



Complete Summary

TITLE

Pneumonia: percent of patients who received influenza vaccination.

SOURCE(S)

Centers for Medicare and Medicaid Services (CMS). 7th statement of work (SOW). Quality of care measure specifications: Pneumonia (PNE). Baltimore (MD): Centers for Medicare and Medicaid Services (CMS); 2002 Sep 30. Various p.

Brief Abstract

DESCRIPTION

Pneumonia patients 50 years and older, hospitalized during October, November, December, January, or February who were screened for influenza vaccine status and were vaccinated prior to discharge, if indicated

RATIONALE

Influenza vaccination is indicated for people age 50 years and older because it is highly effective in preventing influenza-related pneumonia, hospitalization, and death. Vaccine coverage in the United States is suboptimal. Screening and vaccination of inpatients is recommended, but hospitalization is an underutilized opportunity to provide vaccination to adults.

PRIMARY CLINICAL COMPONENT

Pneumonia; influenza vaccination

DENOMINATOR DESCRIPTION

All pneumonia patients age 50 and older (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Patients discharged during October, November, December, January, or February with pneumonia, age 50 and older, who were screened for influenza vaccine status and were vaccinated prior to discharge, if indicated

Evidence Supporting the Measure

PRIMARY MEASURE DOMAIN

Process

SECONDARY MEASURE DOMAIN

Not applicable

EVIDENCE SUPPORTING THE MEASURE

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Overall poor quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Centers for Medicare and Medicaid Services (CMS). 7th statement of work (SOW). Quality of care measure specifications: Pneumonia (PNE). Baltimore (MD): Centers for Medicare and Medicaid Services (CMS); 2002 Sep 30. Various p.

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Collaborative inter-organizational quality improvement
Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Age greater than or equal to 50 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Many investigators have found substantial racial disparities in vaccination rates for minority populations. African American and Native American patients have the lowest rates of influenza vaccination. This disparity largely reflects differences in ambulatory vaccination rates. Lack of access to primary care, limited awareness of need for vaccination, and misconceptions about vaccination have been implicated as possible reasons for racial disparity in immunization rates. This suggests that hospitalization may be a particularly opportune time to vaccinate minority patients.

EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS

Bratzler DW, Houck PM, Jiang H, Nsa W, Shook C, Moore L, Red L. Failure to vaccinate Medicare inpatients: a missed opportunity. Arch Intern Med 2002 Nov 11;162(20):2349-56. [PubMed](#)

BURDEN OF ILLNESS

In the United States (U.S.) pneumonia is the sixth most common cause of death. From 1979-1994, the overall rates of death due to pneumonia and influenza increased by 59%. Much of this increase is due to a greater population of persons aged 65 years or older, and a changing epidemiology of pneumonia, including a greater proportion of the population with underlying medical conditions at increased risk of respiratory infection. More than 1.1 million hospitalizations due to pneumonia each year in the U.S.

Influenza and pneumococcal vaccines are underutilized for Americans aged 65 years and older. Based on the 1999 Behavioral Risk Factor Surveillance System (BRFSS) survey, 66.9% received the influenza vaccine during the previous 12 months and 54.1% had ever received the pneumococcal vaccine. This underutilization is not without consequences. Influenza causes more than 100,000 excess hospitalizations and 20,000 deaths each year. Infection due to *Streptococcus pneumoniae* accounts for at least 500,000 cases of pneumonia and 50,000 cases of bacteremia in the United States each year. The combined reporting category of influenza and pneumonia represents the fifth leading cause of death for this age group.

EVIDENCE FOR BURDEN OF ILLNESS

Bartlett JG, Dowell SF, Mandell LA, File Jr TM, Musher DM, Fine MJ. Practice guidelines for the management of community-acquired pneumonia in adults. Infectious Diseases Society of America. Clin Infect Dis 2000 Aug; 31(2): 347-82. [218 references] [PubMed](#)

Bratzler DW, Houck PM, Jiang H, Nsa W, Shook C, Moore L, Red L. Failure to vaccinate Medicare inpatients: a missed opportunity. Arch Intern Med 2002 Nov 11; 162(20): 2349-56. [PubMed](#)

Influenza and pneumococcal vaccination levels among persons aged > or = 65 years--United States, 1999. MMWR Morb Mortal Wkly Rep 2001 Jun 29; 50(25): 532-7. [PubMed](#)

Niederman MS, Mandell LA, Anzueto A, Bass JB, Broughton WA, Campbell GD, Dean N, File T, Fine MJ, Gross PA, Martinez F, Marrie TJ, Plouffe JF, Ramirez J, Sarosi GA, Torres A, Wilson R, Yu VL. Guidelines for the management of adults with community-acquired pneumonia. Diagnosis, assessment of severity, antimicrobial therapy, and prevention. Am J Respir Crit Care Med 2001 Jun; 163(7): 1730-54. [PubMed](#)

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Medicare discharges, age 50 years and older who were discharged during October, November, December, January, or February, with a principal diagnosis of pneumonia or a principal diagnosis of respiratory failure or sepsis with a secondary diagnosis of pneumonia

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR (INDEX) EVENT

Clinical Condition
Institutionalization

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Medicare discharges with:

- A principal diagnosis of pneumonia (International Classification of Disease, Ninth Edition, Clinical Modification [ICD-9-CM] codes of 480.0 through 483.8, 485 through 486, or 487.0) OR
- A principal diagnosis of septicemia, or respiratory failure (acute or chronic) failure (ICD-9-CM codes 038.XX or 518.81), AND a secondary diagnosis of pneumonia.
- Medicare inpatients who are age 50 years and older who were discharged during October, November, December, January, or February

Exclusions

- Patients who were transferred from another acute care or critical access hospital
- Patients who had no working diagnosis of pneumonia at the time of admission
- Patients who received comfort measures only
- Patients who expired in the hospital
- Patients who left the hospital against medical advice (AMA)
- Patients who were discharged to hospice care
- Patients with a principal or secondary diagnosis of 487.0 (influenza with pneumonia)
- Patients who were transferred to another short-term general hospital for inpatient care

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Patients discharged during October, November, December, January, or February with pneumonia, age 50 years or older, which were screened for influenza vaccine status and were vaccinated prior to discharge, if indicated

Exclusions

Unspecified

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR TIME WINDOW

Institutionalization

DATA SOURCE

Administrative and medical records data

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Influenza vaccination.

MEASURE COLLECTION

[7th Statement of Work Quality of Care Measure Specifications](#)

MEASURE SET NAME

[Pneumonia \(PNE\)](#)

DEVELOPER

Centers for Medicare and Medicaid Services

ENDORSER

National Quality Forum

INCLUDED IN

National Healthcare Disparities Report (NHDR)
National Healthcare Quality Report (NHQR)

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2002 Sep

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

Centers for Medicare and Medicaid Services (CMS). 7th statement of work (SOW).
Quality of care measure specifications: Pneumonia (PNE). Baltimore (MD):
Centers for Medicare and Medicaid Services (CMS); 2002 Sep 30. Various p.

MEASURE AVAILABILITY

The individual measure, "PNE-4: Influenza Vaccination," is published in "Centers for Medicare/Medicaid Services, 7th Statement of Work, Quality of Care Measure Specifications: Pneumonia."

For more information, e-mail CMS PROINQUIRIES at proinquiries@cms.hhs.gov.

COMPANION DOCUMENTS

A software application designed for the collection and analysis of quality improvement data, the CMS Abstraction and Reporting Tool (CART), is available from the [CMS CART Web site](#). Supporting documentation is also available.

For more information, e-mail CMS PROINQUIRIES at proinquiries@cms.hhs.gov.

NQMC STATUS

This NQMC summary was completed by ECRI on January 6, 2003. The information was verified by the Centers for Medicare/Medicaid Services on March 14, 2003.

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