Quality ID #111: Pneumococcal Vaccination Status for Older Adults
– National Quality Strategy Domain: Community/Population Health
– Meaningful Measure Area: Preventive Care

2022 COLLECTION TYPE:
MEDICARE PART B CLAIMS

MEASURE TYPE:
Process

DESCRIPTION:
Percentage of patients 66 years of age and older who have ever received a pneumococcal vaccine

INSTRUCTIONS:
This measure is to be submitted a minimum of once per performance period for patients seen during the performance period. There is no diagnosis associated with this measure. Performance for this measure is not limited to the performance period. This measure may be submitted by Merit-based Incentive Payment System (MIPS) eligible clinicians who perform the quality actions described in the measure based on services provided and the measure-specific denominator coding.

NOTE: Patient encounters for this measure conducted via telehealth (e.g., encounters coded with GQ, GT, 95, or POS 02 modifiers) are allowable.

Measure Submission Type:
Measure data may be submitted by individual MIPS eligible clinicians using Medicare Part B claims. The listed denominator criteria are used to identify the intended patient population. The numerator quality data codes included in this specification are used to submit the quality actions allowed by the measure on the claim form(s). All measure-specific coding should be submitted on the claim(s) representing the denominator eligible encounter and selected numerator option.

DENOMINATOR:
Patients 66 years of age and older with a visit during the measurement period

DENOMINATOR NOTE: This measure assesses whether patients 66 years of age or older have received one or more pneumococcal vaccinations.

DENOMINATOR NOTE: *Signifies that this CPT Category I code is a non-covered service under the Physician Fee Schedule (PFS). These non-covered services will not be counted in the denominator population for Medicare Part B claims measures

Denominator Criteria (Eligible Cases):
Patients aged ≥ 66 years on date of encounter
AND
Patient encounter during the performance period (CPT or HCPCS): 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99315, 99316, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, 99385*, 99386*, 99387*, 99395*, 99396*, G0438, G0439

NUMERATOR:
Patients who received a pneumococcal vaccination on or after their 60th birthday and before the end of the measurement period; or had an adverse reaction to the vaccine before the end of the measurement period

NUMERATOR NOTE: The measure provides credit for adults 66 years of age and older who have received
the PPSV23 vaccine on or after the patient’s 60th birthday.

Patient reported vaccine receipt, when recorded in the medical record, is acceptable for meeting the numerator.

**Numerator Quality Data Coding Options:**
**Patient receiving Hospice Services, Patient Not Eligible:**

**Denominator Exclusion:** G9707: Patient received hospice services any time during the measurement period

**OR**

**Pneumococcal Vaccination Administered or Previously Received**

**Performance Met:** G9991: Pneumococcal vaccine administered on or after patient’s 60th birthday and before the end of the measurement period

**OR**

**Pneumococcal Vaccination Not Administered for Medical Reasons**

**Performance Met:** G9989: Documentation of medical reason(s) for not administering pneumococcal vaccine (e.g., adverse reaction to vaccine)

**OR**

**Pneumococcal Vaccination not Administered or Previously Received, Reason not Otherwise Specified**

**Performance Not Met:** G9990: Pneumococcal vaccine was not administered on or after patient’s 60th birthday and before the end of the measurement period, reason not otherwise specified

**RATIONALE:**

Pneumococcal disease is a common cause of illness and death in older adults and in persons with certain underlying conditions. The major clinical syndromes of pneumococcal disease include pneumonia, bacteremia and meningitis, with pneumonia being the most common (CDC 2015a). Pneumonia symptoms generally include fever, chills, pleuritic chest pain, cough with sputum, dyspnea, tachypnea, hypoxia tachycardia, malaise and weakness. There are an estimated 400,000 cases of pneumonia in the U.S. each year and a 5%–7% mortality rate, although it may be higher among older adults and adults in nursing homes (CDC 2015b; Janssens and Krause 2004).

Pneumococcal infections result in significant health care costs each year. Geriatric patients with pneumonia require hospitalization in nearly 90 percent of cases, and their average length of stay is twice that of younger adults (Janssens and Krause 2004). Pneumonia in the older adult population is associated with high acute-care costs and an overall impact on total direct medical costs and mortality during and after an acute episode (Thomas et al. 2012). Total medical costs for Medicare beneficiaries during and one year following a hospitalization for pneumonia were found to be $15,682 higher than matched beneficiaries without pneumonia (Thomas et al. 2012). It was estimated that in 2010, the total annual excess cost of hospital-treated pneumonia in the fee-for-service Medicare population was approximately $7 billion (Thomas et al. 2012).

Pneumococcal vaccines have been shown to be highly effective in preventing invasive pneumococcal disease. Studies show that at least one dose of pneumococcal polysaccharide vaccine protects between 50-85 in 100 healthy adults against invasive pneumococcal disease (CDC 2019). When comparing costs, outcomes and quality adjusted life years, immunization with recommended pneumococcal vaccines was found to be more economically efficient than no vaccination, with an incremental cost-effectiveness ratio of $25,841 per quality-adjusted life year gained (Chen et al. 2014).

**CLINICAL RECOMMENDATION STATEMENTS:**
The Advisory Committee on Immunization Practices (ACIP) recommends that all adults age 65 years and older receive one dose of the 23-valent pneumococcal polysaccharide vaccine (PPSV23). The 13-valent pneumococcal conjugate
vaccine (PCV13) is no longer routinely recommended for all adults age 65 years and older. Instead, shared clinical
decision-making for PCV13 use is recommended for persons age 65 years and older who do not have an
immunocompromising condition, CSF leak, or cochlear implant and who have not previously received PCV13. When
patients and vaccine providers engage in shared clinical decision-making for PCV13 use to determine whether PCV13
is right for the specific individual, considerations may include the individual patient’s risk for exposure to PCV13
serotypes and the risk for pneumococcal disease for that person as a result of underlying medical conditions.
If a decision to administer PCV13 is made, it should be administered at least 12 months before PPSV23 (Matanock et
al. 2019).

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2022 Medicare Part B Claims Flow for Quality ID #111:
Pneumococcal Vaccination Status for Older Adults

Disclaimer: Refer to the measure specification for specific coding and instructions to submit this measure.

**Denominator**
- Start
- Patients aged ≥ 66 years on date of encounter:
  - Yes: Include in Eligible Population/Denominator (80 patients)
  - No: Not included in Eligible Population/Denominator

**Numerator**
- Pneumococcal vaccine administered on or after patient’s 60th birthday and before the end of the measurement period:
  - Yes: Data Completeness Met + Performance Met (G9991, 30 patients) = a1
  - No: Documentation of medical reason(s) for not administering pneumococcal vaccine:
    - Yes: Data Completeness Met + Performance Met (G9989, 0 patients) = a2
    - No: Pneumococcal vaccine was not administered on or after patient’s 60th birthday and before the end of the measurement period, reason not otherwise specified:
      - Yes: Data Completeness Met + Performance Not Met (G9990, 40 patients) = c
      - No: Patient received hospice services any time during the measurement period:
        - Yes: Data Completeness Not Met Quality Data Code not submitted (10 patients)

**SAMPLE CALCULATIONS**

\[
\text{Data Completeness} = \frac{\text{Denominator Exclusion (x=0 patients)} + \text{Performance Met (a1+a2=30 patients)} + \text{Performance Not Met (c=40 patients)}}{\text{Eligible Population / Denominator (d=80 patients)}} = \frac{70}{80} = 87.50\% \\
\text{Performance Rate} = \frac{\text{Performance Met (a1+a2=30 patients)}}{\text{Data Completeness Numerator (70 patients) - Denominator Exclusion (x=0 patients)}} = \frac{30}{70} = 42.86\%
\]

* See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Patient-Process
2022 Medicare Part B Claims Flow Narrative for Quality ID #111:
Pneumococcal Vaccination Status for Older Adults

Disclaimer: Refer to the measure specification for specific coding and instructions to submit this measure.

1. Start with Denominator

2. Check Patients aged greater than or equal to 66 years on date of encounter:
   a. If Patients aged greater than or equal to 66 years on date of encounter equals No, do not include in Eligible Population/Denominator. Stop processing.
   b. If Patients aged greater than or equal to 66 years on date of encounter equals Yes, proceed to check Patient encounter during performance period as listed in Denominator*.

3. Check Patient encounter during performance period as listed in Denominator*:
   a. If Patient encounter during the performance period as listed in Denominator* equals No, do not include in Eligible Population/Denominator. Stop processing.
   b. If Patient encounter during the performance period as listed in Denominator* equals Yes, include in Eligible Population/Denominator.

4. Denominator Population:
   a. Denominator Population is all Eligible Patients in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 patients in the Sample Calculation.

5. Start Numerator

6. Check Patient received hospice services any time during the measurement period:
   a. If Patient received hospice services any time during the measurement period equals Yes, include in Data Completeness Met and Denominator Exclusion.
      • Data Completeness Met and Denominator Exclusion letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter x equals 0 patients in the Sample Calculation.
   b. If Patient received hospice services any time during the measurement period equals No, proceed to check Pneumococcal vaccine administered or previously received.

7. Check Pneumococcal vaccine administered on or after patient’s 60th birthday and before the end of the measurement period:
   a. If Pneumococcal vaccine administered on or after patient’s 60th birthday and before the end of the measurement period equals Yes, include in Data Completeness Met and Performance Met.
      • Data Completeness Met and Performance Met letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a¹ equals 30 patients in the Sample Calculation.
   b. If Pneumococcal vaccine administered on or after patient’s 60th birthday and before the end of the measurement period equals No, proceed to check Documentation of medical reason(s) for not
administering pneumococcal vaccine.

8. Check Documentation of medical reason(s) for not administering pneumococcal vaccine:
   a. If Documentation of medical reason(s) for not administering pneumococcal vaccine equals Yes, include in Data Completeness Met and Performance Not Met.
      • Data Completeness Met and Performance Met letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a² equals 30 patients in the Sample Calculation.
   b. If Documentation of medical reason(s) for not administering pneumococcal vaccine equals No, proceed to check Pneumococcal vaccine was not administered on or after patient’s 60th birthday and before the end of the measurement period.

9. Check Pneumococcal vaccine was not administered on or after patient’s 60th birthday and before the end of the measurement period, reason not otherwise specified
   a. If Pneumococcal vaccine was not administered on or after patient’s 60th birthday and before the end of the measurement period, reason not otherwise specified equals Yes, include in Data Completeness Met and Performance Not Met.
      • Data Completeness Met and Performance Not Met letter is represented as Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 40 patients in the Sample Calculation.
   b. If Pneumococcal vaccine was not administered on or after patient’s 60th birthday and before the end of the measurement period, reason not otherwise specified equals No, proceed to check Data Completeness Not Met.

10. Check Data Completeness Not Met:
    a. If Data Completeness Not Met, the Quality Data Code was not submitted. 10 patients have been subtracted from the Data Completeness Numerator in the Sample Calculation.

Sample Calculations:

Data Completeness equals Denominator Exclusion (x equals 0 patients) plus Performance Met (a¹ plus a² equals 30 patients) plus Performance Not Met (c equals 40 patients) divided by Eligible Population/Denominator (d equals 80 patients). All equals 70 patients divided by 80 patients. All equals 87.50 percent.

Performance Rate equals Performance Met (a¹ plus a² equals 30 patients) divided by Data Completeness Numerator (70 patients) minus Denominator Exclusion (x equals 0 patients). All equals 30 patients divided by 70 patients. All equals 42.86 percent.

*See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Patient-process

The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.