

****NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE****

Measure Information Form

Measure Set: Pneumonia (PN)

Set Measure ID #: PN-2

Performance Measure Name: Pneumococcal Vaccination

Description: Pneumonia patients, age 65 and older, who were screened for pneumococcal vaccine status and were administered the vaccine prior to discharge, if indicated.

Rationale: Pneumococcal vaccination is indicated for persons 65 years of age and older, because it is up to 75% effective in preventing pneumococcal bacteremia and meningitis. It is also an important vaccine due to increasing antibiotic resistance among pneumococci. In the United States today, vaccine coverage is suboptimal. Although inpatient vaccine screening and administration are recommended, hospitalization is an underutilized opportunity for adult vaccination.

Type of Measure: Process

Improvement Noted as: An increase in the rate

Numerator Statement: Patients with pneumonia, age 65 and older, who were screened for pneumococcal vaccine status and were vaccinated prior to discharge, if indicated

Included Populations: Not Applicable

Excluded Populations: None

Data Elements:

Pneumococcal Vaccination Status

Denominator Statement: Pneumonia patients 65 years of age and older

Included Populations: Discharges:

- Who were age 65 years and older
- With an *ICD-9-CM Principal Diagnosis Code* of pneumonia as defined in Appendix A, Table 3.1 OR *ICD-9-CM Principal Diagnosis Code* of septicemia or respiratory failure (acute or chronic) as defined in Appendix A, Tables 3.2, or 3.3
AND
- With an *ICD-9-CM Other Diagnosis Code* of pneumonia (Appendix A, Table 3.1)

Excluded Populations:

- Patients who had no working diagnosis of pneumonia at the time of admission
- Patients receiving *Comfort Measures Only*
- Patients who expired in the hospital
- Patients who left against medical advice (AMA)
- Patients who were discharged to hospice care
- Patients who were transferred to another short term general hospital for inpatient care
- Patients who were discharged to a federal hospital
- Patients less than 65 years of age
- Patients who had no chest x-ray or CT scan that indicated positive infiltrate within 24 hours prior to hospital arrival or anytime during this hospitalization

Data Elements:

- *Admission Date*
- *Birthdate*
- *Chest X-ray*
- *Comfort Measures Only*
- *Discharge Status*
- *ICD-9-CM Other Diagnosis Codes*
- *ICD-9-CM Principal Diagnosis Code*
- *Pneumonia Working Diagnosis on Admission*

Risk Adjustment: No

Data Collection Approach: Retrospective, data sources for required data elements include administrative data and medical record documents. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal and other ICD-9-CM diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy:

- Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.
- Recent revisions to the ICD-9-CM codes now include V codes for prophylactic vaccination against pneumonia (V03.82 Need for prophylactic vaccination and inoculation against bacterial diseases – *Streptococcus pneumoniae* {pneumococcus}, V06.6 *Streptococcus pneumoniae* {pneumococcus} and influenza). Programmers may want to include this in the measure's algorithm so that hospitals, if they wish, can take advantage of this efficiency.

Measure Analysis Suggestions: None

Sampling: Yes, for additional information see the Sampling Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion

Selected References:

- Bartlett JG, Dowell SF, Mandell LA, et al. Practice guidelines for the management of community-acquired pneumonia in adults. Infectious Diseases Society of America. *Clin Infect Dis*. 2000;31:347-382.
- Bratzler DW, Houck PM, Jiang H, et al. Failure to vaccinate Medicare inpatients: a missed opportunity. *Arch Intern Med* 2002;162:2349-2356.
- Centers for Disease Control and Prevention. General recommendations on immunization. Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Family Physicians (AAFP). *MMWR*. 2002;51(RR02):1-36.
- Fedson DS, Houck PM, Bratzler D. Hospital-based influenza and pneumococcal vaccination: Sutton's Law applied to prevention. *Infect Control Hosp Epi*. 2000;21:692-699.
- Fine MF, Smith MAA, Carson CA, Meffe P, Sankery SS, Weissfeld LA, Detsky AS, Kapoor WN. Efficacy of pneumococcal vaccination in adults: a meta-analysis of randomized controlled trials. *Arch Intern Med*. 1994(December); 154:2666-2677.
- Kissam S, Gifford DR, Patry G, et al. Is signed consent for influenza or pneumococcal polysaccharide vaccination required? *Arch Intern Med* 2004; 164:13-16.
- Mandell LA, Bartlett JG, Dowell SF, et al. Update of practice guidelines for the management of community-acquired pneumonia in adults. Infectious Diseases Society of America. *Clin Infect Dis*. 2003;37:1405-1433.
- Niederman MS, Mandell LA, Anzueto A, et al. Guidelines for the management of adults with community-acquired pneumonia. American Thoracic Society. *Am J Respir Crit Care Med*. 2001; 163:1730-1754.
- Sisk JE, Moskowitz AJ, Whang W, et al. Cost-effectiveness of vaccination against pneumococcal bacteremia among elderly people. *JAMA*, 1997; 278:1333-1339.

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