

PNEUMONIA NATIONAL HOSPITAL INPATIENT QUALITY MEASURES

Set Measure ID #	Measure Short Name
PN-1	Oxygenation Assessment - RETIRED
PN-2	Pneumococcal Vaccination
PN-3a	Blood Cultures Performed Within 24 Hours Prior to or 24 Hours After Hospital Arrival for Patients Who Were Transferred or Admitted to the ICU Within 24 Hours of Hospital Arrival
PN-3b	Blood Cultures Performed in the Emergency Department Prior to Initial Antibiotic Received in Hospital
PN-4	Adult Smoking Cessation Advice/Counseling
PN-5²	Antibiotic Timing (Median)
PN-5b	Initial Antibiotic Received Within 4 Hours of Hospital Arrival - RETIRED
PN-5c³	Initial Antibiotic Received Within 6 Hours of Hospital Arrival
PN-6¹	Initial Antibiotic Selection for CAP in Immunocompetent Patient
PN-6a²	Initial Antibiotic Selection for CAP in Immunocompetent – ICU Patient
PN-6b²	Initial Antibiotic Selection for CAP Immunocompetent – Non ICU Patient
PN-7	Influenza Vaccination

¹CMS ONLY

²The Joint Commission ONLY

³Collected for The Joint Commission for all patients. Refer to the Federal Register for the official list of measures required under the CMS Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU) program.

PN DATA ELEMENT LIST

General Data Element Name	Collected For:
<i>Admission Date</i>	All Records
<i>Birthdate</i>	All Records
<i>Discharge Date</i>	All Records (Used in Algorithm for PN3a, PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN6a ² , PN-6b ² , PN-7)
<i>Discharge Status</i>	All Records (Used in Algorithm for All PN Measures)
<i>First Name</i> ¹	All Records ¹
<i>Hispanic Ethnicity</i> ¹	All Records ¹
<i>Hospital Patient Identifier</i> ¹	All Records ¹
<i>ICD-9-CM Other Diagnosis Codes</i>	All Records (Used in Algorithm for All PN Measures)
<i>ICD-9-CM Other Procedure Codes</i>	All Records
<i>ICD-9-CM Other Procedure Dates</i>	All Records
<i>ICD-9-CM Principal Diagnosis Code</i>	All Records
<i>ICD-9-CM Principal Procedure Code</i>	All Records
<i>ICD-9-CM Principal Procedure Date</i>	All Records
<i>Last Name</i> ¹	All Records ¹
<i>Patient HIC #</i>	All Records Collected by CMS for patients with a standard HIC#
<i>Payment Source</i>	All Records
<i>Physician 1</i> ¹	Optional for All Records ¹
<i>Physician 2</i> ¹	Optional for All Records ¹
<i>Point of Origin for Admission or Visit</i>	All Records
<i>Postal Code</i> ¹	All Records ¹
<i>Race</i> ¹	All Records ¹
<i>Sample</i> ³	Used in transmission of the Joint Commission's aggregate data file and the Hospital Clinical Data file ³
<i>Sex</i>	All Records

Algorithm Output Data Element Name	Collected For:
<i>Measure Category Assignment</i> ^{2,3}	Used in the calculation of the Joint Commission's aggregate data and in the transmission of the Hospital Clinical Data file ^{2,3}
<i>Measurement Value</i> ^{2,3}	Used in the calculation of the Joint Commission's aggregate data, Continuous Variable Measures (PN-5 ²), and in the transmission of the Hospital Clinical Data file ^{2,3}

PN DATA ELEMENT LIST

PN Data Element Name	Collected For:
<i>ABG Done</i> - RETIRED	
<i>Adult Smoking Counseling</i>	PN-4
<i>Adult Smoking History</i>	PN-4
<i>Another Suspected Source of Infection</i>	PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Antibiotic Administration Date</i>	PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Antibiotic Administration Route</i>	PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Antibiotic Administration Time</i>	PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Antibiotic Allergy</i>	PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Antibiotic Name</i>	PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Antibiotic Received</i>	PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Arrival Date</i>	PN-3a, PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Arrival Time</i>	PN-3a, PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Blood Culture Collected</i>	PN-3a, PN-3b
<i>Chest X-Ray</i>	All PN Measures
<i>Clinical Trial</i>	All PN Measures
<i>Comfort Measures Only</i>	All PN Measures
<i>Compromised</i>	PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Diagnostic Uncertainty</i>	PN-5 ² , PN-5c ⁴
<i>Healthcare Associated PN</i>	PN-6 ¹ , PN-6a ² , PN-6b ²
<i>ICU Transfer or Admission Within First 24 Hours</i>	PN-3a, PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Identified Pathogen</i>	PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Influenza Vaccination Status</i>	PN-7
<i>Initial Blood Culture Collection Date</i>	PN-3a, PN-3b
<i>Initial Blood Culture Collection Time</i>	PN-3a, PN-3b
<i>Pneumococcal Vaccination Status</i>	PN-2
<i>Pneumonia Diagnosis: ED/Direct Admit</i>	PN-3a, PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Pseudomonas Risk</i>	PN-6 ¹ , PN-6a ² , PN-6b ²
<i>Pulse Oximetry Done</i> - RETIRED	
<i>Risk Factors for Drug-Resistant Pneumococcus</i>	PN-6 ¹ , PN-6b ²
<i>Transfer From Another ED</i>	PN-3a, PN-3b, PN-5 ² , PN-5c ⁴ , PN-6 ¹ , PN-6a ² , PN-6b ²

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³Transmission Data Element

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Pneumonia (PN) Initial Patient Population

The population of the PN measure set is identified using 5 data elements:

- *ICD-9-CM Principal Diagnosis Code*
- *ICD-9-CM Other Diagnosis Codes*
- *Admission Date*
- *Birthdate*
- *Discharge Date*

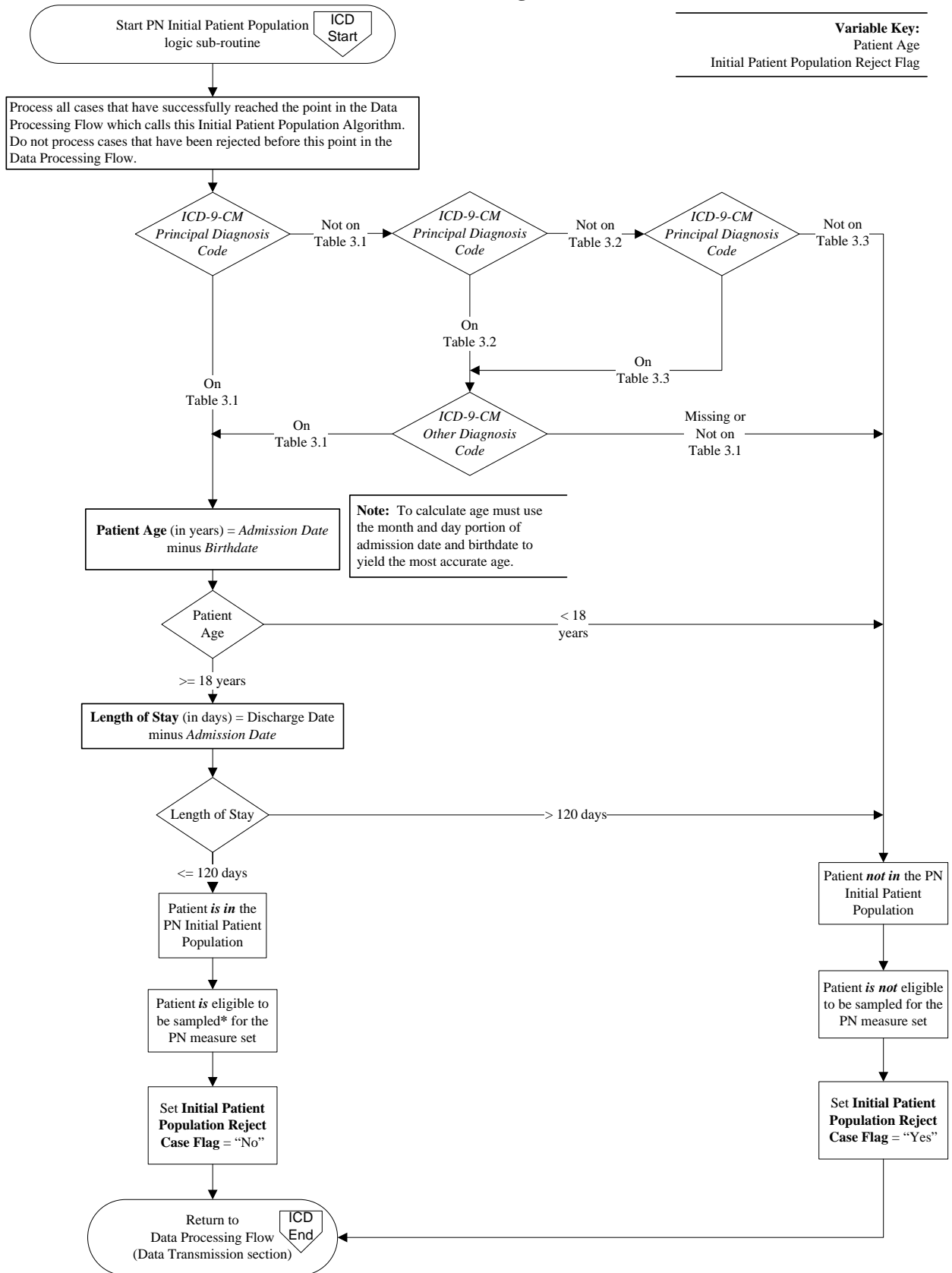
Patients admitted to the hospital for inpatient acute care are included in the PN Initial Patient Population and are eligible to be sampled if they have:

- An *ICD-9-CM Principal Diagnosis Code* for PN as defined in Appendix A, Table 3.1, a Patient Age (*Admission Date – Birthdate*) \geq 18 years, and a Length of Stay (*Discharge Date - Admission Date*) \leq 120 days

OR

- An *ICD-9-CM Principal Diagnosis Code* of Septicemia or Respiratory Failure as defined in Appendix A, Table 3.2 and Table 3.3 accompanied by an *ICD-9-CM Other Diagnosis Code* of PN as defined in Appendix A, Table 3.1, a Patient Age (*Admission Date – Birthdate*) \geq 18 years, and a Length of Stay (*Discharge Date - Admission Date*) \leq 120 days

PN Initial Patient Population Algorithm



PN Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter for the measure set cannot sample. Hospitals that have five or fewer PN discharges (both Medicare and non-Medicare combined) in a quarter are not required to submit PN patient level data to the QIO Clinical Warehouse and Joint Commission's Data Warehouse.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Because the sample for a measure set will rarely be equal to the effective sample due to exclusions, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes. For information concerning how to perform sampling, refer to the Population and Sampling Specifications section in this manual.

Quarterly Sampling

Hospitals performing quarterly sampling for PN must ensure that its Initial Patient Population and effective sample size meet the following conditions:

- *The effective sample size for PN is at least 35 cases per quarter; and*
- *The required sample size is at least 20% of the Initial Patient Population for the quarter.*

**Quarterly Sample Size
Based on Initial Patient Population Size for the PN Measure Set**

<i>Hospital's Measure</i>	
Average Quarterly Initial Patient Population Size "N"	Minimum Required Sample Size "n"
≥ 1201	241
301- 1200	20% of Initial Patient Population size
60 – 300	60
6 - 59	No sampling; 100% Initial Patient Population required
0 – 5	Submission of patient level data is not required; if submission occurs, 100% Initial Patient Population required

Monthly Sampling

Hospitals performing monthly sampling for PN must ensure that its Initial Patient Population and effective sample size meet the following conditions:

- *The effective sample size for PN is at least 12 cases per month; and*
- *The required sample size is at least 20% of the Initial Patient Population for the month.*

**Monthly Sample Size
Based on Initial Patient Population Size for the PN Measure Set**

<i>Hospital's Measure</i>	
Average Monthly Initial Patient Population Size "N"	Minimum Required Sample Size "n"
≥ 401	81
101 – 400	20% of Initial Patient Population size
20 – 100	20
< 20	No sampling; 100% Initial Patient Population required

Sample Size Examples

- *Quarterly sampling:*
 - A hospital's Initial Patient Population size for the PN measure set is 171 PN discharges during the first quarter. The required quarterly sample is 60 cases.
 - A hospital's PN Initial Patient Population size is 1,199 patients during the third quarter. The calculated sample size is 20% of the patient population or 240 cases for the quarter (twenty percent of 1,199 equals 239.8 rounded to the next highest whole number = 240).
 - A hospital's PN Initial Patient Population size is 3 patients during the second quarter. Submission of patient level data is not required. If the hospital chooses to submit patient level data, the required quarterly sample size would be 100% of the patient population or 3 cases for the quarter.
- *Monthly sampling*
 - A hospital's Initial Patient Population size for the PN measure set is 800 PN discharges during January. Twenty percent of 800 equals 160 pneumonia patients -- which exceeds the maximum monthly sample size condition (i.e., 81); thus, the required sample size would be at least 81 pneumonia patients for that month.
 - A hospital's PN Initial Patient Population size is 399 patients during July. The required sample size is 20% of the patient population or 80 cases for the month (twenty percent of 399 equals 79.8 rounded to the next highest whole number = 80).