Resource Guide: Pressure Ulcer Prevention and Treatment
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PURPOSE

This guide is intended to assist Quality Improvement Organizations and nursing homes in reducing the rate of high risk pressure ulcers by providing helpful resources.

This guide is not meant to be an exhaustive list of resources. With the discontinuation of MedQIC, there is not currently a central location for QIO materials to be posted on the internet. The NCC searched for existing resources from the QIO community. Some of those resources are listed here.
INTRODUCTION

A pressure ulcer is localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction (NPUAP). In addition to being costly (CMS estimates the cost of treating just one Stage III or IV pressure ulcer is $43,180\(^1\)), pressure ulcers are serious medical conditions and one of the important measures of the quality of clinical care in nursing homes. Pressure ulcers can be dangerous and painful for a resident, in part because broken skin can allow infection into the body. If untreated, pressure ulcers can deepen and even expose the bone. Deeper ulcers may be hard to heal or may not heal at all. Sometimes, pressure ulcers can lead to death. The presence of pressure ulcers limits the quality of life for a resident as evidenced by:

- Decrease in bowel and bladder function
- More incontinence
- Decrease in ability to move without help
- Decrease in mental capacity
- Increase in pain
- Increased risk for infection
- Less participation in activities (Fact Sheet)

Data from the 2004 National Nursing Home Survey revealed that 2% to 28% of nursing home residents have pressure ulcers. Other key findings from the 2004 National Nursing Home Survey\(^2\):

- About 59,000 current U.S. nursing home residents (11%) had pressure ulcers. Stage 2 pressure ulcers were the most common.
- Residents aged 64 years and under were more likely than older residents to have pressure ulcers.
- Residents of nursing homes for a year or less were more likely to have pressure ulcers than those with longer stays.

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\(^1\) Federal Register: Department of Health and Human Services Centers for Medicare and Medicaid Services Part II, p. 48473 Tuesday, August 19, 2008.

• One in five nursing home residents with a recent weight loss had pressure ulcers.
• Thirty-five percent of nursing home residents with stage 2 or higher (more severe) pressure ulcers received special wound care services.

Clinical practice, expert opinions, and published literature indicate that most, but not all, pressure ulcers can be prevented. In 2010, the National Pressure Ulcer Advisory Panel (NPUAP) organized a consensus congress to study the issue of avoidable and unavoidable pressure ulcers. The results confirmed that pressure ulcers are unavoidable in certain situations where pressure cannot be relieved and perfusion cannot be improved3.

This guide provides resources to help nursing homes prevent avoidable pressure ulcers, identify and document pressure ulcers, and use evidence-based guidelines to care for and/or heal pressure ulcers.

For regulatory guidance on F309, Quality of Care, and F 314, Pressure Sores, refer to The CMS Manual System Guidance to Surveyors for Long Term Care Facilities, Appendix PP.

3 http://npuap.org/OWM2011_Black_0.pdf
**DEFINITIONS**

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

**Suspected Deep Tissue Injury** - Purple or maroon area of discolored intact skin due to damage of underlying soft tissue damage. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

**Stage 1 Pressure Ulcer** - An observable, pressure-related alteration of intact skin, whose indicators as compared to an adjacent or opposite area on the body may include changes in one or more of the following perimeters: skin temperature (warmth or coolness); tissue consistency (firm or boggy); sensation (pain, itching) and/or a defined area of persistent redness in lightly pigmented skin, where as is darker skin tones, the ulcer may appear with persistent red, blue, or purple hues.

**Stage 2 Pressure Ulcer** - Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled blister.

**Stage 3 Pressure Ulcer** - Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle is not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling.

**Stage 4 Pressure Ulcer** - Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often include undermining and tunneling.

**Unstageable Pressure Ulcer** - Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed. Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, and therefore stage, cannot be determined. Stable (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as “the body’s natural (biological) cover” and should not be removed. (NPUAP 2007)

**Healed Pressure Ulcer** - Completely closed, fully epithelialized, covered completely with epithelial tissue, or resurfaced with new skin, even if the area continues to have some surface discoloration.

**Eschar** - Dead or devitalized tissue that is hard or soft in texture; usually black, brown, or tan in color, and may appear scab-like. Necrotic tissue and eschar are usually firmly adherent to the base of the wound and often the sides/edges of the wound.

**Exudate** - Any fluid that has been force out of the tissues or its capillaries because of inflammation or injury.
Non-Blancheable- Reddened areas of tissue that do not turn white or pale when pressed firmly with a finger of device.

Shear- is the result of gravity pushing down on a patient's body and the resistance between the patient and the chair or bed.

Friction- the force of rubbing two surfaces against one

Dermis- the connective tissue underlying the skin's surface (epidermis)

Epidermis- outer layer of the skin

Slough Tissue- Non-viable yellow, tan, grey, green, or brown or tissue; usually moist, can be soft, stringy and mucinous in texture. Slough may be adherent to the base of the wound or present in clumps throughout the wound bed.

Maceration- Refers to skin changes seen when moisture is trapped against the skin for a prolonged period. The skin may soften, wrinkle, and turn white.

Excoriation- an abrasion produced by mechanical means (often scratching), usually involving only the epidermis

Undermining- 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

Tunneling- A passage way of tissue destruction under the skin surface that has an opening at the skin level from the edge of the wound

Sinus Tract- a cavity or channel underlying a wound that involves an area larger than the visible surface of the wound

Osteomyelitis- an infection of the bone

Granulation Tissue- Red tissue with “cobblestone” or bumpy appearance bleeds easily when injured.

Epithelial Tissue- New skin that is light pink and shiny (even in people with darkly pigmented skin). In Stage 2 pressure ulcers, epithelial tissue is seen in the center and edges of the ulcer. In full thickness Stage 3 and 4 pressure ulcers, epithelial tissue advances from the edges of the wound
PRESSURE ULCER PREVENTION STRATEGIES

The prevention of pressure ulcers requires strategies that include educational programs directed at all levels of health care providers, residents, and families. Resource for educational program:

- “Meet Me at the Skin Care Fair” presentation (Louisiana Health Care Review, Inc.)

Pressure ulcer prevention strategies should also include assessing the resident:

1. Risk for developing pressure ulcer
2. Skin condition
3. Nutritional status
4. Mechanical loading and support surfaces

Pressure ulcer prevention strategies resources and tools:

- Pressure Ulcer Prevention Points: Fact Sheet (NPUAP)
- Interventions Table: Pressure Ulcers (Advancing Excellence in America’s Nursing Homes Campaign)
- Fact sheet for consumers (Advancing Excellence in America’s Nursing Homes Campaign)
- Fact sheet for nursing home staff members (Advancing Excellence in America’s Nursing Homes Campaign)
- Reducing Pressure Ulcers in Nursing Homes: An Interdisciplinary Process Framework PowerPoint Presentation (Advancing Excellence in America’s Nursing Homes Campaign)
- Prevention and Treatment program Integrates Actionable Reports into Practice, significantly Reducing Pressure Ulcers in Nursing Home Residents-on-Time Prevention of Pressure Ulcers: Partnering with Quality Improvement Organizations Final Report (AHRQ)
- Nursing Standard of Practice Protocol: Pressure Ulcer Prevention (Hartford Institute for Geriatric Nursing)
- AHCPR Clinical Practice Guideline (AHCPR Supported Guide and Guidelines - NCBI Bookshelf)
- Braden Scale for Predicting Pressure Sore Risk (AHRQ)
- The Norton Scale
- Pressure Ulcer Prevention Quick Reference Guide (Developed by European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel)
- The Role of Nutrition in Pressure Ulcer Prevention and Treatment (NPUAP)
- Save our Skin: A Systems Approach to Quality Improvement in Healthcare: Toolkit for Pressure Ulcer Prevention and Treatment (Kansas Foundation for Medical Care)
- Save Oklahoma's Skin Toolkit (Oklahoma Foundation for Medical Quality)
- “Skin Care Fair” (eQ-Health Solutions) Louisiana Nursing Home Quality Improvement Resources
- Pressure Ulcer Quality Resource Kit (Stratis Health)
IDENTIFICATION AND TRACKING OF PRESSURE ULCERS

In February 2007, The National Pressure Ulcer Advisory Pane (NPUAP) redefined the definition of a pressure ulcer and the stages of pressure ulcers, including the original 4 stages (Stages 1 – 4) and adding 2 stages on deep tissue injury and unstageable pressure ulcers. The staging system provides a name to extent of tissue damage. Only those wounds that are caused by pressure should be staged.

Resources and tools for identifying and tracking pressure ulcers:

- Pressure ulcer staging definitions (NPUAP): National Pressure Ulcer Advisory Panel (NPUAP)
- Photos:
  - Stage 1 (NPUAP)
  - Stage 2 (NPUAP)
  - Stage 3 (NPUAP)
  - Stage 4 (NPUAP)
  - Unstageable (NPUAP)
  - Suspected Deep Tissue Injury (NPUAP)
- Quick Assessment of Leg Ulcers (WOCN)
- Pressure Ulcer Admitted vs. Acquired Tracking Tool (Advancing Excellence in America’s Nursing Home Campaign)
ASSESSMENT AND DOCUMENTATION OF PRESSURE ULCERS

With each dressing change or at least weekly (and more often when indicated by wound complications or changes in wound characteristics), an evaluation of the pressure ulcer wound should be documented. At a minimum, documentation should include the date observed and:

- Location and staging;
- Size (perpendicular measurements of the greatest extent of length and width of the ulceration), depth; and the presence, location and extent of any undermining or tunneling/sinus tract;
- Exudate, if present: type (such as purulent/serous), color, odor and approximate amount;
- Pain, if present: nature and frequency (e.g., whether episodic or continuous);
- Wound bed: Color and type of tissue/character including evidence of healing (e.g., granulation tissue), or necrosis (slough or eschar); and
- Description of wound edges and surrounding tissue (e.g., rolled edges, redness, hardness/induration, maceration) as appropriate. The CMS Manual System Guidance to Surveyors for Long Term Care Facilities, Appendix PP; F314

The RAI User’s Manual should be used to assist in the coding of skin conditions on Section M of the MDS. It is important to note some key changes in coding section M from MDS 2.0 and MDS 3.0. On MDS 3.0:

- Nursing homes not only have to indicate the number of pressure ulcers at each stage, but they have to record the number of arterial and venous ulcers as well as the most severe tissue type for any pressure ulcer.
- Facilities must also record how many stage 2–4 pressure ulcers were present on admission. There are very specific rules for how to record the stages of pressure ulcers that were present on admission. These rules can be found on page M-6 of the RAI User’s Manual.
- Report based on the highest stage of the existing ulcer at its worst, rather than use the reverse staging method of the MDS 2.0.
- It is required that facilities record the length, width, and depth of the largest stage 3 or 4 pressure ulcer a resident has.
- Facilities are required to record the number of stage 2, 3, and 4 pressure ulcers that were not present or were at a lesser stage on a prior assessment.
Resources for documentation of pressure ulcers:

- Pressure Ulcer Documentation Guidelines (NPUAP)
- Wound Documentation Tips (Wound Care Education Institute)
- Quick Assessment of Leg Ulcers (WOCN)
- The PUSH Tool (NPUAP)
- CMS YouTube Video: Section M; Skin Conditions
- MDS RAI Users Manual
- CMS RAI MDS 3.0 Manual Appendix C: Care Area Assessments Resources #16-Pressure Ulcers
PRESSURE ULCER TREATMENT STRATEGIES

It is important that treatment for residents with existing pressure ulcers is evidence-based. Guidelines that are research-based should be used when developing nursing home protocols.

Resources:

- Quick Reference Guide for Treatment (NPUAP)
- The Role of Nutrition in Pressure Ulcer Prevention and Treatment: National Pressure Ulcer Advisory Panel White Paper (NPUAP)
- Management of Wound Infection (European Wound Management Association)
- Pain at Wound Dressing Changes (European Wound Management Association)
- Pain Palliation of Older Adults Presentation (John A. Hartford Foundation Institute for Geriatric Nursing)
- Geriatric Pain Assessment (Center for Nursing Excellence in Long-Term Care)
INDIVIDUALIZED CARE

Data analysis has shown that there is a relationship between person-directed care and quality of care outcomes. The Pioneer Network found that from 2007 to 2009, the culture change adopter homes had a lower percentage of high risk residents with pressure ulcers than the national average. (PioneerNetwork: Positive Outcomes of Culture Change)

Resources to aid in the provision of individualized care:

- Research Resources in Culture Change (Pioneer Network)
- Positive Outcomes of Culture Change — The Case for Adoption (Pioneer Network)
- Investing in Culture Change (AHCA)
- Change Ideas for Consistent Assignment (QSource)
- Implementation Guide: Improving Consistent Assignment of Nursing Home Staff (Advancing Excellence in America’s Nursing Homes Campaign)
- Tool for calculating consistent assignment (Advancing Excellence in America’s Nursing Homes Campaign)
- Consistent Assignment - The Practice and the Experience (Advancing Excellence in America’s Nursing Homes Campaign)
- Video - Consistent assignment: Where Do You Start and How Do You Do It! (Advancing Excellence in America’s Nursing Homes Campaign)
- Increasing Use of Consistent Assignment (Advancing Excellence in America’s Nursing Homes Campaign)
- Implementation Guide: Reducing Staff Turnover (Advancing Excellence in America’s Nursing Homes Campaign)
- Implementation Guide: Reducing Staff Turnover (Advancing Excellence in America’s Nursing Homes Campaign)
- Interventions Table: Staff Retention (Advancing Excellence in America’s Nursing Homes Campaign)
- Tool for Calculation Staff Turnover (Advancing Excellence in America’s Nursing Homes Campaign)
- Webinar: Staff Stability: Learn to Manage your Resources and Improve Staff Retention (Advancing Excellence in America’s Nursing Homes Campaign)
ADDITIONAL RESOURCES

- Agency for Healthcare Research and Quality
- Advancing Excellence in America’s Nursing Homes, Goal #4
- Wound Ostomy and Continence Nurse Society
- American Medical Directors Association
- American Academy of Wound Management
- National Pressure Ulcer Advisory Panel
- WoundSource (resource to find wound products)
- Kennedy Terminal Ulcer
- Association for the Advancement of Wound Care
- Hartford Institute for Geriatric Nursing
- Institute for Healthcare Improvement
- PioneerNetwork: Culture Change in Long-Term Care