Prevention and Management of High-Risk Pressure Ulcers/Injuries*

Pressure Ulcers/Injuries

Pressure ulcers/injuries (PUs/PIs) are one of the most commonly reported adverse events in nursing facilities (NFs). These injuries are caused when tissue is compressed most often between a bony prominence and an external surface or from shear. The risk for PUs/PIs may be affected by friction, skin temperature/moisture, and the existing condition of the underlying soft tissue.[1]

Other risk factors that cause the elderly to be more susceptible to breakdown include:[1]

- impaired/decreased mobility, functional ability, and activity level
- co-morbid conditions or illness (e.g., infection, end stage renal disease, thyroid disease, or diabetes mellitus)
- drugs that may affect wound healing such as steroids
- impaired diffuse or localized blood flow (e.g., generalized atherosclerosis or lower extremity arterial insufficiency)
- refusal of some aspects of care and treatment
- cognitive impairment
- urinary and fecal incontinence
- malnutrition and hydration deficits
- healed pressure ulcers, especially stage 3 or 4 which are more likely to have recurrent breakdown

PUs/PIs can cause pain, infection, diminished quality of life, and even death; and are a significant financial burden on NFs.

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In its initial stages, a pressure injury can appear harmless enough with the skin turning pink or red; however, the skin color does not return after the pressure is removed. When the pressure is not relieved it acts like a tourniquet, cutting off the blood supply and nutrients to the area. If this becomes chronic the cells begin to die causing the skin to blister, break, and ulcerate.[2]

Over the years, pressure injuries (PIs) have been called many things, such as bed sores, decubitus ulcers, pressure sores, and pressure ulcers (PU). In 2016, the National Pressure Injury Advisory Panel (NPIAP), formerly the National Pressure Ulcer Advisory Panel, updated the terminology from pressure ulcer (PU) to pressure injury (PI), defining it as, "localized damage to the skin and underlying soft tissue usually over a bony prominence or related to a medical or other device. The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of intense and/or prolonged pressure or pressure in combination with shear. The tolerance of soft tissue for pressure and shear may also be affected by microclimate, nutrition, perfusion, co-morbidities and condition of the soft tissue."[3]

Regulatory Requirements

Federal regulation requires nursing facility providers to not only treat pressure ulcers/injuries but to prevent them in those at risk unless unavoidable. This quality-of-care regulation is found in F686 of Appendix PP of the State Operations Manual (SOM).

For more information, see the CMS Compliance Group, Inc. blog links* below:

- Ftag of the Week – F686 Treatment/Services to Prevent/Heal Pressure Injuries (Pt. 1)
- Ftag of the Week – F686 Treatment/Services to Prevent/Heal Pressure Injuries (Pt. 2)
- Ftag of the Week – F686 Treatment/Services to Prevent/Heal Pressure Injuries (Pt. 3)
- Ftag of the Week – F686 Treatment/Services to Prevent/Heal Pressure Injuries (Pt. 4)

Note: Additional information on how surveyors review PU/PI, along with other related regulations, is in the *Pressure Ulcer/Injury Critical Element Pathway* found in the *Surveyor Resources* folder on the Centers for Medicare and Medicaid Services (CMS) Nursing Homes page.

Quality Measure (QM) N015.03

Quality Measure (QM) N015.03, calculates the percentage of persons in nursing facilities with long-stays who are at high-risk for pressure ulcers/injuries and have a stage 2-4 or unstageable pressure ulcer/injury (PU/PI).[4]

Pressure (Ulcer) Injury Definitions

Definitions for pressure ulcers/injuries according to the Minimum Data Set (MDS) are important to understanding QM N015.03 and for documenting the interventions provided in the person's health/medical record.

Centers for Medicare and Medicaid Services (CMS) continues to use the term "pressure ulcer (PU)" in its federal regulations. However, it is important to note that CMS did update their guidance to surveyors, making a distinct difference in the use of the terminology "pressure injury" versus "pressure ulcer."

- Pressure ulcer/injury (PU/PI) – localized damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device.[5]
    - Pressure injury presents as intact skin and may be painful
    - Pressure ulcer presents as an open ulcer, the appearance of which will vary depending on the stage and may be painful
- Friction – mechanical force exerted on skin that is dragged across any surface[5]
- 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[5]
- Stage 1 – intact skin with non-blanchable redness of a localized area usually over a bony prominence. Note: Darkly pigmented skin may not have a visible blanching; in dark skin tones only, it may appear with persistent blue or purple hues[6]
- Stage 2 – partial thickness loss of dermis presenting as a shallow open ulcer with a red or pink wound bed, without slough. May also present as an intact or open/ruptured blister[6]
- Stage 3 – 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[6]

- Stage 4 – full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often includes undermining and tunneling[6]
- Unstageable – stage unknown due to:[6]
    - non-removable dressing/device covering the wound
    - slough and/or eschar covering the wound bed
    - deep tissue injury (DTI) with intact skin
- Slough – non-viable yellow, tan, gray, green or brown necrotic 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[5]
- Eschar – dead or devitalized tissue that is hard or soft in texture; usually black, brown, or tan in color, and may appear scab-like. Eschar is usually firmly adherent to the base of the wound and often the sides/edges of the wound[5]
- 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. Undermining often develops from shearing forces and is differentiated from tunneling by the larger extent of the wound edge involved and the absence of a channel or tract extending from the pressure ulcer under the adjacent intact skin[5]
- Tunneling – the destruction of tissue under the skin surface that creates a passageway and has an opening at the skin level from the edge of the wound[5]
- Additional definitions related to PU/PI can be found in Appendix PP of the State Operations Manual in F686 including:
    - Avoidable vs unavoidable
    - Debridement
    - Exudate: purulent exudate/drainage/discharge vs serous drainage/exudate
    - Granulation tissue
    - Sinus tract

Minimum Data Set (MDS)

Currently the data for QM N015.03 is collected from section M, M0300 (stage 2-4 or unstageable) of the Minimum Data Set (MDS), in conjunction with data collected from sections G (bed mobility, transferring), section B0100 (comatose), and section I5600 (malnutrition or at risk for malnutrition). However, section G is scheduled to be retired September 30, 2023, and replaced with data from section GG beginning October 1, 2023.[7]

Training videos for MDS may be viewed on the CMS YouTube channel.

For additional resources on section M and the retirement of section G, review the resources below:

- Claims-Based Measure Tip Sheet - Pressure Ulcer/Injury (Long Stay) – TMF
- Quality Measure: High-Risk Residents with Pressure Ulcers/Injuries – TMF Video
- Transcript for Quality Measure: High-Risk Residents with Pressure Ulcers/Injuries – TMF
- Section G: Scheduled for Retirement October 2023N – AAPACN

Providers should assess their process for collecting and completing Section GG to ensure accuracy of the information. More information about the revised MDS 3.0 and Section GG may be found at Minimum Data Set (MDS) 3.0 Resident Assessment Instrument (RAI) Manual – CMS.

To ensure accuracy in completing Section GG, ask the following questions:[7]

- Do you have a process in place to determine a person's "usual performance"?
- What sources of information are you using to collect data regarding a person's level of functioning to ensure Section GG is complete?
- Is the MDS Coordinator or other person currently coding Section GG knowledgeable in the items that will be used to calculate the two function scores (for nursing and PT/OT)?

Tips for Preventing and Managing PUs/PIs

When preventing and managing pressure ulcers (PUs)/pressure injuries (PIs), consider the person's overall condition, risk factors, assistance needs, activity level, and nutrition/hydration needs. Prevention and management may include the use of alternative mattresses, off-loading of the heels, frequent repositioning, increasing protein or fluids in the diet, wound care per physician/prescriber's orders, or ensuring prompt incontinent care.

To prevent and treat PU/PI for those living in nursing facilities, consider the following questions:[4]

- Was the initial PU/PI diagnosed properly and staged correctly?
- Is the PU/PI staging completed correctly every time it is documented?
- Are PU/PI risk assessments completed per facility policy?
- Are prevention interventions implemented immediately based on identified risk factors?
- Are persons at high-risk evaluated routinely to identify potential changes in their condition and their care plans updated as needed?
- Is the person's skin evaluated immediately on admission and at least weekly?
- Is the bed and other positioning items evaluated routinely to ensure effectiveness and good working condition?
- Does a criteria guide exist for the types of interventions to use to relieve pressure based upon the risk assessment?
- Are all staff on all shifts aware of the use of pressure-relieving interventions?
- Are rounds conducted to ensure prevention measures/devices are in place?
- Are nurses who provide wound care evaluated for competency routinely?
- Are certified nursing assistants (CNAs) evaluated for competency in positioning and transfers for persons at high-risk?
- Is a Root Cause Analysis (RCA) completed for every new facility-acquired pressure/injury occurs and are actions taken to prevent in the future?
- Are persons at minimal risk identified for accuracy of assessments and monitored for subtle changes if no pressure prevention strategies are in place?

PU/PI in Dementia Care

Nursing facility staff frequently report resistance to care for those with dementia. This may lead to the misuse of psychotropic medications to manage behaviors which may increase the risk for PUs/PIs and/or result in abuse or neglect. Caring for those with dementia should not be a battle. Understanding how the person communicates can help identify their needs. Signs of agitation such as pacing, restlessness, or calling out may indicate a physical need, such as hunger, or an emotional need, such as loneliness. Acts of aggression such as slapping, biting, or pushing may indicate the person wants to be left alone or is in pain. Using non-pharmacological approaches to address unmet needs may improve PU/PI prevention strategies such as off-loading, incontinent care, nutritional intake, or repositioning. Understanding how each person communicates their needs and addressing those needs effectively is vital to their overall quality of life.[8]

Preventing and Managing PU/PI

Implementing an evidence-based best practice system for pressure ulcer/injury prevention and management can reduce the potential for PU/PI development and promote healing of existing wounds.[9] It is important to recognize and evaluate each person's risk factors and all areas at risk of constant pressure. The care process should include efforts to stabilize, reduce, or remove underlying risk factors; to monitor the impact of the interventions; and to modify the interventions as appropriate.[1]

Each person should be assessed for PU/PI risk factors on admission and receive an in-depth assessment of any existing pressure ulcers/injuries. The assessment process drives the development of person-centered goals and interventions in identified in the care plan. The care plan should reflect the person's preferences, values, and needs and identify the interventions necessary to meet treatment goals. The care plan should also include guidelines for reassessment to evaluate the effectiveness of the care provided and to prompt changes in treatment as needed.[9]

Evaluation and monitoring outcomes are vital components of any program for the prevention of PU/PI risk and management of existing pressure ulcers/injuries. An effective system includes reassessment of the person's risk for developing a pressure injury. The frequency of reassessment will depend on a variety of factors, with more frequent assessments for people with existing PUs/PIs, those who are at high risk, or those who have experienced a significant change of condition.[9]

Review the resources* below for important tips on preventing and managing PU/PI:

- Pressure Injury Prevention & Management – QMP Texas HHS
- National Pressure Injury Advisory Panel - NPIAP
    - Staging Poster - NPIAP
    - PUSH Tool - NPIAP
    - Best Practices for Prevention of Medical Device-Related Pressure Injuries in LTC – NPIAP
- Pressure Ulcer/Injury Reduction – TMF Networks
- Wound, Ostomy, and Continence Nurses Society™ - WOCN
- Health: Consumer Services & Health Care Regulation: Pressure Ulcer Resource Center – Indiana Department of Health
- AHRQ's Safety Program for Nursing Homes: On-Time Pressure Ulcer Prevention - AHRQ

- Assessment and Management of Pressure Injuries for the Interprofessional Team – RNAO
- Pressure Injury Training v 8.0 – Press Ganey
- Braden Scale – Braden Scale II
- Bates-Jensen Wound Status Tool – Waterloo Wellington Wound Care
- Pressure Injury Prevention Webinar Training – Joint Training Texas HHS
- Nurses and C.N.A.'s…An Important Part of the Team Effect Towards Pressure Injury Prevention PowerPoint Presentation - Gentell
- Preventing Pressure Injuries: A CNA's Guide to Proactive Care - Gentell

References

[1] MDS 3.0 RAI Manual (Draft) v1.18.11 (October 2023). Retrieved June 8, 2023, from CMS: MDS 3.0 RAI Manual v1.18.11 October 2023 (cms.gov)

[2] Wright, K. (2010) *Self Help Guide: Pressure Ulcers Prevention and Treatment*. Mediscript Communications Inc. Retrieved June 8, 2023, from TMF Networks: A Self-Help Guide: Pressure Ulcers Prevention and Treatment (utahcnacenters.com)

[3] Hess, C. T. (2020). *Classification of Pressure Injuries*. Advances in Skin & Wound Care 33(10): 558-559. Retrieved June 8, 2023, from Lippincott Journals: Classification of Pressure Injuries : Advances in Skin & Wound Care (lww.com)

[4] Quality Measure Tip Sheet: Pressure Ulcer/Injury – Long Stay. (2022). Retrieved June 8, 2023, from TMF Networks: Claims-Based Measure Tip Sheet - Pressure Ulcer/Injury (Long Stay) (tmfnetworks.org)

[5] State Operations Manual. Appendix PP. F686. *Guidance to Surveyors for Long Term Care Facilities.* (2023). Retrieved June 8, 2023, from CMS: SOM - Appendix PP (cms.gov)

[6] MDS 3.0 Final Item Sets v1.18.11. (October 2023). Texas Minimum Data Set (in downloads – see M0300). Retrieved June 8, 2023, from CMS: Minimum Data Set (MDS) 3.0 Resident Assessment Instrument (RAI) Manual (cms.gov)

[7] Minimum Data Set (MDS) 3.0 Resident Assessment Instrument (RAI) Manual. (2023) Retrieved June 8, 2023, from CMS: Minimum Data Set (MDS) 3.0 Resident Assessment Instrument (RAI) Manual (cms.gov)

[8] Buchanan, J. A., DeJager, B., Garcia, S., et al. (2018). *The relationship between instruction specificity and resistiveness to care during activities of daily living in persons with dementia.* Retrieved March 9, 2023, from Cornerstone Minnesota State University Mankato: Clinical Nursing Studies Original Article.viewcontent.cgi (mnsu.edu)

[9] Pressure Injury Prevention and Management. (2023). Quality Monitoring Program. Retrieved June 8, 2023, from Texas HHS: Pressure Injury Prevention & Management (hhs.texas.gov)