eCQM Title	Functional Status Assessment for Total Hip Replacement		
eCQM Identifier (Measure Authoring Tool)	56	eCQM Version number	7.4.000
NQF Number	Not Applicable	GUID	2f291003-3f2f-48af-bef9-e5aacb95ac3e
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	Centers for Medicare & Medicaid Services (CMS)		
Measure Developer	National Committee for Quality Assurance		
Endorsed By	None		
Description	Percentage of patients 18 years of age and older who received an elective primary total hip arthroplasty (THA) and completed a functional status assessment within 90 days prior to the surgery and in the 270-365 days after the surgery		
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Disclaimer	The performance Measure is not a clinical guideline and does not establish a standard of medical care, and has not been tested for all potential applications. THE MEASURE AND SPECIFICATIONS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. Due to technical limitations, registered trademarks are indicated by (R) or [R] and unregistered trademarks are indicated by (TM) or [TM].		
Measure Scoring	Proportion		
Measure Type	Process		
Stratification	None		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	Measuring functional status for patients undergoing total hip replacement permits longitudinal assessment - from the patient's perspective - of the impact of surgical intervention on pain, physical function, as well as health-related quality of life (Rothrock 2010).		
Clinical Recommendation Statement	The American Association of Hip and Knee Surgeons (AAHKS) states that it is important to ensure that the general/mental health survey be completed prior to surgery during the preoperative visit, as well as the post-operative visit. AAHKS recommends using a general health instrument, such as the VR-12 or PROMIS Global 10 in addition to condition-specific tools (AAHKS 2015).		
Improvement Notation	A higher score indicates better quality		
Reference	The American Association of Hip and Knee Surgeons (2015). Patient Reported Outcomes Summit for Total Joint Arthroplasty Report. Retrieved from the American Association of Hip and Knee Surgeons Website: http://www.aahks.org/wp-content/uploads/2016/08/AAHKS-2015-Outcomes-Summit-Report.pdf		
Reference	Rothrock NE, Hays RD, Spritzer K, Yount SE, Riley W, Cella D. Relative to the general US population, chronic diseases are associated with poorer health-related quality of life as measured by the Patient-Reported Outcomes Measurement Information System (PROMIS). J Clin Epidemiol 2010; 63(11):1195-204.		
Definition	None		
Guidance	A Functional Status Assessment (FSA) is based on administration of a validated instrument to eligible patients that asks patients to answer questions related to various domains including: pain, physical function, emotional well-being, health-related quality of life, symptom acuity. The same FSA instrument must be used for the initial and follow-up assessment.		
Transmission Format	TBD		
Initial Population	Patients 19 years of age and older who had a primary total hip arthroplasty (THA) in the year prior to the measurement period and who had an outpatient encounter during the measurement period		
Denominator	Equals Initial Population		
Denominator Exclusions	Patients with two or more fractures indicating trauma at the time of the total hip arthroplasty or patients with severe cognitive impairment that overlaps measurement period. Exclude patients whose hospice care overlaps the measurement period.		
Numerator	Patients with patient-reported functional status assessment results (i.e., VR-12, PROMIS-10-Global Health, HOOS, HOOS Jr.) in the 90 days prior to or on the day of the primary THA procedure, and in the 270 - 365 days after THA procedure		
Numerator Exclusions	Not Applicable		
Denominator Exceptions	None		
Supplemental Data Elements	For every patient evaluated by this measure also identify payer, race, ethnicity, and sex		

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Population Criteria

◢ Initial Population

```
exists ( "Total Hip Arthroplasty Procedure" )
    and exists ( "Qualifying Encounter" )
    and exists ["Patient Characteristic Birthdate"] BirthDate
        where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 19
```

◢ Denominator

```
"Initial Population"
```

◢ Denominator Exclusions

```
Hospice."Has Hospice"
    or exists ( "Total Hip Arthroplasty with 2 or More Lower Body Fractures" )
    or exists ( "Dementia Diagnosis" )
```

◢ **Numerator**

> exists "Total Hip Arthroplasty with Initial Assessment"
>   and exists "Hip Assessment 270 to 365 Days after Total Hip Arthroplasty Procedure"

◢ **Numerator Exclusions**

> None

◢ **Denominator Exceptions**

> None

◢ **Stratification**

> None

Definitions

◢ **Complete Assessment**

> (["Assessment, Performed": "Hip Dysfunction and Osteoarthritis Outcome Score for Joint Replacement [HOOSJR]"] HOOSJr
>   where HOOSJr.result is not null
>)
>   union "HOOS Total Assessment"
>   union "VR12 Total Assessment"
>   union "PROMIS10 Total Assessment"

◢ **Dementia Diagnosis**

> ["Diagnosis": "Severe dementia (disorder)"] Dementia
>   where Dementia.prevalencePeriod overlaps "Measurement Period"

◢ **Denominator**

> "Initial Population"

◢ **Denominator Exclusions**

> Hospice."Has Hospice"
>   or exists ("Total Hip Arthroplasty with 2 or More Lower Body Fractures")
>   or exists ("Dementia Diagnosis")

◢ **Hip Assessment 270 to 365 Days after Total Hip Arthroplasty Procedure**

> "Complete Assessment" HipAssessment
>   with "Total Hip Arthroplasty with Initial Assessment" TotalHip
>   such that HipAssessment.authorDatetime 270 days or more after day of end of TotalHip.relevantPeriod
>   and HipAssessment.authorDatetime 365 days or less after day of end of TotalHip.relevantPeriod

◢ **HOOS Total Assessment**

> ["Assessment, Performed": "Quality of life score [HOOS]"] HOOSLifeQuality
>   with ["Assessment, Performed": "Sport-recreation score [HOOS]"] HOOSSport
>   such that HOOSLifeQuality.authorDatetime same day as HOOSSport.authorDatetime
>   and HOOSSport.result is not null
>   with ["Assessment, Performed": "Activities of daily living score [HOOS]"] HOOSActivityScore
>   such that HOOSLifeQuality.authorDatetime same day as HOOSActivityScore.authorDatetime
>   and HOOSActivityScore.result is not null
>   with ["Assessment, Performed": "Symptoms score [HOOS]"] HOOSSymptoms
>   such that HOOSLifeQuality.authorDatetime same day as HOOSSymptoms.authorDatetime
>   and HOOSSymptoms.result is not null
>   with ["Assessment, Performed": "Pain score [HOOS]"] HOOSPain
>   such that HOOSLifeQuality.authorDatetime same day as HOOSPain.authorDatetime
>   and HOOSPain.result is not null
>   where HOOSLifeQuality.result is not null

◢ **Hospice.Has Hospice**

> exists (["Encounter, Performed": "Encounter Inpatient"] DischargeHospice
>   where (DischargeHospice.dischargeDisposition as Code ~ "Discharge to home for hospice care (procedure)"
>   or DischargeHospice.dischargeDisposition as Code ~ "Discharge to healthcare facility for hospice care (procedure)"
>   )
>   and DischargeHospice.relevantPeriod ends during "Measurement Period"
>)
>   or exists (["Intervention, Order": "Hospice care ambulatory"] HospiceOrder
>   where HospiceOrder.authorDatetime during "Measurement Period"
>   )
>   or exists (["Intervention, Performed": "Hospice care ambulatory"] HospicePerformed
>   where HospicePerformed.relevantPeriod overlaps "Measurement Period"
>   )

◢ **Initial Population**

> exists ("Total Hip Arthroplasty Procedure")
>   and exists ("Qualifying Encounter")
>   and exists ["Patient Characteristic Birthdate"] BirthDate
>   where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 19

◢ **Numerator**

> exists "Total Hip Arthroplasty with Initial Assessment"
>   and exists "Hip Assessment 270 to 365 Days after Total Hip Arthroplasty Procedure"

◢ **PROMIS10 Total Assessment**

> ["Assessment, Performed": "PROMIS 10 Global Mental Health Score"] Promis10MentalScore
>   with ["Assessment, Performed": "PROMIS 10 Global Physical Health Score"] Promis10PhysicalScore
>   such that Promis10MentalScore.authorDatetime same day as Promis10PhysicalScore.authorDatetime
>   and Promis10PhysicalScore.result is not null
>   where Promis10MentalScore.result is not null

◢ **Qualifying Encounter**

> (["Encounter, Performed": "Outpatient Consultation"]
>   union ["Encounter, Performed": "Office Visit"]
>   union ["Encounter, Performed": "Postoperative follow-up visit, normally included in the surgical package, to indicate that an evaluation and management service was performed during a postoperative period for a reason(s) related to the original procedure"]) QualifyingEncounter
>   where QualifyingEncounter.relevantPeriod during "Measurement Period"

◢ **SDE Ethnicity**

> ["Patient Characteristic Ethnicity": "Ethnicity"]

◢ **SDE Payer**

> ["Patient Characteristic Payer": "Payer"]

◢ **SDE Race**

["Patient Characteristic Race": "Race"]

◢ SDE Sex

["Patient Characteristic Sex": "ONC Administrative Sex"]

◢ Total Hip Arthroplasty Procedure

(["Procedure, Performed": "Primary THA Procedure"] THAProcedure
      where THAProcedure.relevantPeriod starts 12 months or less before start of "Measurement Period"
)

◢ Total Hip Arthroplasty with 2 or More Lower Body Fractures

"Total Hip Arthroplasty Procedure" THAProcedure
    where Count(["Diagnosis": "Fracture - Lower Body"] LowerBodyFracture
        where LowerBodyFracture.prevalencePeriod starts less than 1 day on or before THAProcedure.relevantPeriod
)>= 2

◢ Total Hip Arthroplasty with Initial Assessment

"Total Hip Arthroplasty Procedure" TotalHip
    with "Complete Assessment" HipAssessment
        such that TotalHip.relevantPeriod starts 90 days or less on or after day of HipAssessment.authorDatetime

◢ VR12 Total Assessment

["Assessment, Performed": "VR12 Mental Component T Score"] VR12MentalScore
    with ["Assessment, Performed": "VR12 Physical Component T Score"] VR12PhysicalScore
        such that VR12MentalScore.authorDatetime same day as VR12PhysicalScore.authorDatetime
           and VR12PhysicalScore.result is not null
    where VR12MentalScore.result is not null

Functions

◢ Global.CalendarAgeInYearsAt(BirthDateTime DateTime, AsOf DateTime)

years between ToDate(BirthDateTime)and ToDate(AsOf)

◢ Global.ToDate(Value DateTime)

DateTime(year from Value, month from Value, day from Value, 0, 0, 0, 0, timezone from Value)

Terminology

- codesystem "CPT" using "2.16.840.1.113883.6.12 version 2018"
- codesystem "LOINC" using "2.16.840.1.113883.6.1 version 2.63"
- codesystem "SNOMEDCT" using "2.16.840.1.113883.6.96 version 2017-09"
- code "Activities of daily living score [HOOS]" using "LOINC version 2.63 Code (72095-3)"
- code "Discharge to healthcare facility for hospice care (procedure)" using "SNOMEDCT version 2017-09 Code (428371000124100)"
- code "Discharge to home for hospice care (procedure)" using "SNOMEDCT version 2017-09 Code (428361000124107)"
- code "Pain score [HOOS]" using "LOINC version 2.63 Code (72097-9)"
- code "Postoperative follow-up visit, normally included in the surgical package, to indicate that an evaluation and management service was performed during a postoperative period for a reason(s) related to the original procedure" using "CPT version 2018 Code (99024)"
- code "Quality of life score [HOOS]" using "LOINC version 2.63 Code (72093-8)"
- code "Severe dementia (disorder)" using "SNOMEDCT version 2017-09 Code (428351000124105)"
- code "Sport-recreation score [HOOS]" using "LOINC version 2.63 Code (72094-6)"
- code "Symptoms score [HOOS]" using "LOINC version 2.63 Code (72096-1)"
- valueset "Encounter Inpatient" using "2.16.840.1.113883.3.666.5.307"
- valueset "Ethnicity" using "2.16.840.1.114222.4.11.837"
- valueset "Fracture - Lower Body" using "2.16.840.1.113883.3.464.1003.113.12.1037"
- valueset "Hip Dysfunction and Osteoarthritis Outcome Score for Joint Replacement [HOOSJR]" using "2.16.840.1.113883.3.464.1003.118.12.1210"
- valueset "Hospice care ambulatory" using "2.16.840.1.113762.1.4.1108.15"
- valueset "Office Visit" using "2.16.840.1.113883.3.464.1003.101.12.1001"
- valueset "ONC Administrative Sex" using "2.16.840.1.113762.1.4.1"
- valueset "Outpatient Consultation" using "2.16.840.1.113883.3.464.1003.101.12.1008"
- valueset "Payer" using "2.16.840.1.114222.4.11.3591"
- valueset "Primary THA Procedure" using "2.16.840.1.113883.3.464.1003.198.12.1006"
- valueset "PROMIS 10 Global Mental Health Score" using "2.16.840.1.113883.3.464.1003.118.12.1138"
- valueset "PROMIS 10 Global Physical Health Score" using "2.16.840.1.113883.3.464.1003.118.12.1139"
- valueset "Race" using "2.16.840.1.114222.4.11.836"
- valueset "VR12 Mental Component T Score" using "2.16.840.1.113883.3.464.1003.118.12.1177"
- valueset "VR12 Physical Component T Score" using "2.16.840.1.113883.3.464.1003.118.12.1176"

Data Criteria (QDM Data Elements)

- "Assessment, Performed: Hip Dysfunction and Osteoarthritis Outcome Score for Joint Replacement [HOOSJR]" using "Hip Dysfunction and Osteoarthritis Outcome Score for Joint Replacement [HOOSJR] (2.16.840.1.113883.3.464.1003.118.12.1210)"
- "Assessment, Performed: PROMIS 10 Global Mental Health Score" using "PROMIS 10 Global Mental Health Score (2.16.840.1.113883.3.464.1003.118.12.1138)"
- "Assessment, Performed: PROMIS 10 Global Physical Health Score" using "PROMIS 10 Global Physical Health Score (2.16.840.1.113883.3.464.1003.118.12.1139)"
- "Assessment, Performed: VR12 Mental Component T Score" using "VR12 Mental Component T Score (2.16.840.1.113883.3.464.1003.118.12.1177)"
- "Assessment, Performed: VR12 Physical Component T Score" using "VR12 Physical Component T Score (2.16.840.1.113883.3.464.1003.118.12.1176)"
- "Diagnosis: Fracture - Lower Body" using "Fracture - Lower Body (2.16.840.1.113883.3.464.1003.113.12.1037)"
- "Encounter, Performed: Encounter Inpatient" using "Encounter Inpatient (2.16.840.1.113883.3.666.5.307)"
- "Encounter, Performed: Office Visit" using "Office Visit (2.16.840.1.113883.3.464.1003.101.12.1001)"
- "Encounter, Performed: Outpatient Consultation" using "Outpatient Consultation (2.16.840.1.113883.3.464.1003.101.12.1008)"
- "Intervention, Order: Hospice care ambulatory" using "Hospice care ambulatory (2.16.840.1.113762.1.4.1108.15)"
- "Intervention, Performed: Hospice care ambulatory" using "Hospice care ambulatory (2.16.840.1.113762.1.4.1108.15)"
- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity (2.16.840.1.114222.4.11.837)"
- "Patient Characteristic Payer: Payer" using "Payer (2.16.840.1.114222.4.11.3591)"
- "Patient Characteristic Race: Race" using "Race (2.16.840.1.114222.4.11.836)"
- "Patient Characteristic Sex: ONC Administrative Sex" using "ONC Administrative Sex (2.16.840.1.113762.1.4.1)"
- "Procedure, Performed: Primary THA Procedure" using "Primary THA Procedure (2.16.840.1.113883.3.464.1003.198.12.1006)"
- "Assessment, Performed: Activities of daily living score [HOOS]" using "Activities of daily living score [HOOS] (LOINC version 2.63 Code 72095-3)"
- "Assessment, Performed: Pain score [HOOS]" using "Pain score [HOOS] (LOINC version 2.63 Code 72097-9)"
- "Assessment, Performed: Quality of life score [HOOS]" using "Quality of life score [HOOS] (LOINC version 2.63 Code 72093-8)"
- "Assessment, Performed: Sport-recreation score [HOOS]" using "Sport-recreation score [HOOS] (LOINC version 2.63 Code 72094-6)"
- "Assessment, Performed: Symptoms score [HOOS]" using "Symptoms score [HOOS] (LOINC version 2.63 Code 72096-1)"
- "Diagnosis: Severe dementia (disorder)" using "Severe dementia (disorder) (SNOMEDCT version 2017-09 Code 428351000124105)"
- "Encounter, Performed: Postoperative follow-up visit, normally included in the surgical package, to indicate that an evaluation and management service was performed during a postoperative period for a reason(s) related to the original procedure" using "Postoperative follow-up visit, normally included in the surgical package, to indicate that an evaluation and management service was performed during a postoperative period for a reason(s) related to the original procedure (CPT version 2018 Code 99024)"

Supplemental Data Elements

◢ SDE Ethnicity

["Patient Characteristic Ethnicity": "Ethnicity"]

◢ SDE Payer

["Patient Characteristic Payer": "Payer"]

◢ SDE Race

["Patient Characteristic Race": "Race"]

◢ **SDE Sex**

["Patient Characteristic Sex": "ONC Administrative Sex"]

Risk Adjustment Variables

None

Measure Set	Not Applicable

◢ **SDE Sex**

["Patient Characteristic Sex": "ONC Administrative Sex"]

Risk Adjustment Variables

None

Measure Set	Not Applicable