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 Unspecified 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

```xml
[ eSituation/(eSituation.09, eSituation.10, eSituation.11, eSituation.12)
  [matches(. , '(B97\.*)|(J00.*)|(J09.*)|(J1[0-8].*)|(J2[0-2].*)|(Z20\.*|(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)')] )
```
SAS Code

proc sql;
create table InfluenzaLikeIllnessKey as
select distinct pcrKey from
(union
    select pcrKey from nemsis.factPcrPrimarySymptom where prxmatch('
        ^(B97\2.*)(J\00.*)(J\09.*)(J1[0-8].*)(J2[0-2].*)(Z20\8.*)
        (Z20\9)$/', eSituation_09)
    union
    select pcrKey from nemsis.factPcrAdditionalSymptom where prxmatch('
        ^(B97\2.*)(J\00.*)(J\09.*)(J1[0-8].*)(J2[0-2].*)(Z20\8.*)
        (Z20\9)$/', eSituation_10))
select pcrKey from nemsis.factPcrPrimaryImpression where prxmatch('
        ^(B97\2.*)(J\00.*)(J\09.*)(J1[0-8].*)(J2[0-2].*)(Z20\8.*)
        (Z20\9)$/', eSituation_11)
    union
    select pcrKey from nemsis.factPcrSecondaryImpression where prxmatch('
        ^(B97\2.*)(J\00.*)(J\09.*)(J1[0-8].*)(J2[0-2].*)(Z20\8.*)
        (Z20\9)$/', 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('
        ^\(J\02\)*|\(J\03\)*|\(J06\)|\(J98\9\)|\(M79\1\.\*\)|\(R05\)|\(R06\)|\(R06\.0\.*\)|\(R06\.8\)|\(R06\.89\)|\(R06\.9\)|\(R07\.0\)|\(R09\.81\)|\(R50\)|\(R50\8\)|\(R50\.8\)|\(R50\.81\)|\(R50\.9\)|\(R51\.*\)|\(R53\)|\(R53\.1\)|\(R53\8\)|\(R53\.8\)|\(R53\.81\)|\(R53\.83\)|\(R68\.83\)$/', eSituation_09)
    union
    select pcrKey, eSituation_10 as diagnosis
    from Nemsis.factPcrAdditionalSymptom where prxmatch('
        ^\(J\02\)*|\(J\03\)*|\(J06\)|\(J98\9\)|\(M79\1\.\*\)|\(R05\)|\(R06\)|\(R06\.0\.*\)|\(R06\.8\)|\(R06\.89\)|\(R06\.9\)|\(R07\.0\)|\(R09\.81\)|\(R50\)|\(R50\8\)|\(R50\.8\)|\(R50\.81\)|\(R50\.9\)|\(R51\.*\)|\(R53\)|\(R53\.1\)|\(R53\8\)|\(R53\.8\)|\(R53\.81\)|\(R53\.83\)|\(R68\.83\)$/', 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
