*Pressure Ulcer* (PU) Healing or Closure (not on the lower extremity )*

## MEASURE ID: USWR 31

### MEASURE DESCRIPTION:
Percentage of Stage 2, 3, or 4 pressure ulcers* (not on the lower extremity) among patients aged 18 or older that achieve healing or closure within 6 months, stratified by the Wound Healing Index (WHI). Healing or closure may occur by delayed secondary intention or may be the result of surgical intervention (e.g., rotational flap or skin graft). Lower extremity pressure ulcers are not included in this measure because they commonly overlap with arterial and diabetic foot ulcers and require a separate risk stratification model.

[Note: The National Pressure Injury Advisory Panel (NPIA) (formerly the NPUAP) has renamed pressure ulcers “pressure injuries,” but the ICD-10-CM continues to use the term pressure “ulcers”. This measure is limited to open defects (stages 2, 3, 4) which heal by secondary intention or surgical closure, typically referred to as ulcers. We have chosen to use the ICD10 terminology of "ulcers".]

### DENOMINATOR:
Stage 2, 3, or 4 Pressure Ulcers among patients aged 18 years and older which are not on the lower extremities, and the outcome of which are known.

### NUMERATOR:
Pressure Ulcers within the denominator that achieved healing or closure within 6 months of the initial encounter (including surgical closure).

### DENOMINATOR EXCLUSIONS:
Palliative care patients, hospice patients, unstageable pressure ulcers, stage 1 pressure ulcers, deep tissue injuries (DTI), pressure ulcers of any stage that are on the lower extremity, patients seen only one time or for consultation only, and patients for whom the data are not sufficient to calculate a WHI score.

### DENOMINATOR EXCEPTIONS:
None

### NUMERATOR EXCLUSIONS:
None

### HIGH PRIORITY MEASURE:
Yes

### HIGH PRIORITY TYPE:
Outcome

### MEASURE TYPE:
Outcome

### NQS DOMAIN:
Person and Caregiver Centered Experience and Outcomes

**SUBMISSION PATHWAY:**
Traditional MIPS

**PUBLISHED CLINICAL CATEGORY:**
Wound Care

**INCLUDES TELEHEALTH:**
No

**CARE SETTING:**
Ambulatory Care: Clinician Office/Clinic; Ambulatory Care: Hospital

**SPECIALTIES:**
Wound Care

**MEANINGFUL MEASURE AREA:**
Functional Outcomes

**MEANINGFUL MEASURE AREA RATIONALE:**
Healing a Pressure Ulcer can have a significant effect on quality of life, activities of daily living, life expectancy, and hospitalization rate.

**MEASURE CALCULATION TYPE:**
Proportional Measure

**NUMBER OF PERFORMANCE RATES:**
4

**PERFORMANCE RATE DESCRIPTION:**
There are four rates reported for this measure. Three of the rates will be risk stratified into risk categories using the Wound Healing Index for pressure ulcers (non-heel) which roughly represent: 1) pressure ulcers likely to heal with conservative care, 2) pressure ulcers which may or may not heal, 3) pressure ulcers which are unlikely to heal. The average of the three risk stratified buckets which will be the performance rate in the XML submitted.

**INDICATE OVERALL PERFORMANCE RATE:**
1st Performance Rate

**RISK ADJUSTED STATUS:**
Yes

**RISK ADJUSTED INDICATION:**
Performance rates 1, 2 and 3.

**CLINICIAN TESTED QCDR MEASURE:**
Yes

**CLINICAL RECOMMENDATION STATEMENT:**
Pressure ulcer healing rate should be honestly reported and this requires a risk stratification that includes both patient and wound factors since the average pressure ulcer patient has at least 2 major comorbid conditions affecting outcome.

**QCDR MEASURE RATIONALE:**

Pressure ulcers affect at least 1.8% of Medicare beneficiaries and the associated annual cost to Medicare is in the billions. The most optimistic healing rate for pressure ulcers is likely 40% based on prospective trials data but could be as low as 30% at 12 weeks based on real-world patient data. The only quality measures currently available in the QPP relevant to pressure ulcers is a measure to count and stage them. No CMS quality program measures pressure ulcer outcome. It is fitting to create such a measure for practitioner reporting because analysis of Medicare claims data show that the majority of Medicare costs associated with pressure ulcer care occur in the outpatient setting. (Nussbaum, et al., Value in Health 21(1): 2017) Reporting pressure ulcer outcome by WHI enables the honest reporting of wound outcome by ensuring that practitioners caring for the sickest patients do not appear to have outcomes worse than their peers whose patients are not as sick. Risk stratification also makes it possible to determine whether specific interventions impact pressure ulcer healing rate.

**STUDY CITATION:**

Many wound care practitioners report "healing rates" as a measure of their success, typically reporting rates >90% based on a national analysis of publicly reported healing rates, Publicly reported data have been vetted to exclude patients who do not heal so that so that the apparent success of the program/practitioner is not impacted by patients unlikely to do well. Clinical trial data suggest the actual pressure ulcer healing rate is 40% and real-world data suggest it is even lower. The average pressure ulcer patient has at least 2.5 pressure ulcers and 2 major co-morbid conditions which profoundly impact pressure ulcer development and healing (e.g., paralysis, malnutrition, dementia, etc.), thus risk stratification must include both wound and patient level factors.

In 2013, the USWR developed and validated a risk stratification for pressure ulcers after analyzing 6640 body PrUs, of which 4300 healed (64.8%). The 10% validation sample included 709 PrUs, of which 477 healed (67.3%). Variables significantly predicting healing were PrU size, PrU age, number of concurrent wounds of any etiology, PrU Stage III or IV, evidence of bioburden/ infection, patient age, being non-ambulatory, having dialysis or renal transplant and being hospitalized for any reason during the treatment course. Additional variables found significant in the model were the comorbid conditions of paralysis, insulin dependent diabetes and malnutrition.

The Wound Healing Index (WHI) for pressure ulcers of the trunk (excluding the lower extremities) has been validated in 2 peer reviewed studies and has been used since 2015 to create matched cohorts for comparative effectiveness studies. A separate risk stratification exists for pressure ulcerations of the lower extremities due to the impact of arterial disease on pressure ulcers of the extremities so they were excluded from this measure. The importance of Risk Stratification in reporting wound healing rates was demonstrated in a peer reviewed article evaluating the way that healing rates are publicly reported which differ dramatically from those from clinical trials and real-world data. Reporting Pressure Ulcer healing stratified by the WHI enables honest reporting of healing rates.


1. Fife CE, Eckert KA, Carter MJ. Publicly Reported Healing Rates: The Fantasy and the Reality. 7(37): 77-94, 2018.
2. Horn S, Fife CE, Barret R, Thomson B. A Predictive Model for Pressure Ulcer Outcome: The Wound Healing Index. Adv Skin Wound Care. 28(12): 560-572, 2015.
3. Horn SD, Fife CE, Smout RJ, Barrett RS, Thomson B. Development of a Wound Healing Index for Patients with Chronic Wounds. Wound Rep Reg. 21; 823-832, 2013. 2.