Home Health Quality Reporting Program: Specifications for the Cross-Setting Quality Measure CY 2016 Final HH PPS Rule

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HOME HEALTH QUALITY REPORTING PROGRAM: SPECIFICATIONS FOR THE CROSS-SETTING PRESSURE ULCER QUALITY MEASURE FINAL CY2016 HH PPS RULE

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SECTION 1
CROSS-SETTING MEASURES DEVELOPMENT WORK: AN INTRODUCTION

The Improving Medicare Post-Acute Care Transformation of 2014 (IMPACT) Act, enacted in 2014, directs the Secretary of Health and Human Services to "specify quality measures on which Post-Acute Care (PAC) providers are required under the applicable reporting provisions to submit standardized patient assessment data" in several domains, which includes skin integrity. The IMPACT Act requires the implementation of quality measures to address this measure domain in home health agencies (HHAs), skilled nursing facilities (SNFs), long-term care hospitals (LTCHs), and inpatient rehabilitation facilities (IRFs).

The IMPACT Act also requires, to the extent possible, the submission of such quality measure data through the use of a Post-Acute Care (PAC) assessment instrument and the modification of such instrument as necessary to enable such use. For Home Health Agencies (HHAs), this requirement refers to the Outcome and Assessment Information Set (OASIS) which is currently in use for the collection and submission of quality data to the Centers for Medicare & Medicaid Services (CMS) as part of the Home Health Quality Reporting Program (HH QRP). For a detailed discussion of the IMPACT Act as it pertains to the selection and the proposal of quality measures for the HH QRP, please review the calendar year (CY) 2016 HH PPS final rule.

In this document, we present final specifications for the following cross-setting quality measure for the HH QRP:

1. Outcome Measure: Percent of Residents or Patients with Pressure Ulcers That Are New or Worsened (application of NQF #0678).

SECTION 2
QUALITY MEASURES

2.2 Cross-Setting Pressure Ulcer Measure: Percent of Residents or Patients with Pressure Ulcers that are New or Worsened (application of NQF #0678)

2.2.1 Quality Measure Description

This quality measure reports the percent of patients with Stage 2-4 pressure ulcers present at discharge that are new or worsened since the beginning of the quality episode. Quality episodes are defined by pairing a Start or Resumption of Care assessment with an End of Care assessment. The measure is calculated using data from the OASIS. For home health patients, the measure is calculated by examining one OASIS item on the discharge assessment which reports the number of current Stage 2-4 pressure ulcers that are present at discharge, but that were not present or were at a lesser stage at the beginning of this quality episode.

2.2.2 Purpose/Rationale for Quality Measure

This quality measure is being put forth as a cross-setting quality measure to meet the requirements of the IMPACT Act addressing the domain of skin integrity and changes in skin integrity. Data reporting for this measure would affect the payment determination for the CY 2019 and subsequent years for the HH QRP. This measure has previously been successfully adopted in other post-acute care settings. For example, was implemented in the Long-term Care Hospital and Inpatient Rehabilitation Facility Quality Reporting Programs in October of 2012, with public reporting planned for fall of 2016, as well as the CMS Nursing Home Quality Initiative using the Minimum Data Set (MDS) with data collection beginning in 2010, and is currently publicly reported on CMS' Nursing Home Compare at: http://www.medicare.gov/nursinghomecompare/search.html. This measure is intended to encourage home health agencies (HHAs) to prevent pressure ulcer development or worsening, and to closely monitor and appropriately treat existing pressure ulcers.

Regardless of setting or provider type, pressure ulcers are recognized as a serious medical condition. Considerable evidence exists regarding the seriousness of pressure ulcers, and the relationship between pressure ulcers and pain, decreased quality of life, and increased mortality in aging populations.[1,2,3,4] Pressure ulcers interfere with activities of daily living and functional gains made during rehabilitation, predispose patients to osteomyelitis and septicemia, and are strongly associated with longer hospital stays, longer IRF stays, and mortality.[5,6,7] Additionally,

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1 Casey, G. (2013). "Pressure ulcers reflect quality of nursing care." Nurs N Z 19(10): 20-24.

2 Gorzoni, M. L. and S. L. Pires (2011). "Deaths in nursing homes." Rev Assoc Med Bras 57(3): 327-331.

3 Thomas, J. M., et al. (2013). "Systematic review: health-related characteristics of elderly hospitalized adults and nursing home residents associated with short-term mortality." J Am Geriatr Soc 61(6): 902-911.

4 White-Chu, E. F., et al. (2011). "Pressure ulcers in long-term care." Clin Geriatr Med 27(2): 241-258.

5 Bates-Jensen BM. Quality indicators for prevention and management of pressure ulcers in vulnerable elders. Ann Int Med. 2001;135 (8 Part 2), 744-51.

6 Park-Lee E, Caffrey C. Pressure ulcers among nursing home residents: United States, 2004 (NCHS Data Brief No. 14). Hyattsville, MD: National Center for Health Statistics, 2009. Available from http://www.cdc.gov/nchs/data/databriefs/db14.htm.

patients with acute care hospitalizations related to pressure ulcers are more likely to be discharged to long-term care facilities (e.g., a nursing facility, an intermediate care facility, or a nursing home) than hospitalizations for all other conditions.[8,9]

Pressure ulcers typically result from prolonged periods of uninterrupted pressure on the skin, soft tissue, muscle, or bone.[5,9,10] Elderly individuals receiving home health care have a wide range of impairments and/or medical conditions that increase their risk of developing pressure ulcers, including but not limited to, impaired mobility or sensation, malnutrition or under-nutrition, obesity, stroke, diabetes, dementia, cognitive impairments, circulatory diseases, and dehydration. The use of wheelchairs and medical devices (e.g., hearing aid, feeding tubes, tracheostomies), a history of pressure ulcers, or presence of a pressure ulcer at admission are additional factors that increase pressure ulcer risk in elderly patients.[1,5,6,8,11,12,1314,15,16,17,18]

Pressure ulcers are high-cost adverse events across the spectrum of health care settings, from acute hospitals to home health.[5,8,10] Pressure ulcer incidence rates vary considerably by clinical setting, ranging from 0.4% to 38% in acute care, 2.2% to 23.9% in skilled nursing facilities [SNFs] and nursing homes [NHs], and 0% to 17% in home health.[8,9]As reported in the

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7 Wang, H., et al. (2014). "Impact of pressure ulcers on outcomes in inpatient rehabilitation facilities." Am J Phys Med Rehabil 93(3): 207-216.

8 Hurd D, Moore T, Radley D, Williams C. Pressure ulcer prevalence and incidence across post-acute care settings. Home Health Quality Measures & Data Analysis Project, Report of Findings, prepared for CMS/OCSQ, Baltimore, MD, under Contract No. 500-2005-000181 TO 0002. 2010.

9 Institute for Healthcare Improvement (IHI). Relieve the pressure and reduce harm. May 21, 2007. Available from http://www.ihi.org/IHI/Topics/PatientSafety/SafetyGeneral/ImprovementStories/FSRelievethePressureandReduceHarm.htm.

10 Russo CA, Steiner C, Spector W. Hospitalizations related to pressure ulcers among adults 18 years and older, 2006 (Healthcare Cost and Utilization Project Statistical Brief No. 64). December 2008. Available from http://www.hcup-us.ahrq.gov/reports/statbriefs/sb64.pdf.

11 Agency for Healthcare Research and Quality (AHRQ). Agency news and notes: pressure ulcers are increasing among hospital patients. January 2009. Available from http://www.ahrq.gov/research/jan09/0109RA22.htm.

12 Cai, S., et al. (2013). "Obesity and pressure ulcers among nursing home residents." Med Care 51(6): 478-486.

13 DeJong, G., et al. (2014). "Factors Associated with Pressure Ulcer Risk in Spinal Cord Injury Rehabilitation." Am J Phys Med Rehabil. 2014 May 29. [Epub ahead of print]

14 MacLean DS. Preventing & managing pressure sores. Caring for the Ages. March 2003;4(3):34-7. Available from http://www.amda.com/publications/caring/march2003/policies.cfm.

15 Michel, J. M., et al. (2012). "As of 2012, what are the key predictive risk factors for pressure ulcers? Developing French guidelines for clinical practice." Ann Phys Rehabil Med 55(7): 454-465.

16 National Pressure Ulcer Advisory Panel (NPUAP) Board of Directors; Cuddigan J, Berlowitz DR, Ayello EA (Eds). Pressure ulcers in America: prevalence, incidence, and implications for the future. An executive summary of the National Pressure Ulcer Advisory Panel Monograph. Adv Skin Wound Care. 2001;14(4):208-15.

17 Reddy, M. (2011). "Pressure ulcers." Clin Evid (Online) 2011.

18 Teno, J. M., et al. (2012). "Feeding tubes and the prevention or healing of pressure ulcers." Arch Intern Med 172(9): 697-701.

Federal Register, in 2006 the average cost for a hospital stay related to pressure ulcers was $40,381[19] The Advancing Excellence in America's Nursing Homes Campaign reported that it can cost as much as $19,000 to treat a single Stage 4 pressure ulcer.[20] Using data from 2009 and 2010, severe (Stage 3 and 4) pressure ulcers acquired during a hospital stay were estimated to have increased CMS payments across 90-day episodes of care by at least $18.8 million a year.[21]

2.2.3 Denominator

The denominator is the number of patients with a complete quality episode, except those who meet the exclusion criteria. HH quality episodes are defined by pairing assessments completed at the start or resumption of care with assessments completed at the end of care.

2.2.4 Denominator Exclusions

1. Patients that expire while on the service with a home health agency are excluded from this measure as they would not have a complete quality episode.

2. Patients without an assessment completed at the start or resumption of care and an assessment completed at the end of care are excluded.

3. Patients are excluded if none of the assessments has a usable response for M1313a, M1313b, or M1313c.

2.2.5 Numerator

The numerator is the number of patients with a complete quality episode for which the assessment completed at the end of care indicates one or more new or worsened Stage 2-4 pressure ulcers compared to the admission assessment.

Where on any assessment:

1. Stage 2 (M1313a) > [0], OR
2. Stage 3 (M1313b) > [0], OR
3. Stage 4 (M1313c) > [0].

2.2.6 Measure Time Window

The measure will be calculated quarterly using rolling 12 months of data. All complete quality episodes, except those that meet the exclusion criteria, during the 12 months will be included in the denominator and are eligible for inclusion in the numerator. For patients with multiple episodes during the 12-month time window, each episode is eligible for inclusion in the measure.

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[19] Centers for Medicare & Medicaid Services (CMS). Medicare program; changes to the hospital inpatient prospective payment system and fiscal year 2008 rates. Fed Register. August 22, 2007;72(162):47205.

[20] Advancing Excellence in America's Nursing Homes (AEANH).Explore our goals.. n.d. Available from https://www.nhqualitycampaign.org/goals.aspx

[21] Kandilov AMG, Coomer NM, Dalton K. (2014) The impact of hospital-acquired conditions on Medicare program payments. MMRR 4(4): E1-E23

2.2.7 Risk Adjustment Covariates

This measure will be risk-adjusted based on an evaluation of potential covariates and their statistically significant impact on the outcome. Anticipated covariates include:

1. Indicator of supervision/touching assistance or more at SOC/ROC for functional mobility item Lying to Sitting on Side of Bed (GG0170C):

   Covariate = [1] (yes) if GG0170C = [01, 02, 03, 04, 07, 09, 88]

   Covariate = [0] (no) if GG0170C = [05, 06, -]

2. Indicator of bowel incontinence at least occasionally on the initial assessment (M1620):
   Covariate = [1] if M1620 = [2, 3, 4, 5]
   Covariate = [0] if M1620 = [0, 1, NA , UK]

3. Have diabetes mellitus, peripheral vascular disease or peripheral arterial disease:
   Covariate = [1] (yes) if any of the following are true: M1028 = [1] (checked) or M1028 = [2] (checked)
   Covariate = [0] (no) if M1028 = [^] (Valid skip)

4. Indicator of Low Body Mass Index, based on Height (M1060a) and Weight (M1060b) on the SOC/ROC assessment:

   Covariate = [1] (yes) if BMI ≥ [12.0] AND ≤ [19.0]

   Covariate = [0] (no) if BMI > [19.0]

   Covariate = [0] (no) if M1060a = [-] OR M1060b = [-] OR BMI < [12.0], ('-' = No response available)

   Where: BMI = (weight * 703 / height2) = ((M1060b) * 703) / (M1060a2) and the resulting value is rounded to one decimal.

2.2.8 Quality Measure Calculation Algorithm

The following steps are used to calculate the measure:

A. Calculate the agency observed score (steps 1 through 3)

Step 1. Calculate the denominator count:

Calculate the total number of patients with a selected target OASIS assessment in the measure time window, who do not meet the exclusion criteria.

Step 2. Calculate the numerator count:

Calculate the total number of patients in the denominator whose OASIS assessments indicates one or more new or worsened pressure ulcers at discharge compared to start or resumption of care.

Step 3. Calculate the agency's observed score:

Divide the agency's numerator count by its denominator count to obtain the agency's observed score; that is, divide the result of step 2 by the result of step 1.

B. Calculate the expected score for each patient (steps 4 and 5)

Step 4. Determine presence or absence of the pressure ulcer covariates for each patient:

Assign covariate values, either '0' for covariate condition not present or '1' for covariate condition present, for each patient for each of the covariates as reported on the initial assessment, as described in the section above.

Step 5. Calculate the expected score for each patient with the following formula:

[1] Patient-level expected QM score = 1/ [1+e^{-x}]

Where e is the base of natural logarithms and X is a linear combination of the constant and the logistic regression coefficients times the covariate scores (from Formula [2], below).

[2] QM triggered (yes=1, no=0) = B0 + B1*COVA + B2*COVB + … BN*COVN

Where B0 is the logistic regression constant, B1 is the logistic regression coefficient for the first covariate (where applicable), COVA is the patient-level score for the first covariate, B2 is the logistic regression coefficient for the second covariate, and COVB is the patient level score for the second covariate (where applicable), etc. The regression constant and regression coefficients* are numbers obtained through statistical logistic regression analysis.

* Regression coefficients and constants are updated each reporting period.

C. Calculate the agency expected score (step 6)

Step 6. Once an expected QM score has been calculated for all patients, calculate the mean agency-level expected QM score by averaging all patient-level expected scores.

D. Calculate national mean QM score (steps 7 through 9)

Step 7. Calculate the denominator count:

Calculate the total number of patients retained after exclusions and sum for the nation. Note that the sample will include only those patients with non-missing data for the component covariates.

Step 8: Calculate the numerator count:

Calculate the total number of patients that triggered the QM and sum for the nation.

Step 9: Calculate national mean observed QM score:

Divide the numerator count by its denominator count to obtain the nation's observed score; that is, divide the result of step 4.1 by the result of step 4.2.

E. Calculate the agency-level adjusted score (step 10)

Step 10. Calculate the agency-level adjusted score based on the:

agency-level observed QM score (step 3),

agency-level average expected QM score (step 6), and

*national average observed QM score (step 9).

**The national observed QM* means *are updated each reporting period.*

The calculation of the adjusted score uses the following equation:

[3] Adj = 1/ [1 + e^{-y}]

where

Adj is the agency-level adjusted QM score, and

y = (Ln(Obs/(1–Obs)) - Ln(Exp/(1–Exp)) + Ln(Nat/(1–Nat)))

Obs is the agency-level observed QM rate,

Exp is the agency-level expected QM rate,

Nat is the national observed QM rate,

Ln indicates a natural logarithm, and

e is the base of natural logarithm.