

Behavioral Health

Date

May 27, 2025 (updated to ignore eSituation.10 - Other Associated Symptoms if it has a Pertinent Negative, "Symptom Not Present")

June 27, 2023

Definition

The patient is experiencing a behavioral health issue.

Criteria Description

Patient care reports where:

- any symptom or impression is mental, behavioral, emotional, suicide attempt, or intentional self-harm
- or
- cause of injury is suicide attempt or intentional self-harm.

Pseudocode

Patient care reports where:

eSituation.09 - Primary Symptom

eSituation.10 - Other Associated Symptoms (without Pertinent Negative)

eSituation.11 - Provider's Primary Impression

eSituation.12 - Provider's Secondary Impressions

- F01–F99 Mental, behavioral and neurodevelopmental disorders
- R45 Symptoms and signs involving emotional state
- R46 Symptoms and signs involving appearance and behavior
- T14.91 Suicide attempt
- T36–T71 codes where label includes "...intentional self-harm..."
- X71–X83 Intentional self-harm

OR

eInjury.01 - Cause of Injury:

- T14.91 Suicide attempt

- T36–T71 codes where label includes “...intentional self-harm...”
- X71–X83 Intentional self-harm

XPath Code

```
/EMSDataset/Header/PatientCareReport
[
  eSituation/(eSituation.09, eSituation.10[not(@PN)], eSituation.11, eSituation.12)
  [matches(., '^((F.*)|(R45.*)|(R46.*)|(T14\.91)|
    (T(3[6-9]|[4-6][0-9]|7[0-1])\.(..|9)2.*)|(T41\.42.*)|(T42\.72.*)|
    (T58\.02.*)|(T58\.12.*)|(T61\.02.*)|(T61\.12.*)|(T64\.02.*)|(T64\.82.*)|
    (T36\.92.)|(X(7[1-9]|8[0-3]).*))$')
  ]
or
eInjury/eInjury.01[matches(., '^((T14\.91)|
  (T(3[6-9]|[4-6][0-9]|7[0-1])\.(..|9)2.*)|(T41\.42.*)|(T42\.72.*)|
  (T58\.02.*)|(T58\.12.*)|(T61\.02.*)|(T61\.12.*)|(T64\.02.*)|(T64\.82.*)|
  (T36\.92.)|(X(7[1-9]|8[0-3]).*))$')
  ]
]
```

SAS Code

The NEMESIS public release research dataset does not include the Pertinent Negative attribute on eSituation.10 - Other Associated Symptoms, which was added in NEMESIS version 3.5, so the SAS code will select some records where a symptom was actually documented as “Symptom Not Present.” This is estimated to affect less than 3% of v3.5 records.

```
proc sql;
  create table BehavioralHealthKey as
  select distinct pcrKey from
  (
    select pcrkey from nemsis.Factpcrcauseofinjury where prxmatch('/^((T14\.91)|
      (T(3[6-9]|[4-6][0-9]|7[0-1])\.(..|9)2.*)|(T41\.42.*)|(T42\.72.*)|(T58\.02.*)|
      (T58\.12.*)|(T61\.02.*)|(T61\.12.*)|(T64\.02.*)|(T64\.82.*)|(T36\.92.)|
      (X(7[1-9]|8[0-3]).*))$/', eInjury_01)
    union
    select pcrKey from nemsis.factPcrPrimarySymptom where prxmatch('/^((F.*)|
      (R45.*)|(R46.*)|(T14\.91)|(T(3[6-9]|[4-6][0-9]|7[0-1])\.(..|9)2.*)|
      (T41\.42.*)|(T42\.72.*)|(T58\.02.*)|(T58\.12.*)|(T61\.02.*)|(T61\.12.*)|
      (T64\.02.*)|(T64\.82.*)|(T36\.92.)|(X(7[1-9]|8[0-3]).*))$/', eSituation_09)
    union
    select pcrKey from nemsis.factPcrAdditionalSymptom where prxmatch('/^((F.*)|
      (R45.*)|(R46.*)|(T14\.91)|(T(3[6-9]|[4-6][0-9]|7[0-1])\.(..|9)2.*)|
```

```

(T41\.42.*)|(T42\.72.*)|(T58\.02.*)|(T58\.12.*)|(T61\.02.*)|(T61\.12.*)|
(T64\.02.*)|(T64\.82.*)|(T36\.92.)|(X(7[1-9]|8[0-3]).*))$/', eSituation_10)
union
select pcrKey from nemsis.factPcrPrimaryImpression where prxmatch('/^((F.*)|
(R45.*)|(R46.*)|(T14\.91)|(T(3[6-9]|[4-6][0-9]|7[0-1])\.(..|9)2.*)|
(T41\.42.*)|(T42\.72.*)|(T58\.02.*)|(T58\.12.*)|(T61\.02.*)|(T61\.12.*)|
(T64\.02.*)|(T64\.82.*)|(T36\.92.)|(X(7[1-9]|8[0-3]).*))$/', eSituation_11)
union
select pcrKey from nemsis.factPcrSecondaryImpression where prxmatch('/^((F.*)|
(R45.*)|(R46.*)|(T14\.91)|(T(3[6-9]|[4-6][0-9]|7[0-1])\.(..|9)2.*)|
(T41\.42.*)|(T42\.72.*)|(T58\.02.*)|(T58\.12.*)|(T61\.02.*)|(T61\.12.*)|
(T64\.02.*)|(T64\.82.*)|(T36\.92.)|(X(7[1-9]|8[0-3]).*))$/', eSituation_12)
)
;
quit;

```

Discussion

This case definition includes all codes from Chapter F of ICD-10-CM. Depending on the purpose of a particular project, it may be appropriate to exclude the following code ranges:

- F70-F79 Intellectual disabilities
- F80-F89 Pervasive and specific developmental disorders

The case definition does not include Z91.5* Personal history of self-harm, since it pertains to a patient's medical history rather than a condition present at the time of an EMS encounter.

The following potential criteria are not used in this case definition:

- eDispatch.01 - Dispatch Reason: Psychiatric Problem/Abnormal Behavior/Suicide Attempt. The reason for dispatch may not match what EMS providers actually found once on scene.
- eExam.19 – Mental Assessment: several values related to behavioral health. eExam.19 is not a national element. Its use in the criteria would cause a different set of records to be selected depending on whether or not it was collected and available in the data set, which would lead to local inconsistencies in the case selection.
- eHistory.01 Barriers to Patient Care: several values related to behavioral health. The behavioral health-related values in eHistory.01 do not correlate strongly with behavioral health-related values in the elements that are included in this case definition.

EMS By the Numbers: Impact of COVID-19, published by the NEMSIS TAC during the COVID-19 public health emergency, includes charts for “suicide” and “mental/behavioral”. The criteria used there are more restrictive than the criteria in this case definition.

References

Rivard MK, Cash RE, Chrzan K, et al. (2022). Public Health Surveillance of Behavioral Health Emergencies through Emergency Medical Services Data. *Prehospital Emergency Care*. 26(6):792-800. doi.org/10.1080/10903127.2021.1973626.

Hepburn S. (2021). The Reporting System 988 Estimates Haven't Included. *CrisisTalk*. talk.crisisnow.com/the-reporting-system-988-estimates-havent-included/.

NEMSIS Technical Assistance Center. (2023). *EMS by the Numbers: Impact of COVID-19*. nemsis.org/ems-by-the-numbers-impact-of-covid-19/.