

eCQM Title	Sexually Transmitted Infection (STI) Testing for People with HIV		
eCQM Identifier (Measure Authoring Tool)	1188	eCQM Version Number	2.0.000
CBE Number	Not Applicable	GUID	f44d919f-9e16-495d-a0d1-dc0ffa6334af
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	Health Resources & Services Administration		
Measure Developer	Health Resources & Services Administration		
Endorsed By	None		
Description	<p>Percentage of patients 13 years of age and older with a diagnosis of HIV who had tests for syphilis, gonorrhea, and chlamydia performed within the measurement period</p> <p>This measure was developed by the Health Resources & Services Administration (HRSA) of the U.S. Department of Health & Human Services (HHS). It is in the public domain.</p> <p>Citation of HRSA as the source of the original measure is appreciated. Any modified versions may not be represented as approved, endorsed, or authorized by HRSA or HHS. 42 U.S.C. Section 1320b-10. Users of modified versions should clearly explain how they deviate from HRSA's original measure.</p>		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	None		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	<p>The rates of syphilis, gonorrhea, and chlamydia cases per 100,000 in the United States have steadily risen over the last decade and increased 11.2 percent, 5.9 percent, and 2.8 percent, respectively, from 2018 to 2019 (DHHS, 2021). People with HIV are at an increased risk of bacterial sexually transmitted infections (STIs), including chlamydia, gonorrhea, and syphilis (Centers for Disease Control and Prevention [CDC], 2004). However, early detection and treatment of bacterial STIs in people with HIV can lead to a reduction in HIV transmission (CDC, 2004). Despite guidelines for at least annual screening among sexually active persons with HIV, only an estimated 55 percent received a syphilis test in the past year, 23 percent received a gonorrhea test in the past year, and 24 percent received a chlamydia test in the past year based on a nationally-representative survey of adults with HIV receiving medical care in the United States (Flagg et al., 2015). This measure will help providers focus their attention and</p>		

quality improvement efforts towards testing and treating sexually transmitted infections in patients with HIV, thus reducing the complications to long-term syphilis infection and reducing STI incidence (Patel et al., 2012).

"Routine serologic screening for syphilis is recommended at least annually for all persons with HIV infection who are sexually active, with more frequent screening (i.e., every 3-6 months) for those who have multiple or anonymous partners" (Panel on Opportunistic Infections in Adults and Adolescents with HIV, 2022, p. Y-3).

"Patients undergoing screening or treatment for syphilis also should be evaluated for other sexually transmitted diseases such as chlamydia and gonorrhea at anatomic sites of exposure in men and for chlamydia, gonorrhea, and trichomonas in women" (Panel on Opportunistic Infections in Adults and Adolescents with HIV, 2022, p. Y-3).

Clinical Recommendation Statement

"The [United States Preventive Services Task Force (USPSTF)] recommends screening for syphilis in persons who are at increased risk for infection. When deciding which persons to screen for syphilis, clinicians should consider the prevalence of infection in the communities they serve, as well as other sociodemographic and behavioral factors that may be associated with increased risk of syphilis infection. For example, prevalence of syphilis is higher in men, men who have sex with men, persons with HIV infection, young adults, and persons with a history of incarceration, sex work, or military service.... Optimal screening frequency for persons who are at increased risk for syphilis infection is not well established. Men who have sex with men or persons with HIV infection may benefit from screening at least annually or more frequently (e.g., every 3 to 6 months) if they continue to be at high risk" (USPSTF, 2022, p. 1244-1246).

"At the initial HIV care visit, providers should screen all sexually active persons for syphilis, gonorrhea, and chlamydia, and perform screening for these infections at least annually during the course of HIV care. Specific testing includes syphilis serology and [a nucleic acid amplification test] NAAT for *N. gonorrhoeae* and *C. trachomatis* at the anatomic site of exposure" (Workowski et al., 2021, p. 26).

Improvement Notation

Higher score equals better quality

Reference Type: CITATION

Reference

Reference Text: 'Centers for Disease Control and Prevention, Health Resources and Services Administration, National Institutes of Health, HIV Medicine Association of the Infectious Diseases Society of America, & HIV Prevention in Clinical Care Working Group. (2004). Recommendations for incorporating human immunodeficiency virus (HIV) prevention into the medical care of persons living with HIV. Clinical infectious diseases: an official publication of the Infectious Diseases Society of America, 38(1), 104-121. <https://doi.org/10.1086/380131>'

Reference Type: CITATION

Reference

Reference Text: 'Flagg, E. W., Weinstock, H. S., Frazier, E. L., Valverde, E. E., Heffelfinger, J. D., & Skarbinski, J. (2015). Bacterial sexually transmitted infections among HIV-infected patients in the United States: Estimates from the Medical Monitoring Project. Sexually transmitted diseases, 42(4), 171-179. <https://doi.org/10.1097/OLQ.0000000000000260>. Erratum in: Sex Transm Dis. 2015 Jun;42(6):351-2. PMID: 25763669; PMCID: PMC6921480'

Reference Type: CITATION

Reference

Reference Text: 'Panel on Opportunistic Infections in Adults and Adolescents with HIV. (2022, July). Guidelines for the prevention and treatment of opportunistic infections in adults and adolescents with HIV: Recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. Retrieved from <https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/syphilis?view=full>'

Reference Type: CITATION

Reference

Reference Text: 'Patel, P., Bush, T., Mayer, K., Milam, J., Richardson, J., Hammer, J., ... SUN Study Investigators. (2012). Routine brief risk-reduction counseling with biannual STD testing reduces STD incidence among HIV-infected men who have sex with men in care. Sexually Transmitted Diseases, 39(6), 470-474. <https://doi.org/10.1097/OLQ.0b013e31824b3110>'

Reference

Reference Type: CITATION

Reference Text: 'US Preventive Services Task Force, Mangione, C. M., Barry, M. J., Nicholson, W. K., Cabana, M., Chelmos, D., ... Wong, J. B. (2022). Screening for syphilis infection in nonpregnant adolescents and adults: US

Preventive Services Task Force reaffirmation recommendation statement. JAMA, 328(12), 1243-1249.
<https://doi.org/10.1001/jama.2022.15322>'

Reference Type: CITATION

Reference	Reference Text: 'Workowski, K. A., Bachmann, L. H., Chan, P. A., Johnston, C. M., Muzny, C. A., Park, I., ... Bolan, G. A. (2021). Sexually transmitted infections treatment guidelines, 2021. MMWR. Recommendations and Reports, 70(4), 1-187. https://doi.org/10.15585/mmwr.rr7004a1 '
Definition	None This eCQM is a patient-based measure.
Guidance	This version of the eCQM uses QDM version 5.6. Please refer to the eCQI resource center (https://ecqi.healthit.gov/qdm) for more information on the QDM.
Transmission Format	TBD
Initial Population	All patients 13 years of age and older at the start of the measurement period with an eligible encounter during the measurement period with a diagnosis of HIV before the end of the measurement period
Denominator	Equals Initial Population
Denominator Exclusions	None
Numerator	Patients who were tested for each of the following at least once during the measurement period: chlamydia, gonorrhea, and syphilis
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

AgeInYearsAt(date from start of "Measurement Period") >= 13
 and "Has Qualifying Encounter During Measurement Period"
 and "Has HIV Diagnosis Before End of Measurement Period"

▲ Denominator

"Initial Population"

▲ Denominator Exclusions

None

▲ Numerator

"Has Chlamydia Testing"
and "Has Gonorrhea Testing"
and "Has Syphilis Testing"

▲ Numerator Exclusions

None

▲ Denominator Exceptions

None

▲ Stratification

None

Definitions**▲ Denominator**

"Initial Population"

▲ Has Chlamydia Testing

exists ["Laboratory Test, Performed": "Chlamydia Screening"] ChlamydiaTest
where ChlamydiaTest.result is not null
and Global."LatestOf" (ChlamydiaTest.relevantDatetime, ChlamydiaTest.relevantPeriod) during day of "Measurement Period"

▲ Has Gonorrhea Testing

exists ["Laboratory Test, Performed": "Gonorrhea Screening"] GonorrheaTest
where GonorrheaTest.result is not null
and Global."LatestOf" (GonorrheaTest.relevantDatetime, GonorrheaTest.relevantPeriod) during day of "Measurement Period"

▲ Has HIV Diagnosis Before End of Measurement Period

exists ["Diagnosis": "HIV"] HIVDx
where HIVDx.prevalencePeriod starts on or before day of end of "Measurement Period"

▲ Has Qualifying Encounter During Measurement Period

exists ((["Encounter, Performed": "Office Visit"]
union ["Encounter, Performed": "Outpatient Consultation"]
union ["Encounter, Performed": "Annual Wellness Visit"]
union ["Encounter, Performed": "Face-to-Face Interaction"]
union ["Encounter, Performed": "Home Healthcare Services"]
union ["Encounter, Performed": "Preventive Care Services Established Office Visit, 18 and Up"]
union ["Encounter, Performed": "Preventive Care Services Initial Office Visit, 18 and Up"]
union ["Encounter, Performed": "Preventive Care Services, Initial Office Visit, 0 to 17"]
union ["Encounter, Performed": "Preventive Care, Established Office Visit, 0 to 17"]

```

union ["Encounter, Performed": "Telephone Visits"]
union ["Encounter, Performed": "Unlisted preventive medicine service" ] QualifyingEncounter
where QualifyingEncounter.relevantPeriod during day of "Measurement Period"
)

```

▲ Has Syphilis Testing

```

exists ["Laboratory Test, Performed": "Syphilis Tests"] SyphilisTest
where SyphilisTest.result is not null
and Global."LatestOf" ( SyphilisTest.relevantDatetime, SyphilisTest.relevantPeriod ) during day of "Measurement Period"

```

▲ Initial Population

```

AgeInYearsAt(date from start of "Measurement Period") >= 13
and "Has Qualifying Encounter During Measurement Period"
and "Has HIV Diagnosis Before End of Measurement Period"

```

▲ Numerator

```

"Has Chlamydia Testing"
and "Has Gonorrhea Testing"
and "Has Syphilis Testing"

```

▲ SDE Ethnicity

```

["Patient Characteristic Ethnicity": "Ethnicity"]

```

▲ SDE Payer

```

["Patient Characteristic Payer": "Payer Type"]

```

▲ SDE Race

```

["Patient Characteristic Race": "Race"]

```

▲ SDE Sex

```

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

```

Functions

▲ Global.HasEnd(period Interval<DateTime>)

```

not (
  end of period is null
  or
  end of period = maximum DateTime
)

```

▲ Global.Latest(period Interval<DateTime>)

```

if ( HasEnd(period)) then
  end of period
else start of period

```

▲ Global.LatestOf(pointInTime DateTime, period Interval<DateTime>)

Latest(NormalizeInterval(pointInTime, period))

▲ Global.NormalizeInterval(pointInTime DateTime, period Interval<DateTime>)

if pointInTime is not null then Interval[pointInTime, pointInTime]
 else if period is not null then period
 else null as Interval<DateTime>

Terminology

- code "Unlisted preventive medicine service" ("CPT Code (99429)")
- valueset "Annual Wellness Visit" (2.16.840.1.113883.3.526.3.1240)
- valueset "Chlamydia Screening" (2.16.840.1.113883.3.464.1003.110.12.1052)
- valueset "Ethnicity" (2.16.840.1.114222.4.11.837)
- valueset "Face-to-Face Interaction" (2.16.840.1.113883.3.464.1003.101.12.1048)
- valueset "Gonorrhea Screening" (2.16.840.1.113762.1.4.1258.1)
- valueset "HIV" (2.16.840.1.113883.3.464.1003.120.12.1003)
- valueset "Home Healthcare Services" (2.16.840.1.113883.3.464.1003.101.12.1016)
- valueset "Office Visit" (2.16.840.1.113883.3.464.1003.101.12.1001)
- valueset "ONC Administrative Sex" (2.16.840.1.113762.1.4.1)
- valueset "Outpatient Consultation" (2.16.840.1.113883.3.464.1003.101.12.1008)
- valueset "Payer Type" (2.16.840.1.114222.4.11.3591)
- valueset "Preventive Care Services Established Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1025)
- valueset "Preventive Care Services Initial Office Visit, 18 and Up" (2.16.840.1.113883.3.464.1003.101.12.1023)
- valueset "Preventive Care Services, Initial Office Visit, 0 to 17" (2.16.840.1.113883.3.464.1003.101.12.1022)
- valueset "Preventive Care, Established Office Visit, 0 to 17" (2.16.840.1.113883.3.464.1003.101.12.1024)
- valueset "Race" (2.16.840.1.114222.4.11.836)
- valueset "Syphilis Tests" (2.16.840.1.113762.1.4.1166.117)
- valueset "Telephone Visits" (2.16.840.1.113883.3.464.1003.101.12.1080)

Data Criteria (QDM Data Elements)

- "Diagnosis: HIV" using "HIV (2.16.840.1.113883.3.464.1003.120.12.1003)"
- "Encounter, Performed: Annual Wellness Visit" using "Annual Wellness Visit (2.16.840.1.113883.3.526.3.1240)"
- "Encounter, Performed: Face-to-Face Interaction" using "Face-to-Face Interaction (2.16.840.1.113883.3.464.1003.101.12.1048)"
- "Encounter, Performed: Home Healthcare Services" using "Home Healthcare Services (2.16.840.1.113883.3.464.1003.101.12.1016)"
- "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)"
- "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, 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 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, 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)"
- "Encounter, Performed: Telephone Visits" using "Telephone Visits (2.16.840.1.113883.3.464.1003.101.12.1080)"
- "Encounter, Performed: Unlisted preventive medicine service" using "Unlisted preventive medicine service (CPT Code 99429)"
- "Laboratory Test, Performed: Chlamydia Screening" using "Chlamydia Screening (2.16.840.1.113883.3.464.1003.110.12.1052)"
- "Laboratory Test, Performed: Gonorrhea Screening" using "Gonorrhea Screening (2.16.840.1.113762.1.4.1258.1)"
- "Laboratory Test, Performed: Syphilis Tests" using "Syphilis Tests (2.16.840.1.113762.1.4.1166.117)"
- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity (2.16.840.1.114222.4.11.837)"
- "Patient Characteristic Payer: Payer Type" using "Payer Type (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)"

Supplemental Data Elements

▲ SDE Ethnicity

["Patient Characteristic Ethnicity": "Ethnicity"]

▲ **SDE Payer**

["Patient Characteristic Payer": "Payer Type"]

▲ **SDE Race**

["Patient Characteristic Race": "Race"]

▲ **SDE Sex**

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

Risk Adjustment Variables

None

Measure Set
