

Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Pneumonia (PN) Hospitalization

Evidence: Peer-Reviewed Original Research (Search Strategy)

We searched the PubMed MEDLINE database. Conceptually, we designed our search strategy to link the measure condition of interest to the outcome of interest by using search terms (Medical Subject Headings [MeSH] and key words) for the two primary search parameters — condition and outcome. The search period used for all mortality measures was November 1, 2020, through October 31, 2021.

Search criteria for each measure were initiated in the PubMed MEDLINE database. Articles that met the search criteria during the period selected were automatically imported to our EndNote libraries and Microsoft Access databases for each measure. We then systematically determined if the articles met more specific criteria for inclusion in our text review, excluding those articles that met any of the following:

Exclusion criteria:

- Is not written in English
- Does not focus on humans (for example, about cellular/molecular studies) or healthcare systems
- Is focused on drug, device, surgical, or behavioral interventions
- Is a literature review, has no primary data, or is a case report/series *OR* is a comment letter, editorial, or opinion piece that is NOT in response to a primary article related to our quality measure(s)
- Full text of article is not available
- Wrong population (for example, article focused on children, pregnant women, cancer, or psychiatric patients, or exclusively on patients less than 65 years old)
- A study conducted outside of the United States (only for studies related to quality measurement or healthcare system structure)
- Article not about inpatient acute care hospitals (for example, article about rehabilitation, long-term care, or psychiatric hospitals)
- Article focused solely on clinical predictors (for example, lab values, behavior, and diagnostic test results) not captured in claims data
- Article focused solely on processes of care (for example, patients get prescribed treatment, patient transfer patterns, Emergency Medical Services [EMS])
- Not related to the measure or the outcome (for example, mortality or readmissions) of interest

Our process first entails review of articles for exclusion criteria. Articles that are not excluded based on these criteria and are potentially relevant to our outcome measures are identified for further review if necessary. Once we have identified the most relevant articles, they are grouped into categories based on the content of the articles. These categories include:

- Cohort Definition (inclusion/exclusion)
- International Statistical Classification of Diseases (ICD)-10 Transition/Coding
- Methodological/Statistical Approach
- Outcome Assessment
- Patient Case Mix/Risk-Adjustment Issues (including socioeconomic status [SES])
- Policy Implications

- Unintended Consequences
- Validity or Reliability
- Other

If we determine that the article fits into at least one category or should be designated a new category, we place the article in that category and provide their rationale. In addition to articles identified using the literature search strategy, we ask our measure experts to provide sentinel articles that they may have identified in their own review of the literature published during the search periods, ensuring we had captured any pertinent articles published between November 1, 2020, and October 31, 2021.

PubMed Search Terms:

((("Pneumonia/mortality"[MeSH Major Topic] OR "Pneumonia/physiopathology"[MeSH Major Topic] OR "Pneumonia/diagnosis"[MeSH Major Topic] OR "Pneumonia/therapy"[MeSH Major Topic] OR "Pneumonia/epidemiology"[MeSH Major Topic] OR "pneumonia"[tiab]) AND ("30-day"[all fields] OR "thirty day"[all fields] OR "30 day"[all fields]) AND ("survival rate/trends"[MeSH Major Topic] OR "Hospital mortality/trends"[MeSH Major Topic] OR "mortality"[tiab] OR "morbidity/trends"[MeSH Major Topic]) NOT ("surgery"[ti] OR "lower extremity"[ti] OR "aortic"[ti] OR "repair"[ti] OR "cancer"[ti] OR "surgical"[ti] OR "surgery"[ti] OR "arthroplasty"[ti] OR "valve replacement"[ti] OR "graft*"[ti] OR "resection"[ti] OR "undergoing"[ti] OR "therapy"[ti] OR "bacter*"[ti] OR "clinical effectiveness"[tiab] OR "fracture*"[ti] OR "ablation"[ti] OR "orthopedic"[ti] OR "levels"[ti] OR "etiolog*"[ti] OR "neutrophil*"[ti] OR "serum"[ti] OR "lumbar"[ti] OR "stroke"[ti] OR "efficacy"[ti] OR "trial*"[ti] OR "multidrug*"[ti] OR "multi-drug"[ti] OR "bypass"[ti] OR "intraoperative"[ti]) AND (("2020/11/01"[mhda] : "2021/10/31"[mhda]) OR ("2020/11/01"[PDAT] : "2021/10/31"[PDAT])))