

eCQM Title	HIV Screening		
eCQM Identifier (Measure Authoring Tool)	349	eCQM Version number	1.2.000
NQF Number	NA	GUID	ed78899d-2375-4d68-aa63-58e1734f5694
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	Centers for Disease Control and Prevention (CDC)		
Measure Developer	Mathematica Policy Research		
Endorsed By	None		
Description	Percentage of patients 15-65 years of age who have been tested for HIV within that age range		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	None		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	<p>Human immunodeficiency virus (HIV) is a communicable infection that leads to a progressive disease with a long asymptomatic period. Approximately 50,000 persons in the United States are newly infected with HIV each year (Prejean 2011). Without treatment, most persons develop acquired immunodeficiency syndrome (AIDS) within 10 years of HIV infection. Antiretroviral therapy (ART) delays this progression and increases the length of survival, but it is most effective when initiated during the asymptomatic phase. It is estimated that on average an HIV-infected person aged 25 years who receives high quality health care will live an additional 39 years (Lohse 2007). DHHS Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents recommends antiretroviral therapy for all HIV-infected individuals to reduce the risk of disease progression (regardless of CD4 cell count at diagnosis) (Panel on Antiretroviral Guidelines for Adults and Adolescents, 2017).</p> <p>CDC estimates that almost 16% of the 1.1 million adults and adolescents living with HIV infection in the United States are unaware of their infection (Centers for Disease Control and Prevention 2013). Among persons diagnosed with HIV in 2011, one quarter were diagnosed with Stage 3 HIV (AIDS) at the time of HIV diagnosis (Centers for Disease Control and Prevention 2010). Median CD4 count at diagnosis is less than 350 cells/mm3 (Althoff 2010). HIV screening identifies infected persons who were previously unaware of their infection, which enables them to seek medical and social services that can improve their health and the quality and length of their lives. Additionally, using ART with high levels of medication adherence has been shown to substantially reduce risk for HIV transmission (Panel on Antiretroviral Guidelines for Adults and Adolescents, 2017).</p> <p>Based on the National Health Interview Survey, fewer than half of persons 18 and older reported ever having been tested for HIV as of 2010 (Centers for Disease Control and Prevention 2014).</p>		
Clinical Recommendation Statement	<p>The US Preventive Services Task Force recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years. Younger adolescents and older adults who are at increased risk should also be screened (A Recommendation) (Moyer 2013).</p> <p>Since 2006, the CDC has recommended routine opt-out HIV screening (i.e. patient is notified that testing will be performed unless the patient declines) in healthcare facilities of adolescents and adults 13-64 years of age and HIV diagnostic testing of adolescents and adults with clinical signs or symptoms consistent with HIV infection (Centers for Disease Control and Prevention 2006).</p>		
Improvement Notation	Higher score indicates better quality		
Reference	Althoff KN, Gange SJ, Klein MB, Brooks JT, Hogg RS, Bosch RJ, et al. Late presentation for human immunodeficiency virus care in the United States and Canada. Clin Infect Dis. 2010;50:1512-20.		
Reference	Centers for Disease Control and Prevention. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. MMWR 2006;55(No. RR-14).		
Reference	Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data-United States and 6 U.S. dependent areas-2011. HIV Surveillance Supplemental Report 2013;18(No. 5). http://www.cdc.gov/hiv/topics/surveillance/resources/reports/ . Published October 2013. Accessed April 7, 2014.		
Reference	Lohse N, Hansen AB, Pedersen G, et al. Survival of persons with and without HIV infection in Denmark, 1995-2005. Ann Intern Med 2007;146:87-95.		
Reference	Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. Department of Health and Human Services 2017. Available at https://aidsinfo.nih.gov/contentfiles/lvguidelines/adultandadolescentgl.pdf . Accessed 2/19/2018.		
Reference	Moyer VA, on behalf of the U.S. Preventive Services Task Force. Screening for HIV: U.S. Preventive Services Task Force Recommendation Statement. Annals Internal Medicine 2013. Published at www.annals.org (accessed July 1, 2013).		
Reference	Prejean J, Song R, Hernandez A, et al. Estimated HIV incidence in the United States, 2006-2009. PlosOne 2011. 2011;6(8):e17502.		
Definition	None		
Guidance	<p>This measure evaluates the proportion of patients with an HIV test between their 15th and 66th birthdays. In order to satisfy the measure, the reporting provider must have documentation of the administration of the laboratory test present in the patient's medical record. On occasion, providers will view HIV screening results that were performed elsewhere and therefore the results are not present in the EHR in structured format. To allow such tests to be applied to this measure, they should be entered into the EHR as a laboratory test in a manner consistent with the EHR in use. If the specific Human Immunodeficiency Virus (HIV) Laboratory Test LOINC code of the test is not known, the entry should use the more generic code LOINC panel code [75622-1] which is present in the HIV test value set titled, "HIV Test Documentation Reviewed."</p>		
Transmission Format	TBD		
Initial Population	Patients 15 to 65 years of age who had an outpatient visit during the measurement period		
Denominator	Equals Initial Population		
Denominator Exclusions	Patients diagnosed with HIV prior to the start of the measurement period		
Numerator	Patients with documentation of an HIV test between age 15-65 before the end of the measurement period		




Numerator Exclusions	Not Applicable	
Denominator Exceptions	None	
Supplemental Data Elements	For every patient evaluated by this measure also identify payer, race, ethnicity and sex	

Table of Contents

- [Population Criteria](#)
- [Definitions](#)
- [Functions](#)
- [Terminology](#)
- [Data Criteria \(QDM Data Elements\)](#)
- [Supplemental Data Elements](#)
- [Risk Adjustment Variables](#)

Population Criteria

Initial Population

```
exists ( ["Patient Characteristic Birthdate"] BirthDate
  where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 15
    and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 66
)
and exists ( "Qualifying Encounters" Encounter )
```

Denominator

"Initial Population"

Denominator Exclusions

```
exists ( ["Diagnosis": "Conditions Due To Human Immunodeficiency Virus (HIV)"] HIVConditions
  where HIVConditions.prevalencePeriod starts before start of "Measurement Period"
)
```

Numerator

exists ("HIV Test Performed")

Numerator Exclusions

None

Denominator Exceptions

None

Stratification

None

Definitions

Denominator

"Initial Population"

Denominator Exclusions

```
exists ( ["Diagnosis": "Conditions Due To Human Immunodeficiency Virus (HIV)"] HIVConditions
  where HIVConditions.prevalencePeriod starts before start of "Measurement Period"
)
```

HIV Test Performed

```
( ["Laboratory Test, Performed": "Human Immunodeficiency Virus (HIV) Laboratory Test Codes (Ab and Ag)"]
union ["Laboratory Test, Performed": "HIV 1 and 2 tests - Meaningful Use set"] ) HIVTest
where exists ( ["Patient Characteristic Birthdate"] BirthDate
  where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of HIVTest.relevantPeriod)>= 15
    and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of HIVTest.relevantPeriod)< 66
)
and HIVTest.relevantPeriod starts before end of "Measurement Period"
```

Initial Population

```
exists ( ["Patient Characteristic Birthdate"] BirthDate
  where Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")>= 15
    and Global."CalendarAgeInYearsAt"(BirthDate.birthDatetime, start of "Measurement Period")< 66
)
and exists ( "Qualifying Encounters" Encounter )
```

Numerator

exists ("HIV Test Performed")

Qualifying Encounters

```
( ["Encounter, Performed": "Preventive Care Services, Initial Office Visit, 0 to 17"]
union ["Encounter, Performed": "Preventive Care Services-Initial Office Visit, 18 and Up"]
union ["Encounter, Performed": "Preventive Care, Established Office Visit, 0 to 17"]
union ["Encounter, Performed": "Preventive Care Services - Established Office Visit, 18 and Up"]
union ["Encounter, Performed": "Office Visit"] ) Encounter
where Encounter.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"]

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 "LOINC" using "2.16.840.1.113883.6.1 version 2.63"
- code "HIV 1 and 2 tests - Meaningful Use set" using "LOINC version 2.63 Code (75622-1)"
- valueset "Conditions Due To Human Immunodeficiency Virus (HIV)" using "2.16.840.1.113762.1.4.1056.54"
- valueset "Ethnicity" using "2.16.840.1.114222.4.11.837"
- valueset "Human Immunodeficiency Virus (HIV) Laboratory Test Codes (Ab and Ag)" using "2.16.840.1.113762.1.4.1056.50"
- 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 "Payer" using "2.16.840.1.114222.4.11.3591"
- valueset "Preventive Care Services - Established Office Visit, 18 and Up" using "2.16.840.1.113883.3.464.1003.101.12.1025"
- valueset "Preventive Care Services, Initial Office Visit, 0 to 17" using "2.16.840.1.113883.3.464.1003.101.12.1022"
- valueset "Preventive Care Services-Initial Office Visit, 18 and Up" using "2.16.840.1.113883.3.464.1003.101.12.1023"
- valueset "Preventive Care, Established Office Visit, 0 to 17" using "2.16.840.1.113883.3.464.1003.101.12.1024"
- valueset "Race" using "2.16.840.1.114222.4.11.836"

Data Criteria (QDM Data Elements)

- "Diagnosis: Conditions Due To Human Immunodeficiency Virus (HIV)" using "Conditions Due To Human Immunodeficiency Virus (HIV) (2.16.840.1.113762.1.4.1056.54)"
- "Encounter, Performed: Office Visit" using "Office Visit (2.16.840.1.113883.3.464.1003.101.12.1001)"
- "Encounter, Performed: Preventive Care Services - Established Office Visit, 18 and Up" using "Preventive Care Services - Established Office Visit, 18 and Up (2.16.840.1.113883.3.464.1003.101.12.1025)"
- "Encounter, Performed: Preventive Care Services, Initial Office Visit, 0 to 17" using "Preventive Care Services, Initial Office Visit, 0 to 17 (2.16.840.1.113883.3.464.1003.101.12.1022)"
- "Encounter, Performed: Preventive Care Services-Initial Office Visit, 18 and Up" using "Preventive Care Services-Initial Office Visit, 18 and Up (2.16.840.1.113883.3.464.1003.101.12.1023)"
- "Encounter, Performed: Preventive Care, Established Office Visit, 0 to 17" using "Preventive Care, Established Office Visit, 0 to 17 (2.16.840.1.113883.3.464.1003.101.12.1024)"
- "Laboratory Test, Performed: Human Immunodeficiency Virus (HIV) Laboratory Test Codes (Ab and Ag)" using "Human Immunodeficiency Virus (HIV) Laboratory Test Codes (Ab and Ag) (2.16.840.1.113762.1.4.1056.50)"
- "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)"
- "Laboratory Test, Performed: HIV 1 and 2 tests - Meaningful Use set" using "HIV 1 and 2 tests - Meaningful Use set (LOINC version 2.63 Code 75622-1)"

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	NA	1
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