NEMSIS V3 Case Definition

Influenza-like Illness

Date

August 30, 2021

Definition

The patient may have an influenza-like illness.

Criteria Description

Patient care reports where:

- any symptom or impression is influenza-like illness
  or
- any two distinct symptoms or impressions are influenza-like

Pseudocode

Patient care reports where:

eSituation.09 - Primary Symptom
eSituation.10 - Other Associated Symptoms
eSituation.11 - Provider's Primary Impression
eSituation.12 - Provider's Secondary Impressions
- B97.2* Coronavirus as the cause of diseases classified elsewhere
- J00 Acute nasopharyngitis [common cold]
- J09*–J18* Influenza and pneumonia
- J20*–J22* Other acute lower respiratory infections
- Z20.8* Contact with and (suspected) exposure to other communicable diseases
- Z20.9 Contact with and (suspected) exposure to unspecified communicable disease

OR

eSituation.09 - Primary Symptom
eSituation.10 - Other Associated Symptoms
eSituation.11 - Provider's Primary Impression
eSituation.12 - Provider's Secondary Impressions
Two or more distinct values of the following:
- J02* Acute pharyngitis
- J03* Acute tonsillitis
- J06 Acute upper respiratory infections of multiple and unspecified sites
- J80 Acute respiratory distress syndrome
- J98.9 Respiratory disorder, unspecified
- M79.1* Myalgia
- R05 Cough
- R06 Abnormalities of breathing
- R06.0* Dyspnea
- R06.8 Other abnormalities of breathing
- R06.89 Other abnormalities of breathing
- R06.9 Unspecified abnormalities of breathing
- R07.0 Pain in throat
- R09.81 Nasal congestion
- R50 Fever of other and unknown origin
- R50.8 Other specified fever
- R50.81 Fever presenting with conditions classified elsewhere
- R50.9 Fever, unspecified
- R51* Headache
- R53 Malaise and fatigue
- R53.1 Weakness
- R53.8 Other malaise and fatigue
- R53.81 Other malaise
- R53.83 Other fatigue
- R68.83 Chills (without fever)

XPath Code

```
/EMSDataSet/Header/PatientCareReport
  [
    eSituation/(eSituation.09, eSituation.10, eSituation.11, eSituation.12)
      [matches(., '^(B97\.2.*)|(J00.*)|(J09.*)|(J1[0-8].*)|(J2[0-2].*)|(Z20\.8.*)|
      (Z20\.9)$')]
    or
    count(distinct-values
      (eSituation/(eSituation.09, eSituation.10, eSituation.11, eSituation.12)
        [matches(., '(J02.*)|(J03.*)|(J06)|(J80)|(J98\.9)|(M79\.1.*)|(R05)|(R06)|
        (R06\.0.*)|(R06\.8)|(R06\.89)|(R06\.9)|(R07\.0)|(R09\.81)|(R50)|(R50\.8)|
        (R50\.81)|(R50\.9)|(R51.*)|(R53)|(R53\.1)|(R53\.8)|(R53\.81)|(R53\.83)|
        (R68\.83)')]
```

```
    )) > 1
  ]
```

SAS Code

```
proc sql;
  create table InfluenzaLikeIllnessKey as
  select distinct pcrKey from
    (
      union
      select pcrKey from nemsis.factPcrPrimarySymptom where prxmatch(
        '/^(B97\.2.*)|(J00.*)|(J09.*)|(J1[0-8].*)|(J2[0-2].*)|(Z20\.8.*)|
        (Z20\.9)$/', eSituation_09)
      union
      select pcrKey from nemsis.factPcrAdditionalSymptom where prxmatch(
        '/^(B97\.2.*)|(J00.*)|(J09.*)|(J1[0-8].*)|(J2[0-2].*)|(Z20\.8.*)|
        (Z20\.9)$/', eSituation_10))
      select pcrKey from nemsis.factPcrPrimaryImpression where prxmatch(
        '/^(B97\.2.*)|(J00.*)|(J09.*)|(J1[0-8].*)|(J2[0-2].*)|(Z20\.8.*)|
        (Z20\.9)$/', eSituation_11)
      union
      select pcrKey from nemsis.factPcrSecondaryImpression where prxmatch(
        '/^(B97\.2.*)|(J00.*)|(J09.*)|(J1[0-8].*)|(J2[0-2].*)|(Z20\.8.*)|
        (Z20\.9)$/', eSituation_12)
      union
      select pcrKey from
        (
          select pcrKey, count(distinct diagnosis) as c from
            (
              select pcrKey, eSituation_09 as diagnosis
                from Nemsis.factPcrPrimarySymptom where prxmatch('/^(J02.*)|
                (J03.*)|(J06)|(J80)|(J98\.9)|(M79\.1.*)|(R05)|(R06)|(R06\.0.*)|
                (R06\.8)|(R06\.89)|(R06\.9)|(R07\.0)|(R09\.81)|(R50)|(R50\.8)|
                (R50\.81)|(R50\.9)|(R51.*)|(R53)|(R53\.1)|(R53\.8)|(R53\.81)|
                (R53\.83)|(R68\.83)$/', eSituation_09)
              union
              select pcrKey, eSituation_10 as diagnosis
                from Nemsis.factPcrAdditionalSymptom where prxmatch('/^(J02.*)|
                (J03.*)|(J06)|(J80)|(J98\.9)|(M79\.1.*)|(R05)|(R06)|(R06\.0.*)|
                (R06\.8)|(R06\.89)|(R06\.9)|(R07\.0)|(R09\.81)|(R50)|(R50\.8)|
                (R50\.81)|(R50\.9)|(R51.*)|(R53)|(R53\.1)|(R53\.8)|(R53\.81)|
                (R53\.83)|(R68\.83)$/', eSituation_10)
              union
              select pcrKey, eSituation_11 as diagnosis
```

```
             from Nemsis.factPcrPrimaryImpression where prxmatch('/^(J02.*)|
             (J03.*)|(J06)|(J80)|(J98\.9)|(M79\.1.*)|(R05)|(R06)|(R06\.0.*)|
             (R06\.8)|(R06\.89)|(R06\.9)|(R07\.0)|(R09\.81)|(R50)|(R50\.8)|
             (R50\.81)|(R50\.9)|(R51.*)|(R53)|(R53\.1)|(R53\.8)|(R53\.81)|
             (R53\.83)|(R68\.83)$/', eSituation_11)
          union
          select pcrKey, eSituation_12 as diagnosis
             from Nemsis.factPcrSecondaryImpression where prxmatch('/^(J02.*)|
             (J03.*)|(J06)|(J80)|(J98\.9)|(M79\.1.*)|(R05)|(R06)|(R06\.0.*)|
             (R06\.8)|(R06\.89)|(R06\.9)|(R07\.0)|(R09\.81)|(R50)|(R50\.8)|
             (R50\.81)|(R50\.9)|(R51.*)|(R53)|(R53\.1)|(R53\.8)|(R53\.81)|
             (R53\.83)|(R68\.83)$/', eSituation_12)
        )
        group by pcrKey
      )
      where c > 1
   )
 ;
quit;
```

Discussion

The criteria for this case definition are not specifically tailored to select potential COVID-19 cases; instead, they select multiple influenza-like illnesses, including but not limited to potential COVID-19 cases.

The *CDC COVID-19 ICD-10-CM Official Coding and Reporting Guidelines* state,

> "If the COVID-19 is documented as being associated with a respiratory infection, NOS, codes U07.1 and *J98.8, Other specified respiratory disorders*, should be assigned."

> "For acute respiratory distress syndrome (ARDS) due to COVID-19, assign codes U07.1, and *J80, Acute respiratory distress syndrome*."

> "During pregnancy, childbirth or the puerperium, a patient admitted (or presenting for a health care encounter) because of COVID-19 should receive a principal diagnosis code of *O98.5-, Other viral diseases complicating pregnancy, childbirth and the puerperium*, followed by code U07.1, COVID-19, and the appropriate codes for associated manifestation(s)."

ICD-10-CM code *U07.1 COVID-19* was not included because it is not valid in the NEMSIS XML Schema (XSD) and thus will not be present in NEMSIS-compliant data.

References

National Influenza-Like Illness (ILI) Surveillance Dashboard. Global Inclusion Criteria and Filters. wiki.utahdcc.org/confluence/display/NTD/National+Influenza-Like+Illness+%28ILI%29+Surveillance+Dashboard.

CDC COVID-19 ICD-10-CM Official Coding and Reporting Guidelines, April 1, 2020 through September 30, 2020. cdc.gov/nchs/data/icd/COVID-19-guidelines-final.pdf.