NHQI

Nursing Home Quality Initiative

FAST FACTS: PRESSURE ULCERS

Overview

MAY 2006

PREVALENCE

Pressure ulcers have been identified across all healthcare settings and are one of the measures of quality being publicly reported on Nursing Home Compare. The quality measure data are calculated based on the Minimum Data Set (MDS), an assessment mandated for each resident in a Medicare- and/or Medicaid-certified facility. These data show that the national percentage of pressure ulcers for combined high and low risk residents in nursing homes rose slightly, from 8.5% to 8.7% since June 2002 (DHHS, 2004).

DEFINITION

The Agency for Health Care Policy and Research (AHCPR, 1994) Clinical Practice Guideline for pressure ulcers defines a pressure ulcer as "any lesion caused by unrelieved pressure resulting in damage of underlying tissue." Pressure ulcers are staged according to the degree of tissue damage observed:

Stage 1 – Nonblanchable erythema of intact skin, the heralding lesion of skin ulceration. In individuals with darker skin, discoloration of the skin, warmth, edema, induration, or hardness may also be indicators.

Stage 2 – Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion, blister or shallow crater.

Stage 3 – Full thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through underlying fascia. The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue.

Stage 4 – Full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures (e.g., tendon, joint capsule). Undermining sinus tracts also may be associated with Stage 4 pressure ulcers.

In 2002, a consensus panel convened by CMS agreed that most facilities should be able, ideally, to lower their pressure ulcer rate to under 5%" (ANHT, 2003)

MAJOR RISK FACTORS

The American Medical Directors Association (AMDA, 1996) identifies multiple factors that put individuals at major (high) risk of developing pressure ulcers:

Alterations in sensation or response to discomfort

- Degenerative neurologic disease
- Cerebrovascular disease
- Central nervous system (CNS) injury
- Depression
- Drugs that adversely affect alertness

Alterations in mobility

- Neurologic disease/injury
- Fractures
- Pain
- Restraints

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MAJOR RISK FACTORS (CONT.)	**Significant changes in weight (≥5% in 30 days or greater than ≥10% in the previous180 days)** ❖ Protein-calorie undernutrition ❖ Edema **Incontinence** ❖ Bowel and bladder
BARRIERS TO PREVENTION/ TREATMENT	• Non-adherence to current clinical practice guidelines • Failure to monitor skin on a regular basis • Failure to collect or to effectively utilize process of care data • Failure to use an appropriate assessment tool to identify residents at-risk (See Fast Facts: Pressure Ulcer Prevention for examples of risk assessment instruments) • Lack of staff education on how pressure ulcers develop and heal • Lack of use of appropriate preventive strategies (e.g., pressure relieving devices, positioning and mobility aids, proper seating)
FURTHER READING AND WEB RESOURCES	A more detailed overview of screening for pressure ulcers can be obtained by contacting your state Quality Improvement Organization (QIO). Visit http://www.medqic.org/dcs/QIOListings for contact information for your state QIO. Quality Measures Resource Manual, February 2006, Version 5.0. High-Risk Pressure Ulcers – Available: http://www.medqic.org/Chapter6L. Low Risk Pressure Ulcers – Available: http://www.medqic.org/Chapter6M . Revised Long-Term Care Resident Assessment Instrument User's Manual, December 2002, Version 2.0, Revised March 2006. Available: http://www.cms.hhs.gov/RAI. Centers for Medicare & Medicaid Services. State Operations Manual, Guidance to Surveyors for Long Term Care Facilities, Appendix PP, Rev. 15, November 2005. F-314 Pressure Ulcers (pp129-166). Available: http://cms.hhs.gov/manuals/Downloads/som107ap_pp_guidelines_ltcf.pdf AHCPR Clinical Practice Guidelines. Pressure Ulcer Prevention and Treatment, 1992. Available: http://www.ahcpr.gov/clinic/cpgonline.htm. U.S. Department of Health and Human Services. Nursing home care improving in many areas new CMS data show, new steps initiated. December 2004. Available: http://www.hhs.gov/news/press/2004pres/20041222.html. American Medical Directors Association - Professional Association. National Guideline Clearinghouse: Pressure ulcers. 1996 (reviewed Jan 2001, 2002, and 2003). Available: http://www.cpgnews.org/PU/index.cfm. American Medical Directors Association - Professional Association. Pressure ulcer therapy companion. 1999 (reviewed 2004). Available: http://www.cpgnews.org/PU/index.cfm. Ordin DL, Baier RR, Moscoso T, et al. Achieving Nursing Home Targets (ANHT): Identifying Achievable Targets for Pressure Ulcer and Restraint Rates in Nursing Homes. Quality Improvement Organization Special Study Final Report. November 2003.

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FAST FACTS: PRESSURE ULCERS

Prevention

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FACILITY COMMITMENT	Many factors make pressure ulcer prevention in the long-term care setting challenging. The leadership of the organization must ensure that a commitment to high quality pressure ulcer management permeates all aspects of the facility's operation.
KEY STEPS IN PREVENTION OF PRESSURE ULCERS	Instituting a prevention program based on accepted clinical guidelines for at risk residents is key to prevention of pressure ulcers (e.g. AHCPR, AMDA) Elements of a prevention program may include: • Use of a valid and reliable pressure ulcer risk assessment instrument (e.g. Braden Scale) • Ensuring systematic daily skin inspection of all residents at risk • Determining a schedule to re-evaluate if initial screen indicates not at risk • Reporting of adverse findings of daily skin inspections to be acted upon in a timely fashion and incorporated into each resident's plan of care • Adoption of individualized positioning/re-positioning programs (e.g. take into account resident wake/sleep cycles; consistent CNA to reposition residents) • Use of pressure relieving support surfaces • Proper transfer/lift techniques • Minimization of exposure of skin to moisture due to incontinence, perspiration or wound drainage • Nutrition assessment and provision of appropriate nutrition to assist with prevention and healing of pressure ulcers • Mobility and exercise programs • Education of staff, residents and families on pressure ulcers and pressure ulcer prevention
PRESSURE ULCER RISK ASSESSMENT INSTRUMENTS	Individuals who are at risk for developing pressure ulcers must be identified early so that risk factors can be reduced through interventions. There are several valid and tested tools available for nursing homes to assess such risk. The Braden Scale is a tool that has been widely used and validated in the acute, home care and long-term care settings. The tool leads clinicians to assess risk factors in six specific areas: • Sensory perception • Skin moisture • Activity • Mobility • Nutrition • Friction/Shear

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Pressure Ulcer Risk Assessment Instruments (cont)	Total scores range from 6-23. A lower Braden Scale Score indicates lower levels of functioning, meaning higher levels of risk for pressure ulcer development. More information available here: Braden Scale . The Norton Scale assesses factors that predict the development of pressure ulcers. The Norton Scale has total scores that range from 5-20. A higher Norton Scale Score indicates lower levels of functioning, meaning higher levels of risk for pressure ulcer development. More information available here: Norton Scale .
Further Reading and Web Resources	A more detailed overview of screening for pressure ulcers can be obtained by contacting your state Quality Improvement Organization (QIO). Visit http://www.medqic.org/dcs/QIOListings for contact information for your state QIO. Quality Measures Resource Manual, February 2006, Version 5.0. High-Risk Pressure Ulcers – Available: http://www.medqic.org/Chapter6L Low Risk Pressure Ulcers – Available: http://www.medqic.org/Chapter6M Revised Long-Term Care Resident Assessment Instrument User's Manual, December 2002, Version 2.0, Revised March 2006. Available: http://www.cms.hhs.gov/RAI Centers for Medicare & Medicaid Services. State Operations Manual, Guidance to Surveyors for Long Term Care Facilities, Appendix PP, Rev. 15, November 2005. F-314 Pressure Ulcers (pp129-166). Available: http://cms.hhs.gov/manuals/Downloads/som107ap_pp_guidelines_ltcf.pdf AHCPR Clinical Practice Guidelines. Pressure Ulcer Prevention and Treatment, 1992. Available: http://www.ahcpr.gov/clinic/cpgonline.htm National Guideline Clearinghouse: Pressure ulcers. American Medical Directors Association - Professional Association. 1996 (reviewed Jan 2001, 2002, and 2003). Available: http://www.cpgnews.org/PU/index.cfm. Pressure ulcer therapy companion. American Medical Directors Association - Professional Association. 1999 (reviewed 2004). Available: http://www.cpgnews.org/PU/index.cfm. Ayello EA, Braden B. How and why to do pressure ulcer risk assessment. Advances in Skin and Wound Care. 2002. 15(3): 125-32. Norton D, McLaren R, Exton-Smith AN. An investigation of geriatric nursing problems in hospital. London: Churchill Livingstone; 1962.

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Screening

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WHAT IS PRESSURE ULCER SCREENING?	Pressure ulcer screening is a skin and risk assessment to determine if residents are at risk for developing, or currently have pressure ulcers. Since residents at risk can develop a pressure ulcer within 2 to 6 hours of the onset of pressure (Kosiak,1961), it is imperative to identify those at risk and put interventions into place to help prevent the development of pressure ulcers. The results of a pressure ulcer screening should be used to determine if a person needs immediate intervention, further evaluation and/or follow-up.
KEY STEPS IN SCREENING	• All residents should be screened for pressure ulcer risk and/or presence of pressure ulcers on admission/readmission • Use of an appropriate screening tool to predict pressure ulcer risk (e.g. Braden Scale for Predicting Pressure Sore Risk, Norton Scale) • Screening should be performed by staff who have undergone appropriate training in the use of the tools as well as to recognize risk factors for the development of pressure ulcers • If a resident is found to be at high-risk for pressure ulcers, interventions should be put into place immediately to help prevent pressure ulcers and screening should continue for the first four weeks after a resident has been admitted (Bergstrom, 1992; Braden, 2001) • Identification of a current pressure ulcer should trigger a comprehensive evaluation to help determine care approaches • If a resident is not found to be at high-risk for pressure ulcer development on the initial screen, re-screening should occur if there is a change in the resident's status or condition that increases risk (see risk factors listed on Fast Facts: Pressure Ulcers – Overview) and at periodic reassessment periods, recommended is quarterly (Bergstrom, 1992; Braden, 2001) • Screening results should be documented and made available to all members of the interdisciplinary team
SCREENING CRITERIA	Screening tools for pressure ulcer risk should include: • Current medical diagnoses • Resident mobility/activity status • Nutritional status • Moisture/Incontinence • Prior history of pressure ulcers • Sensory perception

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Further Reading and Web Resources

A more detailed overview of screening for pressure ulcers can be obtained by contacting your state Quality Improvement Organization (QIO). Visit http://www.medqic.org/dcs/QIOListings for contact information for your state QIO.

Quality Measures Resource Manual, February 2006, Version 5.0.
High-Risk Pressure Ulcers – Available: http://www.medqic.org/Chapter6L
Low Risk Pressure Ulcers – Available: http://www.medqic.org/Chapter6M

Revised Long-Term Care Resident Assessment Instrument User's Manual, December 2002, Version 2.0, Revised March 2006. Available: http://www.cms.hhs.gov/RAI

AHCPR Clinical Practice Guidelines. Pressure Ulcer Prevention and Treatment, 1992. Available: http://www.ahcpr.gov/clinic/cpgonline.htm.

National Guideline Clearinghouse:
Pressure ulcers. American Medical Directors Association - Professional Association. 1996 (reviewed Jan 2001, 2002, and 2003). Available: http://www.cpgnews.org/PU/index.cfm.

Pressure ulcer therapy companion. American Medical Directors Association - Professional Association. 1999 (reviewed 2004). Available: http://www.cpgnews.org/PU/index.cfm.

Ayello, E.A., Braden, B. (2002). How and why to do pressure ulcer risk assessment. Advances in Skin and Wound Care, 15(3): 125-32.

Bergstrom, N. & Braden, B.A. (1992). A prospective study of pressure sore risk among institutionalized elderly. Journal of the American Geriatrics Society, Aug 40(8): 747-758.

Braden, B. (2001). Risk Assessment in Pressure Ulcer Prevention. In Krasner, D.L., Rodheaver, G.T., Sibbeald, R.G. (Eds.) Chronic Wound Care: A Clinical Source Book for Healthcare Professionals (3rd ed., pp. 641-651). Wayne, PA: HMP Communications Pub.

Kosiak, M. (1961). Etiology of Decubitus Ulcers. Archives of Physical Medicine and Rehabilitation, 41, 19-29..

Lyder, C.H., Yu, C., Stevenson, D., Mangat, R., Empleo-Frazier, O., Emrling, J., McKay, J. (1998). Validating the Braden Scale for the prediction of pressure ulcer risk in Blacks and Latino/Hispanic elders: A pilot study. Ostomy/Wound Management, 44 (3A) Suppl: 42S-50S.

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FAST FACTS: PRESSURE ULCERS

Evaluation and Treatment

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FACILITY COMMITMENT	Many factors make pressure ulcer prevention in the long-term care setting challenging. The leadership of the organization must ensure that a commitment to high quality pressure ulcer management permeates all aspects of the facility's operation.
AVOIDABLE VS. UNAVOIDABLE PRESSURE ULCERS	The quality of life regulation related to pressure ulcers (42CFR283.25) requires that "a resident who is admitted without a pressure ulcer doesn't develop a pressure ulcer unless clinically unavoidable, and that a resident who has an ulcer receives care and services to promote healing and prevent additional ulcers." The Interpretive Guidelines for Long Term Care Facilities (page 130) defines avoidable pressure ulcers as a situation where "the resident developed a pressure ulcer and that the facility did not do one or more of the following: • Evaluate the resident's clinical condition and assess risk factors • Define and implement interventions that are consistent with resident needs, resident goals, and recognized standards of practice • Monitor and evaluate the impact of interventions • Revise the interventions as appropriate" An unavoidable pressure ulcer is one that developed even though the facility has done all of the above.
COMPREHENSIVE PRESSURE ULCER EVALUATION	To provide appropriate care for residents who do develop pressure ulcers or are admitted to the facility with pressure ulcers, the Agency for Healthcare Research and Quality (formerly AHCPR) clinical practice guidelines for "Pressure Ulcers in Adults: Prediction and Prevention" (1992), state that a comprehensive pressure ulcer evaluation should completed and include the following for each pressure ulcer: • Site/Location of wound(s) • Stage of Pressure Ulcer • Size, including length, width and depth measured in centimeters • Appearance of the wound bed, including tissue type (e.g. granulation, slough, necrotic) • Presence of undermining/sinus tracts • Drainage/exudates noted in the form of amount, color, type, consistency and odor • Observation of skin (e.g. erythematous, indurated, edematous, macerated, warm, purplish/bluish areas in dark-colored skin, localized coolness if tissue death occurs) • Pain/tenderness

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Treatment Of Pressure Ulcers	Healing of pressure ulcers requires the creation of an optimal wound-healing environment. The use of appropriate cleansers, dressings, necrotic tissue removal techniques (e.g. surgical, mechanical debridement) and continued emphasis on appropriate hydration, nutrition, repositioning and preventive and pressure relieving measures greatly influence how quickly pressure ulcers heal and help to ensure other pressure ulcers do not develop. Treatment of pressure ulcers is based on: • Stage/characteristics of ulcer (e.g. via observation and documentation) • Response to treatment (e.g. evidence of healing/non-healing) • Development of adverse events or complications (e.g. cellulitis, sepsis, pain) • Adequate treatment of co-morbid medical conditions (e.g. diabetes, anemia, infection, malnutrition)
Further Reading and Web Resources	A more detailed overview of screening for pressure ulcers can be obtained by contacting your state Quality Improvement Organization (QIO). Visit http://www.medqic.org/dcs/QIOListings for contact information for your state QIO. Code of Federal Regulations – Quality of Care: Pressure Ulcers. Available: http://ecfr.gpoaccess.gov/. Quality Measures Resource Manual, February 2006, Version 5.0. High-Risk Pressure Ulcers – Available: http://www.medqic.org/Chapter6L. Low Risk Pressure Ulcers – Available: http://www.medqic.org/Chapter6M Revised Long-Term Care Resident Assessment Instrument User's Manual, December 2002, Version 2.0, Revised March 2006. Available: http://www.cms.hhs.gov/RAI. AHCPR Clinical Practice Guidelines. Pressure Ulcer Prevention and Treatment, 1992. Available: http://www.ahcpr.gov/clinic/cpgonline.htm. National Guideline Clearinghouse: Pressure ulcers. American Medical Directors Association - Professional Association. 1996 (reviewed Jan 2001, 2002, and 2003). Available: http://www.cpgnews.org/PU/index.cfm. Pressure ulcer therapy companion. American Medical Directors Association - Professional Association. 1999 (reviewed 2004). Available: http://www.cpgnews.org/PU/index.cfm. State Operations Manual: Appendix PP Guidance to Surveyors for Long Term Care Facilities. Rev 15; 11/25/2005. Available: http://cms.hhs.gov/manuals/Downloads/som107ap_pp_guidelines_ltcf.pdf.

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