

# QDM-Based Logic (Bonnie-prior, v1.6.11)

CMS32v7

# PATIENT HISTORY

CMS32V7

population 1

Encounter: Performed: Emergency Department Visit

START

06/10/2012 5:00 AM

STOP

06/10/2012 9:15 AM

UNDEFINED

CODES

SNOMED-CT: 4525004

Code Set

--

FIELD VALUE

PRINCIPAL\_DIAGNOSIS: Psychiatric/Mental Health Patient

FACILITY\_LOCATION\_ARRIVAL\_DATETIME: 06/10/2012 5:00 AM

FACILITY\_LOCATION\_DEPARTURE\_DATETIME: 06/10/2012 9:15 AM

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Coded

--

REFERENCES

--

NOT PERFORMED

Encounter: Performed: Encounter Inpatient

START

06/10/2012 9:20 AM

STOP

06/14/2012 8:15 AM

UNDEFINED

INITIAL POPULATION:

AND : Occurrence A: Encounter, Performed: Emergency Department Visit during "Measurement Period"

MEASURE POPULATION:

None

MEASURE OBSERVATIONS:

Median of: Difference between date/times:

AND : Occurrence A: Encounter, Performed: Emergency Department Visit ( Facility Location Departure Date/Time )

AND : Occurrence A: Encounter, Performed: Emergency Department Visit ( Facility Location Arrival Date/Time )

MEASURE POPULATION EXCLUSIONS:

OR : Occurrence A: Encounter, Performed: Emergency Department Visit ( Discharge Status : Patient Expired )

OR : Occurrence A: Encounter, Performed: Emergency Department Visit <= 1 hour ends before or concurrent with start

Encounter, Performed: Encounter Inpatient

## PATIENT HISTORY

Encounter: Performed: Emergency Department Visit

START

06/10/2012

5:00 AM

STOP

06/10/2012

9:15 AM

UNDEFINED

CODES

SNOMED-CT: 4525004 x

Code Set

--

FIELD VALUE

PRINCIPAL\_DIAGNOSIS: Psychiatric/Mental Health Patient x

FACILITY\_LOCATION\_ARRIVAL\_DATETIME: 06/10/2012 5:00 AM x

FACILITY\_LOCATION\_DEPARTURE\_DATETIME: 06/10/2012 9:15 AM x

--

Coded

--

REFERENCES

--

--

NOT PERFORMED

Encounter: Performed: Encounter Inpatient

START

06/10/2012

11:11 AM

STOP

06/14/2012

8:15 AM

UNDEFINED

## CMS32V7

population 1

INITIAL POPULATION:

AND : Occurrence A: Encounter, Performed: Emergency Department Visit during "Measurement Period"

MEASURE POPULATION:

None

MEASURE OBSERVATIONS:

Median of: Difference between date/times ;

AND : Occurrence A: Encounter, Performed: Emergency Department Visit ( Facility Location  
Departure Date/Time )

AND : Occurrence A: Encounter, Performed: Emergency Department Visit ( Facility Location Arrival  
Date/Time )

MEASURE POPULATION EXCLUSIONS:

OR : Occurrence A: Encounter, Performed: Emergency Department Visit ( Discharge Status : Patient  
Expired )

OR : Occurrence A: Encounter, Performed: Emergency Department Visit <= 1 hour ends before or  
concurrent with start  
Encounter, Performed: Encounter Inpatient

## PATIENT HISTORY

CMS32V7

population 1

Encounter: Performed: Emergency Department Visit

START

06/10/2012

5:00 AM

STOP

06/10/2012

9:15 AM

UNDEFINED

CODES

SNOMED-CT: 4525004 x

Code Set

--

FIELD VALUE

PRINCIPAL\_DIAGNOSIS: Psychiatric/Mental Health Patient x

FACILITY\_LOCATION\_ARRIVAL\_DATETIME: 06/10/2012 5:00 AM x

FACILITY\_LOCATION\_DEPARTURE\_DATETIME: 06/10/2012 9:15 AM x

--

Coded

--

REFERENCES

--

NOT PERFORMED

Encounter: Performed: Encounter Inpatient

START

06/10/2012

11:20 AM

STOP

06/14/2012

8:15 AM

UNDEFINED

INITIAL POPULATION:

AND : Occurrence A: Encounter, Performed: Emergency Department Visit during "Measurement Period"

MEASURE POPULATION:

None

MEASURE OBSERVATIONS:

Median of: Difference between date/times :

AND : Occurrence A: Encounter, Performed: Emergency Department Visit ( Facility Location  
Departure Date/Time )

AND : Occurrence A: Encounter, Performed: Emergency Department Visit ( Facility Location Arrival  
Date/Time )

MEASURE POPULATION EXCLUSIONS:

OR : Occurrence A: Encounter, Performed: Emergency Department Visit ( Discharge Status : Patient  
Expired )

OR : Occurrence A: Encounter, Performed: Emergency Department Visit <= 1 hour ends before or  
concurrent with start ✓ Encounter, Performed: Encounter Inpatient

# CQL-Based Logic (Bonnie, v2.0.7)

CMS32v8

## PATIENT HISTORY

CMS32V8

population criteria section

Encounter: Performed: Emergency Department Visit

RELEVANT PERIOD

START 06/10/2012 5:00 AM STOP 06/10/2012 9:15 AM

UNDEFINED

CODES

SNOMED-CT: 4525004

Code Set

FIELD VALUE

Principal Diagnosis: Psychiatric/Mental Health Patient

Facility Location: 06/10/2012 5:00 AM - 06/10/2012 10:00 AM, Emergency Department Visit , 1339304400000

Coded

REFERENCES

NOT PERFORMED

Encounter: Performed: Encounter Inpatient

RELEVANT PERIOD

START 06/10/2012 10:14 AM STOP 06/14/2012 10:15 AM

UNDEFINED

CODES

SNOMED-CT: 8715000

CQL Calculation Results:  
IPP 1, MSRPOPL 1, MSRPOPLEX 1, STRAT,

INITIAL POPULATION:

```
define "Initial Population":  
  /*Emergency Department visit during the  
  measurement period*/  
  ["Encounter, Performed": "Emergency  
  Department Visit"] EDvisit  
  where EDvisit.relevantPeriod during  
  "Measurement Period"
```

MEASURE POPULATION:

```
define "Measure Population":  
  /* Initial population and to prevent  
  null values from being included in the  
  Median calculation*/  
  "Initial Population" EDvisit  
  where "Measure Observation"(EDvisit)is  
  not null
```

MEASURE POPULATION EXCLUSION:

```
define "Measure Population Exclusions":  
  /*ED visits where patient expired or the  
  patient was admitted inpatient within an  
  hour of the ED visit*/  
  ( "Emergency Department ED Visit"  
  EDvisit  
  where EDvisit.dischargeDisposition ~  
  "Patient deceased during stay (discharge  
  status = dead) (finding)"  
  )  
  union { "Emergency Department ED  
  Visit" EDvisit  
  with ["Encounter, Performed":  
  "Encounter Inpatient"] Encounter  
  such that EDvisit.relevantPeriod  
  ends 1 hour or less before or on start of  
  Encounter.relevantPeriod  
  }
```

**PATIENT HISTORY**

Encounter: Performed: Emergency Department Visit

RELEVANT PERIOD

START: 06/10/2012 5:00 AM

STOP: 06/10/2012 9:15 AM

UNDEFINED

CODES

SNOMED-CT: 4525004

FIELD VALUE

Principal Diagnosis: Psychiatric/Mental Health Patient

Facility Location: 06/10/2012 5:00 AM - 06/10/2012 10:00 AM, Emergency Department Visit, 1339304400000

REFERENCES

NOT PERFORMED

---

Encounter: Performed: Encounter Inpatient

RELEVANT PERIOD

START: 06/10/2012 11:11 AM

STOP: 06/14/2012 10:15 AM

UNDEFINED

CODES

SNOMED-CT: 8715000

**CMS32V8**

population criteria section

CQL Calculation Results:

IPP 1, MSRPOPL 1, MSRPOPLEX 0, STRAT

INITIAL POPULATION:

```
define "Initial Population":
  /*Emergency Department visit during the measurement period*/
  ["Encounter, Performed": "Emergency Department Visit"] EDVisit
  where EDVisit.relevantPeriod during "Measurement Period"
```

MEASURE POPULATION:

```
define "Measure Population":
  /* Initial population and to prevent null values from being included in the Median calculation*/
  "Initial Population" EDVisit
  where "Measure Observation"(EDVisit)is not null
```

MEASURE POPULATION EXCLUSION:

```
define "Measure Population Exclusions":
  /*ED visits where patient expired or the patient was admitted inpatient within an hour of the ED visit*/
  ( "Emergency Department ED Visit" EDVisit
  where EDVisit.dischargeDisposition ~ "Patient deceased during stay (discharge status = dead) (finding)"
  union ( "Emergency Department ED Visit" EDVisit
  with ["Encounter, Performed": "Encounter Inpatient"] Encounter
  such that EDVisit.relevantPeriod ends 1 hour or less before or on start of Encounter.relevantPeriod
```

With QDM-Logic (CMS32v7),  
This was all green (excluded)

With CQL-Logic (CMS32v8),  
Not all green (not excluded)

# PATIENT HISTORY

CMS32V8

population criteria section

Encounter: Performed: Emergency Department Visit

### RELEVANT PERIOD

START

06/10/2012 5:00 AM

STOP

06/10/2012 9:15 AM

UNDEFINED

### CODES

SNOMED-CT: 4525004

Code Set

### FIELD VALUE

Principal Diagnosis: Psychiatric/Mental Health Patient

Facility Location: 06/10/2012 5:00 AM - 06/10/2012 10:00 AM, Emergency Department Visit , 1339304400000

Coded

### REFERENCES

NOT PERFORMED

Encounter: Performed: Encounter Inpatient

### RELEVANT PERIOD

START

06/10/2012 10:15 AM

STOP

06/14/2012 10:15 AM

UNDEFINED

### CODES

SNOMED-CT: 8715000

CQL Calculation Results:  
IPP 1, MSRPOPL 1, MSRPOPLEX 1, STRAT,

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```
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  measurement period*/  
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  with ["Encounter, Performed":  
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  such that EDvisit.relevantPeriod  
  ends 1 hour or less before or on start of  
  Encounter.relevantPeriod  
  )
```



# PATIENT HISTORY

CMS32V8

population criteria section

Encounter: Performed: Emergency Department Visit

RELEVANT PERIOD

START: 06/10/2012 5:00 AM

STOP: 06/10/2012 9:15 AM

CODES

SNOMED-CT: 4525004

FIELD VALUE

Principal Diagnosis: Psychiatric/Mental Health Patient

Facility Location: 06/10/2012 5:00 AM - 06/10/2012 10:00 AM, Emergency Department Visit, 1339304400000

Encounter: Performed: Encounter Inpatient

RELEVANT PERIOD

START: 06/10/2012 10:16 AM

STOP: 06/14/2012 10:15 AM

CODES

SNOMED-CT: 8715000

CQL Calculation Results:  
IPP 1, MSRPOPL 1, MSRPOPEX 0, STRAT

INITIAL POPULATION:

```
define "Initial Population":  
  /*Emergency Department visit during the  
  measurement period*/  
  ["Encounter, Performed": "Emergency  
  Department Visit"] EDVisit  
  where EDVisit.relevantPeriod during  
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```

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  )  
  union ( "Emergency Department ED  
  Visit" EDVisit  
  with ["Encounter, Performed":  
  "Encounter Inpatient"] Encounter  
  such that EDVisit.relevantPeriod  
  ends 1 hour or less before or on start of  
  Encounter.relevantPeriod  
  )
```