PSI # 6: Iatrogenic Pneumothorax

**NQF#:** 0346  
**Developer:** Agency for Healthcare Research and Quality (AHRQ)  
**Data Source:** CMS  

**Description:** This measure is used to assess the number of cases of iatrogenic pneumothorax (secondary diagnosis) per 1,000 surgical and medical discharges among patients aged 18 years and older.

**Rationale:** Widespread consensus exists that health care organizations can reduce patient injuries by improving the environment for safety from implementing technical changes, such as electronic medical record systems, to improving staff awareness of patient safety risks. Clinical process interventions also have strong evidence for reducing the risk of adverse events related to a patient’s exposure to hospital care. Patient Safety Indicators (PSIs), which are based on computerized hospital discharge abstracts from the AHRQ’s Healthcare Cost and Utilization Project (HCUP), can be used to better prioritize and evaluate local and national initiatives. Analyses of these and similar inexpensive, readily available administrative data sets may provide a screen for potential medical errors and a method for monitoring trends over time. The iatrogenic pneumothorax indicator is intended to flag cases of pneumothorax caused by medical care. Iatrogenic pneumothorax excludes all trauma patients because these patients may be more susceptible to non-preventable iatrogenic pneumothorax or may be miscoded for traumatic pneumothorax.

**Evidence for Rationale:**

**Numerator:** Discharges with ICD-9-CM code for iatrogenic pneumothorax in any secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator. (See measure specifications)

**Denominator:** All surgical and medical discharges, for patients aged 18 years and older, defined by specific DRGs or MS-DRGs. Exclude cases: with principal diagnosis of iatrogenic pneumothorax or secondary diagnosis present on admission; MDC 14 (pregnancy, childbirth, puerperium); with any diagnosis code for specified chest trauma (rib fractures, traumatic pneumothorax and related chest wall injuries) or pleural effusion; with a code of diaphragmatic surgery repair in any procedure field; with any code indicating thoracic surgery, lung or pleural biopsy, or cardiac surgery; missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)

**Impact:**  
- Affects all surgical inpatients.

**Opportunity:**  
- Opportunity for improvement exists, based on the coefficient of variation for the measure.

**Evidence:**  
- The evidence has not been formally assessed.