

PSI 38: Decubitus Ulcer	
Review of OECD PSI/AHRQ/CIHI PSI (3;33)	
Dimension	Description
Description of Specific Aspects of Patient Safety	Decubitus ulcers or bedsores are a common complication of inadequate care for immobilised patients. The occurrence of a decubitus ulcer in a hospitalised patient has a serious negative impact on the individual’s health and often leads to a much prolonged hospital stay. Decubitus ulcers can be prevented with good quality nursing care. Thus, the indicator has great clinical plausibility as a patient safety measure.
Aim of the PSI	This PSI is intended to flag cases of in-hospital decubitus ulcers.
Level of Determination of Patient Safety	Safety is assessed at the aggregated patient level.
Source(s)	This indicator was originally proposed by Iezzoni et al. as part of the Complications Screening Program (CSP 6, “cellulitis or decubitus ulcer”). Needleman and Buerhaus identified decubitus ulcer as an “outcome potentially sensitive to nursing” The American Nurses Association, its State associations, and the California Nursing Outcomes Coalition have identified the total prevalence of inpatients with Stage I, II, III, or IV pressure ulcers as a “nursing-sensitive quality indicator for acute care settings” (3).
Extent of Clinically Testing	<p>The OECD Health Care Quality Indicators (HCQI) Project was initiated to implement quality measures for international benchmarking of medical care at the health system level. Five priority areas including patient safety were selected. International expert panels were formed to identify clinically important, scientifically sound, and feasible measures based on a structured consensus process. The consensus process was successfully completed in all five priority areas leading to a recommendation of 86 indicators of which 21 covered patient safety (34).</p> <p>The project team developing the AHRQ PSI conducted extensive empirical analyses on this PSI. The team concluded that this PSI generally performs well on several different dimensions, including reliability, bias, relatedness of indicators, and persistence over time. (3).</p> <p>While the indicator was found to be well operationalised, the biggest threat to construct validity is the inability to precisely distinguish between pre-existing and hospital-acquired decubitus ulcers on the basis of administrative data (33)</p> <p>The AHRQ PSI software was applied to Veteran Affairs (VA) administrative data to identify potential instances of compromised patient safety; determine occurrence rates of PSI events in the VA; and examine the construct validity of the PSIs.</p>

	<p>The study population was 97% male, with a mean age of 65 years, 54% were age 65 and older. Mean length of stay was 7.1.days. All together 11411 PSI events were identified, 46% of PSI events occurred in surgical hospitalisation and 54% in medical hospitalisation. The observed PSI rate per 1000 discharges was 15.41 the highest of all for decubitus ulcer. This PSI was not significantly associated with any other PSI studied. Statistically differences were found for hospitalisations with this PSI events and those without PSI events for longer lengths of stay, higher mortality and higher costs (4).</p> <p>The performance of the AHRQ PSIs was analysed to: 1) provide a descriptive analysis of the incidence of PSI events from 2001 to 2004 in the VA; 2) examine trends in national PSI rates at the hospital discharge level over time; and 3) assess whether hospital characteristics (e.g., teaching status, number of beds, and degree of quality improvement implementation) and baseline safety-related hospital performance predict future hospital safety-related performance. Risk-adjusted rates of the PSI for iatrogenic pneumothorax and failure to rescue demonstrated a consistent rate over time. After accounting for patient and hospital characteristics, hospitals' baseline risk-adjusted PSI rates were the most important predictors of the 2004 risk-adjusted rates for eight PSIs among these decubitus ulcer. It was concluded, that the PSIs are useful tools for tracking and monitoring patient safety events. Future research should investigate whether trends reflect better or worse care or increased attention to documenting patient safety events (5).</p> <p>Administrative data from community hospitals in 16 US states with reliable race/ethnicity measures using the AHRQ PSIs was analysed to determine whether racial and ethnic differences in patient safety events disappear when income (a proxy for socioeconomic status) is taken into account. No differences in the occurrence of this PSI event were found according to race. It was concluded that: "The AHRQ PSIs are a broad screen for potential safety events that point to needed improvement in the quality of care for specific populations" (7).</p> <p>AHRQ is determining the feasibility and practicality in a project concerning validation of selected AHRQ Quality Indicators (8). The results suggest that this PSI may be useful as a measure of patient safety (3-5;7;8;33;34).</p>
Evidence of Clinically use of Standards	No evidence of clinically use of standards was found.
PSI category	Institution-wide PSI.
Data definitions	Cases of decubitus ulcer per 1000 discharges with a length of stay greater than 4 days.
Numerator Description	Discharges with ICD-9-CM code of decubitus ulcer in any secondary diagnosis field.

Denominator Description	<p>All medical and surgical discharges 18 years and older defined by specific DRGs.</p> <p>Exclude cases:</p> <ul style="list-style-type: none"> – with length of stay of less than 5 days – with ICD-9-CM code of decubitus ulcer in the principal diagnosis field – MDC 9 (Skin, Subcutaneous Tissue, and Breast) – MDC 14 (pregnancy, childbirth, and puerperium) – with any diagnosis of hemiplegia, paraplegia, or quadriplegia – with an ICD-9-CM diagnosis code of spina bifida or anoxic brain damage – with an ICD-9-CM procedure code for debridement or pedicle graft before or on the same day as the major operating room procedure (surgical cases only) – admitted from a long-term care facility (Admission Source=3) – transferred from an acute care facility (Admission Source=2)
Data Source	Administrative data.
Identifying the institutional context	The impact of decubitus makes this PSI important for both financial and quality improvement policies.
Care Setting	The PSI applies for high quality nursing care.
Professionals Responsible for Health Care	Nurses.
Lowest Level of Health Care Delivery Addressed	Individual clinical department.
Allowance for Patient Factors	Risk adjustment for : Age, sex, DRG, comorbidity categories
Stratification by Vulnerable Populations	No stratification.
Standard of Comparison	No specific standards given.
Scoring	AHRQ has PSI software for scoring.