

## NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE

### Measure Information Form

**Measure Set:** Immunization

**Set Measure ID #:** IMM-2

**Performance Measure Name:** Influenza Immunization

**Description:** This prevention measure addresses acute care hospitalized inpatients age 6 months and older who were screened for seasonal influenza immunization status and were vaccinated prior to discharge if indicated. The numerator captures two activities: screening and the intervention of vaccine administration when indicated. As a result, patients who had documented contraindications to the vaccine, patients who were offered and declined the vaccine and patients who received the vaccine during the current year's influenza season but prior to the current hospitalization are captured as numerator events.

Influenza (flu) is an acute, contagious, viral infection of the nose, throat and lungs (respiratory illness) caused by influenza viruses. Outbreaks of seasonal influenza occur annually during late autumn and winter months although the timing and severity of outbreaks can vary substantially from year to year and community to community. Influenza activity most often peaks in February, but can peak rarely as early as November and as late as April. In order to protect as many people as possible before influenza activity increases, most flu-vaccine is administered in September through November, but vaccine is recommended to be administered throughout the influenza season as well. Because the flu vaccine usually first becomes available in September, health systems can usually meet public and patient needs for vaccination in advance of widespread influenza circulation.

**Rationale:** Up to 1 in 5 people in the United States get influenza every season (CDC, Key Facts). Each year an average of approximately 226,000 people in the US are hospitalized with complications from influenza and between 3,000 and 49,000 die from the disease and its complications (Thompson WW, JAMA). Combined with pneumonia, influenza is the nation's 8<sup>th</sup> leading cause of death (Minino, 2004 National Center for Health Statistics). Up to two-thirds of all deaths attributable to pneumonia and influenza occur in the population of patients that have been hospitalized during flu season regardless of age (Fedson). The Advisory Committee on Immunization Practices (ACIP) recommends seasonal influenza vaccination for all persons 6 months of age and older to highlight the importance of preventing influenza. Vaccination is associated with reductions in influenza among all age groups (CDC Press Release February 24, 2010).

The influenza vaccination is the most effective method for preventing influenza virus infection and its potentially severe complications. Screening and vaccination of

inpatients is recommended, but hospitalization is an underutilized opportunity to provide vaccination to persons 6 months of age or older.

**Type of Measure:** Process

**Improvement Noted As:** An increase in the rate

**Numerator Statement:** Inpatient discharges who were screened for influenza vaccine status and were vaccinated prior to discharge if indicated.

**Included Populations:**

- Patients who received the influenza vaccine during this inpatient hospitalization
- Patients who have an ICD-9-CM Principal Procedure Code or Other Procedure Codes from Table 12.9 for Prophylactic Vaccination against Influenza during this inpatient hospitalization
- Patients who received the influenza vaccine during the current year's flu season but prior to the current hospitalization
- Patients who were offered and declined the influenza vaccine
- Patients who have an allergy/sensitivity to the influenza vaccine, anaphylactic latex allergy or anaphylactic allergy to eggs, or for whom the vaccine is not likely to be effective because of bone marrow transplant within the past 6 months, or history of Guillian-Barre Syndrome within 6 weeks after a previous influenza vaccination

**Excluded Populations:** None

**Data Elements:**

- *ICD-9-CM Other Diagnosis Codes*
- *ICD-9-CM Other Procedure Codes*
- *ICD-9-CM Principal Diagnosis Code*
- *ICD-9-CM Principal Procedure Code*
- *Influenza Vaccination Status*

**Denominator Statement:** Acute care hospitalized inpatients age 6 months and older discharged during October, November, December, January, February or March.

**Included Populations:** Inpatient discharges 6 months of age and older

**Excluded Populations:**

- Patients less than 6 months of age
- Patients who expire prior to hospital discharge
- Patients with an organ transplant during the current hospitalization (Appendix A, Table 12.10)
- Patients for whom vaccination was indicated, but supply had not been received by the hospital due to problems with vaccine production or distribution
- Patients who have a Length of Stay greater than 120 days
- Patients who are transferred or discharged to another acute care hospital

- Patients who leave Against Medical Advice (AMA)

**Data Elements:**

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

**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 or 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.

**Measure Analysis Suggestions:** Hospitals may wish to analyze the measure data by individual high risk populations, for example, diabetes, COPD, etc., in order to determine if all defined high risk populations are equally vaccinated or if there are opportunities to improve care to a specific population of patients.

**Sampling:** Yes, please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications section.

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

**Selected References:**

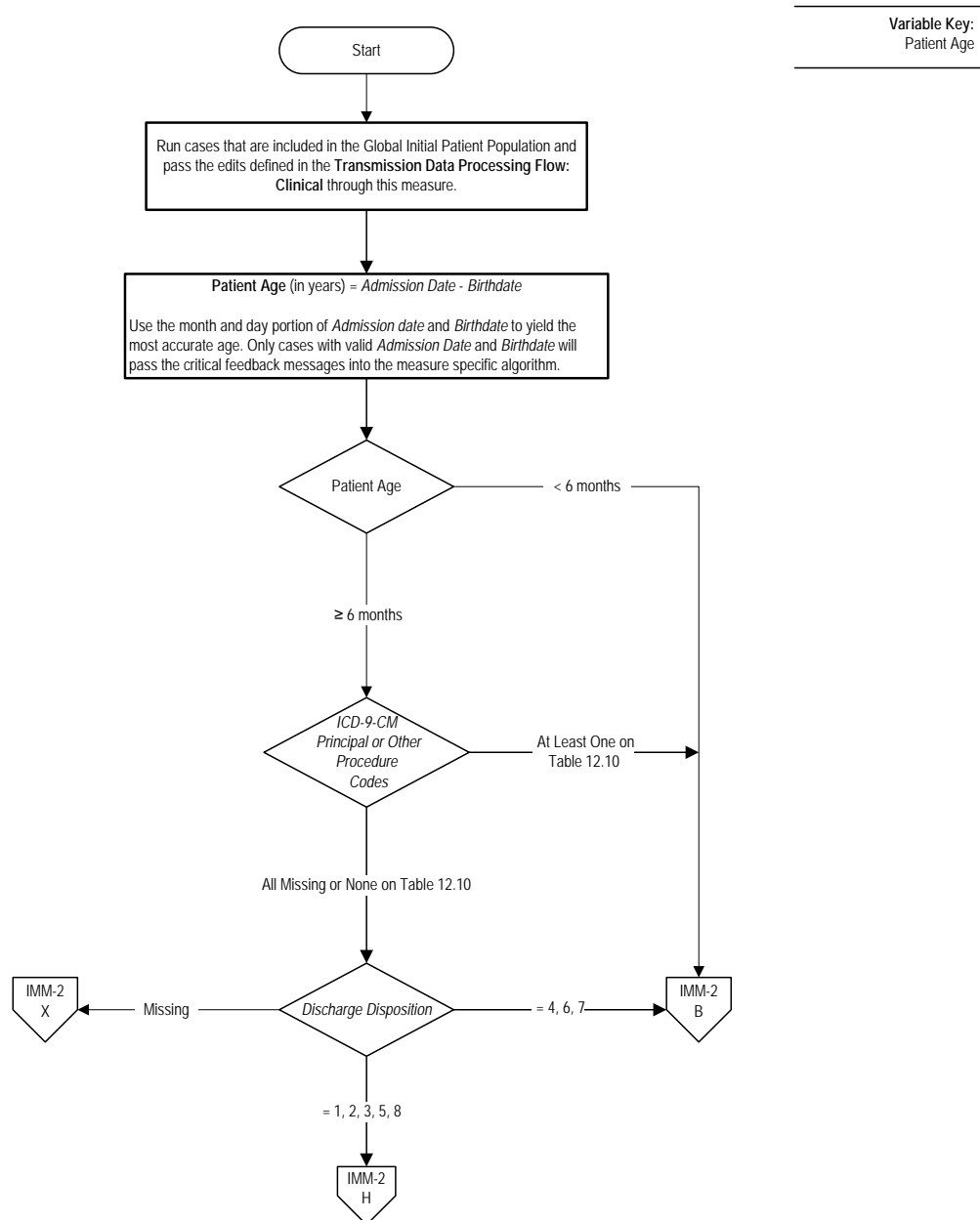
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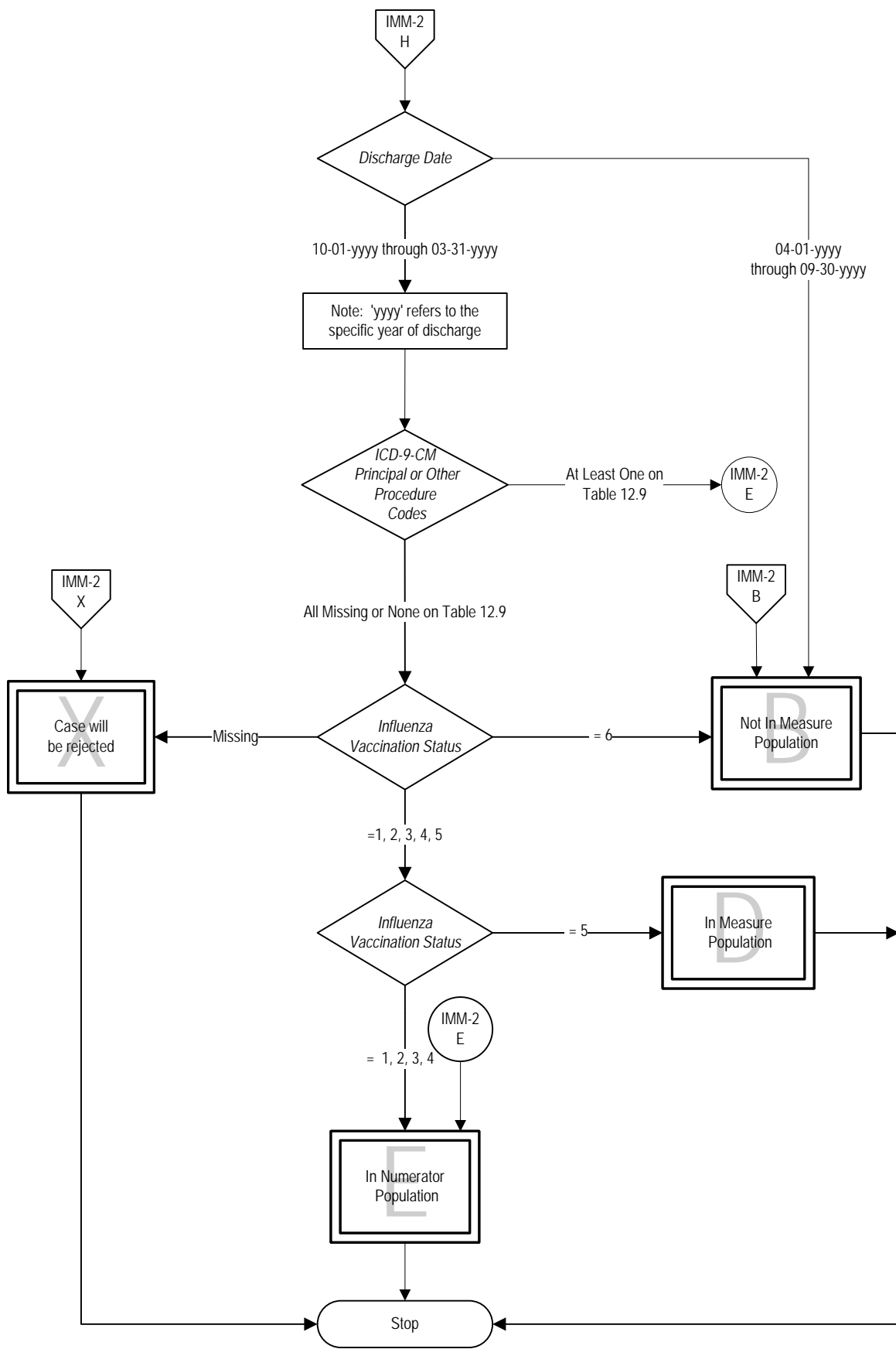
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## IMM-2: Influenza Immunization

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**Variable Key:** Patient Age

1. Start processing. Run cases that are included in the Global Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.
2. Calculate Patient Age. Patient Age, in years, is equal to the Admission Date minus the Birthdate. Use the month and day portion of admission date and birthdate to yield the most accurate age. Only cases with valid Admission Date and Birthdate will pass the critical feedback messages into the measure specific algorithms.
3. Check Patient Age
  - a. If the Patient Age is less than 6 months old, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
  - b. If the Patient Age is greater than or equal to 6 months, continue processing and proceed to ICD-9-CM Principal or Other Procedure Codes.
4. Check ICD-9-CM Principal or Other Procedure Codes
  - a. If at least one of ICD-9-CM Principal or Other Procedure Codes is on Table 12.10 the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
  - b. If all of ICD-9-CM Principal or Other Procedure Codes are missing or none of ICD-9-CM Principal or Other Procedure Codes is on Table 12.10, continue processing and check Discharge Disposition.
5. Check Discharge Disposition
  - a. If Discharge Disposition equals 4, 6, or 7 the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
  - b. If Discharge Disposition equals 1, 2, 3, 5, or 8 continue processing and proceed to Discharge Date.
  - c. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
6. Check Discharge Date. Note: 'yyyy' refers to the specific year of discharge.

- a. If the Discharge Date is 04-01-yyyy through 09-30-yyyy, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
  - b. If the Discharge Date is 10-01-yyyy through 03-31-yyyy, continue processing and proceed to ICD-9-CM Principal or Other Procedure Code.
7. Check ICD-9-CM Principal or Other Procedure Codes
- a. If at least one of the ICD-9-CM Principal or Other Procedure Codes is on Table 12.9 the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
  - b. If all of the ICD-9-CM Principal or Other Procedure Codes are missing or none is on Table 12.9, continue processing and proceed to Influenza Vaccination Status.
8. Check Influenza Vaccination Status
- a. If Influenza Vaccination Status is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
  - b. If Influenza Vaccination Status equals 6, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
  - c. If Influenza Vaccination Status equals 1, 2, 3, 4, or 5, continue processing and recheck Influenza Vaccination Status.
9. Recheck Influenza Vaccination Status
- a. If Influenza Vaccination Status equals 5, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
  - b. If Influenza Vaccination Status equals 1, 2, 3, or 4 the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.