarrhea), reduce or eliminate incontinent episodes (e.g., bladder training); Use mild soap, rinse, and dry skin well and apply moisture barrier. For patients with increase perspiration, frequent gown or bed change. Do not apply powder. Change bed support surface as indicated in bed algorithm.</p> <p>e. Manage Nutrition: Increase protein intake more than 100% RDA, if not renal or liver impaired. Dietary consult to determine dietary needs and/or effectiveness of tube feedings.</p> <p>f. Reduce Friction and Shear: Use bed trapeze or pull sheet for lifting and moving patient up in bed. Apply transparent film or hydrocolloid dressing (Duoderm) over friction areas (e.g., elbows) Keep the head of the bed less than 30 degrees as often as possible.</p>
<p>Moderate Risk (Score of 13-14)</p>	<p>a. Modify lateral turning by limiting degree of turn to no more than 30 degrees. May place pillows under one hip at a time if patient cannot tolerate full turning.</p> <p>b. Use foam wedges for support lateral positioning. Wedge should be pulled out slightly q1h. May allow patient to turn in prone position if tolerated with attention to bony prominences.</p>
<p>High Risk (Score of \leq 12)</p>	<p>Turn q2h and as needed (prn).</p> <p>a. Small shifts in body weight during each turn.</p> <p>b. Same interventions as At Risk.</p> <p>c. Low air- loss bed for patients with: Braden Scale Score less than 9; uncontrolled or severe pain during turning.</p>

NOTE: Specialty Beds are not a substitute for turning. Patients must still be turned on a regular schedule even when placed on a specialty bed.

**RECOMMENDED PRACTICES IN PRESSURE ULCER PREVENTION
AND MANAGEMENT NUTRITION**

1. Laboratory Assessment

a. Laboratory requests to order:

- (1) Serum albumin or pre-albumin,
- (2) Cholesterol,
- (3) Total protein,
- (4) Hemoglobin and/or Hematocrit,
- (5) TLC (total leukocyte count), and
- (6) Hemoglobin A1C test for glucose if Diabetic.

b. Repeat levels of these parameters

(1) Varying intervals depending upon the individual patient's by mouth (PO) intake and plan of care (e.g., if PO intake has improved from an average of 25 percent to 75 percent, then a repeat albumin may be appropriate in more than or equal to 21 days from the baseline level).

(2) If there is no improvement in PO intake and/or a repeat albumin level would not change the plan of care, then there is no need to repeat the level.

c. Pre-albumin is a more reliable indicator of changes in nutritional status. May repeat weekly if a decrease in PO intake of less than 75 percent is observed for greater than 3 days or more, and/or the plan of care would be impacted by having a repeat pre-albumin level available.

2. When to Order a Nutrition Consult

a. Any patient identified as being a high risk for pressure ulcers (Braden score <12)

b. Within 24 hours of discovery a new pressure ulcer or with the worsening of a pre-existing ulcer.

c. Ideally, the consult should be completed within 48 hours of the order.

d. When the patient is refusing nutrition supplements and/or patient is consuming less than 75 percent of meals for greater than 3 days or more, the Registered Dietitian (RD) needs to be consulted for assessment, evaluation and appropriate recommendations.

- e. When a wound is not progressing through the normal stages of wound healing.

3. Significant Weight Loss

- a. Weigh patient at a minimum weekly.
- b. Offer high-calorie feedings frequently.
 - (1) Consider making available a variety of snacks for patient to choose from.
 - (2) Consider combining recreational activities with use of supplemental feedings.
 - (3) May include offering high-calorie supplement at medication passes or with meals.
- c. Implement, as needed, calorie count to determine actual intake.

4. Feeding Practices

- a. Encourage patients to eat in a common patient dining area to promote socialization and allow for greater supervision of diet tolerance, food preferences, and assistance needs.
- b. Encourage staff to feed patients if needed.
- c. Encourage multiple health care team members to be present during meal times (i.e., Physician, Physician Assistant, Nurse Practitioner, Dietitian, Speech Pathologist, Nurse Manager).
- d. Therapeutic supplemental nutrition drinks with Arginine and/or Glutamine, as appropriate.

5. To Supplement or Not to Supplement?

- a. The following patients should receive vitamin and/or mineral supplements:
 - (1) All patients who are identified as being at moderate or high risk for pressure ulcers on admission, and
 - (2) All patients who are identified as becoming moderate or high risk during their stay.
- b. **Vitamins and Minerals.** Vitamins and minerals essential for wound healing.
 - (1) Ascorbic Acid (vitamin C)
 - (a) Need for supplementation should be determined on a case-by-case basis.

(b) Potential for toxicity is low due to water solubility of this vitamin and excretion of excess vitamin C by the kidneys.

(c) Contraindication: Iron storage disease, iron overload.

(2) Zinc

(a) Need for zinc supplementation should be individually determined.

(b) No reliable laboratory indicator of zinc status exists.

(c) Best practice is for clinicians to predict who is at risk for zinc deficiency through analysis of intake of zinc-containing foods.

(d) The serum pre-albumin level may be a more objective indicator of a patient's risk for zinc deficiency.

(e) Should only be supplemented for a 2-3 week time period and then discontinued.

(f) Contraindicated in patients with stomach and duodenal ulcers.

(g) Signs and symptoms of zinc toxicity include nausea and vomiting.

(3) Vitamin A (particularly for those patients who are prescribed steroids). The need to prescribe Vitamin A supplements should be individually determined.

(a) Availability of a topical,

(b) If systemic use may counteract use of systemic steroid therapy, and

(c) Possibility of toxicity.

c. **Water.** Water, the often forgotten nutrient.

(1) A fluid intake of 30-35 milliliter (ml) per kilogram (kg) per day is usually adequate.

(2) Patients using air-fluidized beds may need an additional 10-15 ml per kg of body weight per day.

(3) If fluid restriction is medically necessary, then a minimum of 1500 ml daily is suggested.

(4) If fluid intake is inadequate, intravenous fluid intervention may need to be considered.

d. Nutrition Support

(1) If PO intake is inadequate, aggressive nutrition support may need to be considered. Initiate a consult to Nutrition and Food Service for recommendations for tube feeding or parenteral nutrition. Appropriateness is determined individually.

(2) If the patient is diabetic, it is important to maintain proper diabetic control, as this is vital to the healing process.

VA FORM 10-0440, WEEKLY PRESSURE ULCER REPORT

Below is an embedded copy of Department of Veterans Affairs (VA) Form 10-0440, Weekly Pressure Ulcer Report. The fillable version of VA Form 10-0440 can be found on the Veterans Health Administration (VHA) Forms intranet website at: <http://vaww.va.gov/vaforms>.

You should use the latest version of Adobe Acrobat Reader to view this form.



VA Form
10-0440-fill.pdf



PATIENT NAME (Last Name- First Name- Middle Initial)					ROOM				
<input type="text"/>					<input type="text"/>				

DATE	<input type="text"/>	DATE	<input type="text"/>	DATE	<input type="text"/>	DATE	<input type="text"/>	DATE	<input type="text"/>
LOCATION	<input type="text"/>								
STAGE*	<input type="text"/>	ST*	<input type="text"/>						

SIZE									
LENGTH	<input type="text"/>	L	<input type="text"/>						
WIDTH	<input type="text"/>	W	<input type="text"/>						
DEPTH	<input type="text"/>	D	<input type="text"/>						

UNDERMINING									
AT 12 o'clock	<input type="text"/>	12	<input type="text"/>						
AT 3 o'clock	<input type="text"/>	3	<input type="text"/>						
AT 6 o'clock	<input type="text"/>	6	<input type="text"/>						
AT 9 o'clock	<input type="text"/>	9	<input type="text"/>						

TUNNEL										
AT	<input type="text"/>	O'CLOCK	AT	<input type="text"/>						
EXTENDS	<input type="text"/>	CM								
SINUS TRACT	<input type="checkbox"/> Y	<input type="checkbox"/> N								
NECROTIC TISSUE	<input type="checkbox"/> Y	<input type="checkbox"/> N								
SOFT YELLOW (SLOUGH)	<input type="checkbox"/> Y	<input type="checkbox"/> N								
HARD DRY (ESCHAR)	<input type="checkbox"/> Y	<input type="checkbox"/> N								

DRAINAGE										
SEROUS	<input type="checkbox"/> Y	<input type="checkbox"/> N								
SANGUINOUS	<input type="checkbox"/> Y	<input type="checkbox"/> N								
CREAMY	<input type="checkbox"/> Y	<input type="checkbox"/> N								
GRANULATION	<input type="checkbox"/> Y	<input type="checkbox"/> N								
EPITHELIALIZATION	<input type="checkbox"/> Y	<input type="checkbox"/> N								
PAIN	<input type="checkbox"/> Y	<input type="checkbox"/> N								
ODOR	<input type="checkbox"/> Y	<input type="checkbox"/> N								

SURROUNDING SKIN										
ERYTHEMA	<input type="checkbox"/> Y	<input type="checkbox"/> N								
OTHER DISCOLORATION	<input type="checkbox"/> Y	<input type="checkbox"/> N								
INDURATION (HARDNESS)	<input type="checkbox"/> Y	<input type="checkbox"/> N								
MACERATION	<input type="checkbox"/> Y	<input type="checkbox"/> N								

* SEE NOTE ON PAGE 2

WEEKLY PRESSURE ULCER REPORT

**Note: The following caveats are of importance in using this form.*

a) The AHRQ scheme speaks to the deepest anatomic injury and back-staging is not permitted. Thus a “stage IV” pressure ulcer, when exposed muscle or bone is covered by granulation tissue, becomes a “healing stage IV” pressure ulcer, not a “stage III” pressure ulcer. This is because bone, periosteum, tendon, and muscle do not regenerate. Stage III and IV pressure ulcers heal by scarring. For purposes of a checklist such as the AHCPR Assessment, the check mark must remain at the anatomically deepest stage and not be back-staged. If, after complete epithelialization, the ulcer should re-open, it should be considered a “re-opened Stage IV pressure ulcer” because it lies over scar.

b) Another important factor to document is wound odor. Odor will be evaluated and documented only after the wound is cleaned. Pain associated with the presence of the pressure ulcer will be explored and treated.