

# Center for Clinical Standards and Quality (CCSQ) Centers for Medicare & Medicaid Services (CMS)



## **Measure Information Form**

**Falls with Major Injury**

**Task 2, Deliverable #3-3**

May 2021

Version 3



## **DRAFT**

### **SUBMITTED TO**

Centers for Medicare & Medicaid Services (CMS)  
Center for Clinical Standards and Quality (CCSQ)

### **ATTENTION**

Annese Abdullah-Mclaughlin  
Centers for Medicare & Medicaid Services  
7500 Security Boulevard  
Baltimore, MD 21244-1850

### **SUBMITTED BY**

IMPAQ International, LLC  
10420 Little Patuxent Parkway  
Suite 300  
Columbia, MD 21044  
(443)256-5500  
www.impaqint.com

### **PROJECT**

Patient Safety Measure Development and Maintenance  
Contract Number: 75FCMC18D0027

### **TASK & DELIVERABLE**

Chapter 3 Information Gathering  
Deliverable 3-3 Measure Information Form

### **AUTHORS**

Jaqueline Stocking, University of California-Davis  
Michelle Lefebvre, IMPAQ International, LLC  
Mia Nievera, IMPAQ International, LLC  
Anna Michie, IMPAQ International, LLC

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## Overview

**PROJECT TITLE:** Patient Safety Measure Development and Maintenance Project

**DATE:** Information included is current on May 20, 2021.

**PROJECT OVERVIEW:** The Centers for Medicare & Medicaid Services (CMS) has contracted with IMPAQ International to develop, maintain, reevaluate, and implement patient safety measures for CMS' hospital-level quality reporting programs. The contract name is Patient Safety Measure Development and Maintenance. The contract number is 75FCMC18D0027 (Task Order: 75FCMC19F0001).

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# 1. Measure Name:

Hospital Harm – Falls with Major Injury

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## 2. Descriptive Information:

### 2.1 MEASURE TYPE

Outcome

### 2.2 BRIEF DESCRIPTION OF MEASURE

This ratio electronic clinical quality measure (eCQM) assesses the number of in-hospital falls with major injury among the total qualifying inpatient hospital days for patients ages 18 years and older.

A **patient fall** is a sudden, unintentional descent, with or without injury to the patient, that results in the patient coming to rest on the floor, on or against some other surface (e.g., a counter), on another person, or on an object (e.g., a trash can).

**Major injuries** include the following overarching categories, with examples provided (although not an exhaustive list): Compartment syndrome, crush injury, dislocation, fracture, non-minor injury (corroborated by Abbreviated Injury Scale [AIS] code e.g. unspecified injury of esophagus, lung, meniscus, Achilles tendon), other consequential subluxation (e.g. shoulder, humerus, hip, knee), overt intracranial injury (e.g. cerebral edema, traumatic brain injury, contusion/laceration/hemorrhage of cerebrum, epidural hemorrhage, carotid artery injury), penetration into peritoneal cavity (e.g. laceration with or without foreign body, puncture wound with or without foreign body), penetration into retroperitoneum (e.g. laceration with or without foreign body to lower back or pelvis, puncture wound with or without foreign body to lower back or pelvis), penetration into thoracic cavity (e.g. open wound, laceration, or puncture wound with or without foreign body to front of back wall of thorax), sign of consequential injury (e.g. traumatic hemorrhage, shock, or anuria), significant concussion (e.g. with loss of consciousness), significant nerve injury (e.g. injury of cauda equina or lumbosacral plexus), significant visceral injury (e.g. laceration or unspecified injury of heart, lung, spleen, liver), spinal cord injury (unspecified, complete or incomplete lesion of spinal cord; any spinal cord syndrome such as anterior cord syndrome), spine subluxation (at any spinal level), threat of permanent

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vision loss (e.g. ocular laceration and rupture, penetrating wound of orbit), traumatic amputation (e.g. complete or partial traumatic amputation of nose, external genital organs, or digits) , vessel injury (e.g. laceration of carotid or vertebral artery, unspecified injury of external jugular vein).

Note: ICD-10-CM codes were identified that aligned with the National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) Harm Taxonomy Codes E, F, G, H, I (used by the Pennsylvania Patient Safety Authority [PA-PSRS]) and the Abbreviated Injury Scale (AIS) (used by the Association for the Advancement of Automotive Medicine) with AIS score  $\geq 2$ . Selection of relevant ICD-10-CM codes for “major injury” was further informed by the National Database of Nursing Quality Indicator’s (NDNQI) falls with Injury measure (developed by the American Nurses Association [ANA] and now owned by Press Ganey) and the Nursing Knowledge Big Data Science (NKBDS) Falls Workgroup.

The detailed specifications for this measure are still in development.

This measure has not gone through the testing process. The measure will seek public comment in Summer 2021.

### 2.3 IF PAIRED OR GROUPED

Not Applicable

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## 3. Measure Specifications:

### 3.1 MEASURE-SPECIFIC WEB PAGE

Not applicable

### 3.2 HQMF SPECIFICATIONS (ECQM)

See *Falls with Major Injury.pdf*

### 3.3 DATA DICTIONARY, CODE, TABLE, OR VALUE SETS

Value Set Name	Value Set OID	Hyperlink to the Value Set Authority Center
Emergency Department Visit	2.16.840.1.113883.3.117.1.7.1.292	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.117.1.7.1.292">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.117.1.7.1.292</a>
Encounter Inpatient	2.16.840.1.113883.3.666.5.307	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.666.5.307">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.666.5.307</a>

Value Set Name	Value Set OID	Hyperlink to the Value Set Authority Center
Ethnicity	2.16.840.1.114222.4.11.837	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.837">https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.837</a>
Inpatient Falls	2.16.840.1.113762.1.4.1147.171	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1147.171">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1147.171</a>
Major Injuries	2.16.840.1.113762.1.4.1147.174	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1147.174">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1147.174</a>
Observation Services	2.16.840.1.113762.1.4.1111.143	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1111.143">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1111.143</a>
ONC Administrative Sex	2.16.840.1.113762.1.4.1	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1</a>
Payer	2.16.840.1.114222.4.11.3591	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3591">https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3591</a>
Race	2.16.840.1.114222.4.11.836	<a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.836">https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.836</a>

### 3.4 INSTRUMENT-BASED MEASURE

Not applicable

### 3.5 ENDORSEMENT MAINTENANCE

Not applicable as this proposed measure is *de novo*.

### 3.6 NUMERATOR STATEMENT

The total number of falls that result in an injury level of major or death.

### 3.7 NUMERATOR DETAILS

Examples of falls with major injury include fractures, closed head injuries, and internal bleeding. All falls with major injury are included, even if they occur in a patient who previously had a fall with a major injury in the same hospitalization. If a fall occurs while a patient is off the inpatient unit (e.g. for a procedure or diagnostic test), the fall is still counted.

This is an eCQM, and therefore uses electronic health record data to calculate the measure score. The time period for data collection is during an inpatient hospitalization, beginning at hospital arrival (whether through emergency department, observation stay, or directly admitted as inpatient).

All data elements necessary to calculate the numerator are defined within value sets available in the Value Set Authority Center (VSAC) and listed below.

Falls are defined by the value set “Inpatient Falls” (2.16.840.1.113762.1.4.1147.171).

Major injuries are defined by the value set “Major Injuries” (2.16.840.1.113762.1.4.1147.174).

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To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at <https://vsac.nlm.nih.gov/>.

### 3.8 DENOMINATOR STATEMENT

The total number of eligible hospital days for adult patients aged 18 years or older at the start of the encounter. Hospital days are measured in 24-hour periods starting from the time of arrival at the hospital (including time in the Emergency Department and or Observation.)

This measure has not gone through the testing process. The measure will seek public comment in Summer 2021.

### 3.9 DENOMINATOR DETAILS

This measure includes all patients aged 18 years and older at the time of admission, and all payers. Measurement period is one year.

Inpatient encounters are defined using the value set of Encounter Inpatient (2.16.840.1.113883.3.666.5.307).

Emergency department visits are defined using the value set of Emergency Department Visit (2.16.840.1.113883.3.117.1.7.1.292).

Observation stays are defined using the value set of Observation Services (2.16.840.1.113762.1.4.1111.143).

To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at <https://vsac.nlm.nih.gov/>.

### 3.10 DENOMINATOR EXCLUSIONS

TBD; there are no denominator exclusions; however this is subject to change.

### 3.11 DENOMINATOR EXCLUSION DETAILS

TBD; there are no denominator exclusions.

### 3.12 STRATIFICATION DETAILS AND VARIABLES

Not applicable.



### **3.13 RISK ADJUSTMENT TYPE**

This measure will be risk adjusted. Variables under consideration include: age (in years), gender, bone disorders (e.g. osteoporosis, metastatic bone cancer), and coagulation issues (e.g., anticoagulant use, abnormal platelet count). Additional risk adjustment variables will be informed through the TEP and public comment periods as well as the testing process to best balance validity and feasibility. The detailed specifications for this measure are still in development.

We plan to investigate how to appropriately risk-adjust this measure; however, we have not gone through the specification process or received public comment from the TEP on risk adjustment.

### **3.14 TYPE OF SCORE**

Rate/proportion

### **3.15 INTERPRETATION OF SCORE**

A lower score is indicative of a better quality.

### **3.16 CALCULATION ALGORITHM AND MEASURE LOGIC**

There are two Measure Observations:

1) Associated with the Denominator: The total number of eligible days across all encounters for patients aged 18 years or older at the start of the encounter.

Hospital days are measured in 24-hour periods starting from the time of arrival at the hospital (including time in the Emergency Department and or Observation.)

2) Associated with the Numerator: The total number of falls with major injury across all encounters.

The measure result is the total number of qualifying falls across all encounters divided by the total number of eligible days across all encounters.

To express the rate of inpatient falls with major injury per 1,000 patient days, the following calculation is applied post-production during implementation:

$$(\text{Total number of falls with major injury} / \text{Total number of eligible hospital days}) \times 1000 = \text{rate}$$

Example: 1 eligible patient fall over 120 eligible days

$$(1/120) \times 1000 = 8.33$$

The risk-adjusted rate is calculated as follows:

TBD. The detailed specifications for this measure are still in development.

### **3.17 SAMPLING**

Not applicable

### **3.18 SURVEY/PATIENT-REPORTED DATA**

Not applicable

### **3.19 DATA SOURCE**

Electronic clinical health record data

### **3.20 DATA SOURCE OR COLLECTION INSTRUMENT**

Hospitals collect EHR data using certified electronic health record technology (CEHRT). The MAT output, which includes the human readable and XML artifacts of the clinical quality language (CQL) for the measure are contained in the eCQM specifications attached. No additional tools are used for data collection for eCQMs.

### **3.21 DATA SOURCE OR COLLECTION INSTRUMENT REFERENCE**

No data collection instrument is used.

### **3.22 LEVEL OF ANALYSIS**

Facility

### **3.23 CARE SETTING**

Hospital: Short Term Acute Care Facility. Excludes Long Term Care Hospitals.

**3.24 COMPOSITE PERFORMANCE MEASURE**

Not Applicable