

## ***Proposed New Measure for HEDIS<sup>®1</sup> MY 2027:*** **Prenatal Syphilis Screening and Follow-Up (PSF-E)**

NCQA seeks comments on the proposed new measure concept: *Prenatal Syphilis Screening and Follow-Up* (PSF-E) measure.

The United States Preventive Services Task Force (USPSTF) recommends screening for syphilis in pregnant individuals to prevent congenital syphilis in early pregnancy or at the first presentation to care. The PSF-E measure assesses the percentage of deliveries screened for syphilis during pregnancy, and if screened positive, that received appropriate follow-up after the positive test. Two rates are reported:

- *Prenatal Syphilis Screening.* The percentage of deliveries that had a syphilis screening with a documented result during the first trimester, or within 14 days of the first pregnancy diagnosis or prenatal visit, or within 30 days of enrollment in the organization.
- *Follow-Up on Positive Screen.* The percentage of deliveries with a positive syphilis screen which received appropriate follow-up care.

### **Testing and Panel Feedback**

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NCQA conducted field testing with one health plan (Medicaid and commercial) and one database (commercial) to evaluate the feasibility and performance of the new measure concepts and to gather information to inform implementation at the health plan level. Due to data testing challenges and limitations, NCQA was unable to complete performance rate analyses for the PSF-E measure. Public comment feedback and results from additional testing, to be completed in April 2026, will be shared with measurement advisory panels and the Committee on Performance Measurement in Spring 2026.

Advisory panels were supportive of the measure as specified but encouraged NCQA to consider aligning the measure with the American College of Obstetricians and Gynecologists (ACOG) recommendation to include universal rescreening during the third trimester and at delivery.

### **Public Comment Request**

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NCQA seeks general feedback on the measure and specific feedback on the following:

1. Should this measure include universal rescreening during third trimester and delivery in accordance with ACOG recommendation?
2. Does your organization have access to syphilis screening results that could be mapped onto SNOMED CT codes?
3. Do you have any concerns about the alignment of this measure with state congenital syphilis screening mandates?

Supporting documents include the draft measure specification and evidence workup.

**NCQA acknowledges the contributions of the Congenital Syphilis Prevention and Technical Measurement Advisory Panels, and the Coding Panel.**

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## ***Prenatal Syphilis Screening and Follow-Up (PSF-E)***

| Measure title                               | Prenatal Syphilis Screening and Follow-Up   | Measure ID | PSF-E |
|---|---|------------|-------|
| Description                                 | <p>The percentage of deliveries screened for syphilis during pregnancy, and if screened positive, received appropriate follow-up after the positive test. Two rates are reported:</p> <ul style="list-style-type: none"> <li><i>Prenatal Syphilis Screening.</i> The percentage of deliveries that had a syphilis screening with a documented result during the first trimester or within 14 days of the first pregnancy diagnosis or prenatal visit or within 30 days of enrollment in the organization.</li> <li><i>Follow-Up on Positive Screen.</i> The percentage of deliveries with a positive syphilis screen which received appropriate follow-up care.</li> </ul>  |            |       |
| Measurement period                          | January 1–December 31.  |            |       |
| Copyright and disclaimer notice             | <p><i>*Developed with financial support from the Centers for Disease Control and Prevention and the National Association of County and City Health Officials.</i></p> <p>Refer to the complete copyright and disclaimer information at the front of this publication.</p> <p>NCQA website: <a href="http://www.ncqa.org">www.ncqa.org</a>.</p> <p>Submit policy clarification support questions via My NCQA (<a href="https://my.ncqa.org">https://my.ncqa.org</a>).</p>  |            |       |
| Clinical recommendation statement/rationale | <p>The American College of Obstetricians and Gynecologists (ACOG) recommends all pregnant persons should be screened serologically for syphilis at the first prenatal care visit, during the third trimester, and at delivery.</p> <p>The U.S. Preventive Services Task Force (USPSTF) recommends screening early or at the first available opportunity for syphilis infection in all pregnant persons (grade A recommendation).</p> <p>The Centers for Disease Control and Preventive Services (CDC) recommends screening all pregnant persons serologically at the first prenatal care visit and rescreening during the third trimester and at delivery for individuals at risk.</p>  |            |       |
| Citations                                   | <p>American College of Obstetricians and Gynecologists. 2024. "Screening for Syphilis in Pregnancy: Practice Advisory." Screening for Syphilis in Pregnancy. April 2024. <a href="https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2024/04/screening-for-syphilis-in-pregnancy">https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2024/04/screening-for-syphilis-in-pregnancy</a></p> <p>Silverstein, M., Wong, J. B., Davis, E. M., Chelmow, D., Coker, T. R., Fernandez, A., ... &amp; US Preventive Services Task Force. (2025). Screening for Syphilis Infection During Pregnancy: US Preventive Services Task Force Reaffirmation Recommendation Statement. <i>JAMA</i>. <a href="https://jamanetwork.com/journals/jama/fullarticle/2833883">https://jamanetwork.com/journals/jama/fullarticle/2833883</a></p> <p>Centers for Disease Control and Prevention, Division of STI Prevention. 2021. "Syphilis During Pregnancy." Sexually Transmitted Infections Treatment Guidelines, 2021. July 22, 2021. <a href="https://www.cdc.gov/std/treatment-guidelines/syphilis-pregnancy.htm">https://www.cdc.gov/std/treatment-guidelines/syphilis-pregnancy.htm</a></p> |            |       |

| Characteristics             |   |
|-----------------------------|---|
| <b>Scoring</b>              | Proportion  |
| <b>Type</b>                 | Process   |
| <b>Product Lines</b>        | <ul style="list-style-type: none"> <li>• Commercial.</li> <li>• Medicaid.</li> </ul>  |
| <b>Stratifications</b>      | <p>Race (Refer to the <i>General Guideline: Race and Ethnicity Stratification</i>).</p> <ul style="list-style-type: none"> <li>• American Indian or Alaska Native.</li> <li>• Asian.</li> <li>• Black or African American.</li> <li>• Middle Eastern or North African</li> <li>• Native Hawaiian or Pacific Islander.</li> <li>• White.</li> <li>• Some Other Race.</li> <li>• Two or More Races.</li> <li>• Asked But No Answer.</li> <li>• Unknown.</li> </ul> <p>Ethnicity (Refer to the <i>General Guideline: Race and Ethnicity Stratification</i>).</p> <ul style="list-style-type: none"> <li>• Hispanic or Latino.</li> <li>• Not Hispanic or Latino.</li> <li>• Asked But No Answer.</li> <li>• Unknown.</li> </ul>  |
| <b>Risk Adjustment</b>      | None  |
| <b>Improvement Notation</b> | Increased score indicates improvement.  |
| <b>Guidance</b>             | <p><b>Data Collection Methodology:</b> ECDS. Refer to the <i>General Guideline: Data Collection Methods</i> for additional information.</p> <p><b>Date Specificity:</b> Dates must be specific enough to determine the event occurred in the period being measured.</p> <p><b>Which Services Count?</b> When using claims, include all paid, suspended, pending and denied claims.</p> <p><b>Other Guidance:</b></p> <ul style="list-style-type: none"> <li>• For each person, the organization must identify gestational age at delivery to define the start and end of the first trimester. The last menstrual period may not be used to determine the first trimester.</li> <li>• The measure is based on deliveries; therefore, it is possible for the denominator to include multiple deliveries for the same person.</li> </ul> |

| Definitions                       |  |
|-----------------------------------|--|
| <b>First enrollment</b>           | First enrollment refers to a new enrollment in a plan on or after the pregnancy start date. Persons who were enrolled prior to pregnancy do not meet this criteria.  |
| <b>First trimester</b>            | The first trimester is calculated as the pregnancy start date through 13 weeks from pregnancy start date.  |
| <b>Pregnancy start</b>            | Pregnancy start date is calculated by subtracting the gestational age (in weeks) at the time of delivery from the delivery date. Use the last gestational age assessment or diagnosis within 1 day of the delivery date.   |
| <b>Negative confirmatory test</b> | A negative confirmatory test is based on what type of test was used for the index (first) screening. If the index screening is a nontreponemal test, the negative confirmatory test must be a treponemal test, completed within 5 days. If the index screening is a treponemal test, the negative confirmatory test must be a nontreponemal test, completed within 5 days.   |
| <b>Syphilis screening</b>         | A nontreponemal or treponemal syphilis test completed during the pregnancy period up to 3 days after delivery. Date of syphilis screening should be used.  |
| <b>Initial population</b>         | <p><i>Measure item count:</i> Episode.</p> <p><i>Attribution basis:</i> Enrollment.</p> <ul style="list-style-type: none"> <li>• <i>Benefits:</i> Medical.</li> <li>• <i>Continuous enrollment:</i> 30 days prior to delivery through 17 days after delivery.</li> <li>• <i>Allowable gap:</i> None.</li> </ul> <p><i>Ages:</i> None.</p> <p><i>Event:</i> <b>Deliveries.</b></p> <p><b>Step 1.</b> Identify all deliveries or miscarriages (<u>Delivery and Miscarriage Treatment Procedures Value Set</u>) that occurred on or between December 15 of the year prior to the measurement period and December 14 of the measurement period with a gestational age of 14 weeks or greater. The gestational age documentation must be within 1 day of the start or end of the delivery or miscarriage procedure. Use either of the following to identify gestational age:</p> <ul style="list-style-type: none"> <li>• Gestational age assessment (<u>Weeks of Gestation Value Set</u>); value <math>\geq 14</math> weeks.</li> <li>• Gestational age diagnosis (<u>Weeks of Gestation Greater Than or Equal to 14 Value Set</u>).</li> </ul> <p><b>Note:</b> <i>Delivery Date:</i> The intent is to identify the date of delivery using the date as of the end of the delivery procedure; when available, use that date. When using inpatient claims to identify delivery date, use the following hierarchy to determine the date:</p> <ul style="list-style-type: none"> <li>• When a procedure date or date of service is available, use that date.</li> <li>• When a procedure date or date of service is not available, use the discharge date from the inpatient claim.</li> </ul> |

|                               |  |
|-------------------------------|--|
|                               | <p><b>Step 2.</b> Identify continuous enrollment. Determine if enrollment was continuous 30 days prior to delivery through 17 days after delivery, with no gaps.</p> <p><b>Step 3.</b> Remove multiple deliveries in a 180-day period. If a person has more than one delivery in a 180-day period, include only the first eligible delivery. Then, if applicable, include the next delivery that occurs after the 180-day period. Identify deliveries chronologically, including only one per 180-day period.</p> <p><b>Note:</b> <i>The initial population for this measure is based on deliveries, not on persons. All eligible deliveries that were not removed in steps 1–3 remain in the initial population.</i></p>  |
| <b>Denominator exclusions</b> | <p><b>Persons in hospice or using hospice services.</b><br/>Persons who use hospice services (<u>Hospice Encounter Value Set</u>; <u>Hospice Intervention Value Set</u>) or elect to use a hospice benefit any time in the year prior to the measurement period or during the measurement period. Organizations that use the Monthly Membership Detail Data File to identify these persons must use only the run date of the file.</p> <p><b>Persons receiving palliative care.</b><br/>Persons receiving palliative care (<u>Palliative Care Assessment Value Set</u>; <u>Palliative Care Encounter Value Set</u>; <u>Palliative Care Intervention Value Set</u>) or who had an encounter for palliative care (ICD-10-CM code Z51.5)* any time in the year prior to the measurement period or during the measurement period.</p> <p><b>Coding Guidance</b><br/>*Do not include laboratory claims (claims with POS code 81).</p>   |
| <b>Denominator</b>            | <p><b>Denominator 1:</b> The initial population minus denominator exclusions.</p> <p><b>Denominator 2:</b> Deliveries from numerator 1 with a documented positive screening result for syphilis: (<u>Treponemal Syphilis Tests Value Set</u>; <u>Non Treponemal Syphilis Tests Value Set</u>) with <u>Positive Syphilis Test Result or Finding Value Set</u>.</p>  |
| <b>Numerator</b>              | <p><b>Numerator 1: Prenatal syphilis screening.</b><br/>Use the date the syphilis screening was collected. Any of the following may apply:</p> <ul style="list-style-type: none"> <li>Deliveries that were screened for syphilis (<u>Treponemal Syphilis Tests Value Set</u>; <u>Non Treponemal Syphilis Tests Value Set</u>) during the first trimester and with a result (<u>Positive Syphilis Test Result or Finding Value Set</u>; <u>Negative Syphilis Test Result or Finding Value Set</u>).</li> <li>Deliveries with a syphilis screening (<u>Treponemal Syphilis Tests Value Set</u>; <u>Non Treponemal Syphilis Tests Value Set</u>) any time from pregnancy start date through 14 days after the first pregnancy diagnosis or the first prenatal visit with a syphilis test result (<u>Positive Syphilis Test Result or Finding Value Set</u>; <u>Negative Syphilis Test Result or Finding Value Set</u>). Use any of the following to identify earliest indication of pregnancy or first prenatal visit. Use the diagnosis or visit with the earliest date on or after pregnancy start: <ul style="list-style-type: none"> <li>A bundled service (<u>Prenatal Bundled Services Value Set</u>) where the organization can identify the date when prenatal care was initiated (because bundled service codes are used on the date of delivery, these</li> </ul> </li> </ul> |

|                             | <p>codes may be used only if the claim form indicates when prenatal care was initiated)</p> <ul style="list-style-type: none"><li>• A visit for prenatal care (Standalone Prenatal Visits Value Set)</li><li>• A pregnancy-related diagnosis code (<u>Pregnancy Diagnosis Value Set</u>*)</li><li>• Deliveries with a syphilis screening (<u>Treponemal Syphilis Tests Value Set</u>; <u>Non Treponemal Syphilis Tests Value Set</u>) any time from pregnancy start date through 30 days after first enrollment, with a documented result (<u>Positive Syphilis Test Result or Finding Value Set</u>; <u>Negative Syphilis Test Result or Finding Value Set</u>).</li></ul> <p>Note: Do not include syphilis screenings that occurred 4 days or more after the delivery date.</p> <p><b>Coding Guidance</b></p> <p>*Do not include laboratory claims (claims with POS code 81).</p> <p><b>Numerator 2: Follow-up care on positive screen.</b></p> <p>Deliveries that received appropriate follow-up care. Either of the following meets criteria:</p> <ul style="list-style-type: none"><li>• A documented negative confirmatory test (<u>Treponemal Syphilis Tests Value Set</u>; <u>Non Treponemal Syphilis Tests Value Set</u> with a negative result <u>Negative Syphilis Test Result or Finding Value Set</u>) on or within 5 days of the first positive syphilis screening.<ul style="list-style-type: none"><li>• If the first positive screening was a nontreponemal test, the confirmatory test must be a treponemal test.</li><li>• If the first positive screening was a treponemal test, the confirmatory test must be a nontreponemal test.</li></ul></li><li>• Penicillin treatment (<u>Penicillin G Injection Value Set</u>; <u>Syphilis Antibiotic Medications List</u>) on or within 14 days of the first positive syphilis screening.</li></ul> |                        |              |                        |                           |                   |                   |           |            |                   |  |             |                 |  |           |                 |  |      |           |
|-----------------------------|---|------------------------|--------------|------------------------|---------------------------|-------------------|-------------------|-----------|------------|-------------------|--|-------------|-----------------|--|-----------|-----------------|--|------|-----------|
| Summary of changes          | <ul style="list-style-type: none"><li>• This is a first-year measure.</li></ul>   |                        |              |                        |                           |                   |                   |           |            |                   |  |             |                 |  |           |                 |  |      |           |
| Data elements for reporting | <p>Organizations that submit HEDIS data to NCQA must provide the following data elements.</p> <p><b>Table PSF-E-A-1/2: Metadata Elements for Prenatal Syphilis Screening and Follow-Up</b></p> <table><tr><th>Metric</th><th>Data Element</th><th>Reporting Instructions</th></tr><tr><td>PrenatalSyphilisScreening</td><td>InitialPopulation</td><td>Repeat per Metric</td></tr><tr><td>Follow-Up</td><td>Exclusions</td><td>Repeat per Metric</td></tr><tr><td></td><td>Denominator</td><td>For each Metric</td></tr><tr><td></td><td>Numerator</td><td>For each Metric</td></tr><tr><td></td><td>Rate</td><td>(Percent)</td></tr></table>  | Metric                 | Data Element | Reporting Instructions | PrenatalSyphilisScreening | InitialPopulation | Repeat per Metric | Follow-Up | Exclusions | Repeat per Metric |  | Denominator | For each Metric |  | Numerator | For each Metric |  | Rate | (Percent) |
| Metric                      | Data Element  | Reporting Instructions |              |                        |                           |                   |                   |           |            |                   |  |             |                 |  |           |                 |  |      |           |
| PrenatalSyphilisScreening   | InitialPopulation   | Repeat per Metric      |              |                        |                           |                   |                   |           |            |                   |  |             |                 |  |           |                 |  |      |           |
| Follow-Up                   | Exclusions  | Repeat per Metric      |              |                        |                           |                   |                   |           |            |                   |  |             |                 |  |           |                 |  |      |           |
|                             | Denominator   | For each Metric        |              |                        |                           |                   |                   |           |            |                   |  |             |                 |  |           |                 |  |      |           |
|                             | Numerator   | For each Metric        |              |                        |                           |                   |                   |           |            |                   |  |             |                 |  |           |                 |  |      |           |
|                             | Rate  | (Percent)              |              |                        |                           |                   |                   |           |            |                   |  |             |                 |  |           |                 |  |      |           |

**Table PSF-E -B-1/2: Data Elements for Prenatal Syphilis Screening and Follow-Up: Stratifications by Race**

| Metric                    | Race                            | Data Element      | Reporting Instructions                     |
|---------------------------|---------------------------------|-------------------|--|
| PrenatalSyphilisScreening | AmericanIndianOrAlaskaNative    | InitialPopulation | For each Stratification, repeat per Metric |
| Follow-Up                 | Asian                           | Exclusions        | For each Stratification, repeat per Metric |
|                           | BlackOrAfricanAmerican          | Denominator       | For each Stratification and Metric         |
|                           | MiddleEasternOrNorthAfrican     | Numerator         | For each Stratification and Metric         |
|                           | NativeHawaiianOrPacificIslander | Rate              | (Percent)                                  |
|                           | White                           |                   |  |
|                           | SomeOtherRace                   |                   |  |
|                           | TwoOrMoreRaces                  |                   |  |
|                           | AskedButNoAnswer                |                   |  |
|                           | Unknown                         |                   |  |

**Table PSF-E-C-1/2: Data Elements for Prenatal Syphilis Screening and Follow-Up: Stratifications by Ethnicity**

| Metric                    | Ethnicity           | Data Element      | Reporting Instructions                     |
|---------------------------|---------------------|-------------------|--|
| PrenatalSyphilisScreening | HispanicOrLatino    | InitialPopulation | For each Stratification, repeat per Metric |
| Follow-Up                 | NotHispanicOrLatino | Exclusions        | For each Stratification, repeat per Metric |
|                           | AskedButNoAnswer    | Denominator       | For each Stratification and Metric         |
|                           | Unknown             | Numerator         | For each Stratification and Metric         |
|                           |                     | Rate              | (Percent)                                  |

## ***Prenatal Syphilis Screening & Follow-Up (PSF-E)***

### **Measure Workup**

#### **Topic Overview**

#### **Importance & Prevalence**

Congenital syphilis (CS), or syphilis transmitted from a pregnant individual to the fetus during pregnancy, is preventable if pregnant individuals are routinely screened for syphilis and receive treatment if positive before delivery (Bowen et al., 2015). CS prevalence is increasing in the United States despite evidence, guideline recommendations and state policies that promote syphilis screening during pregnancy.

Prior to 2012, congenital and infectious syphilis prevention efforts in the U.S. were largely successful, with infectious syphilis prevalence declining by 89.2% between 1990 and 2000 (Nelson, 2022; Carrier & Haughton, 2019). This trend reversed sharply in the 2010s, with severe consequences for CS rates in newborns.

If untreated, syphilis acquired at any point prior to or during pregnancy can lead to CS in newborns, with a transmission frequency of up to 90% (Pérez-Cavazos et al., 2022). In 2012, there were 1,561 reported cases of syphilis in pregnant U.S. individuals. In 2016, the prevalence of syphilis in pregnant U.S. individuals increased by 61% to 2,508 reported cases (Trivedi et al., 2019). Syphilis rates in pregnant individuals continued to climb after 2012, mirroring the increases seen in CS across the same period (Gregory & Ely, 2024). In 2024, 3,941 infants were born with congenital syphilis—a nearly 700% increase from 2015, when only 495 cases were reported (CDC, 2025).

CS can cause severe issues throughout a newborn's body, including jaundice, skin/organ lesions, skeletal deformities and respiratory issues. More severe consequences such as sensory impairments, brain abnormalities and seizures are possible as well (Lim et al., 2021; Pañgan et al., 2024). Syphilis infection in pregnant individuals is strongly associated with preterm birth, miscarriage, and stillbirths, and drives adverse population health outcomes such as neonatal mortality and a loss of lifetime Quality-Adjusted Life Years (Gulersen et al., 2023; Schlueter et al., 2021; Canto et al., 2019; Lee et al., 2023; Tong et al., 2023).

#### **Financial importance and cost-effectiveness**

Routinely screening and treating pregnant individuals is the most cost-effective approach for addressing CS. On average, a standard nontreponemal/treponemal antibody test costs \$6.59, and an average use of penicillin costs \$12.53 (Sykes et al., 2021). Applied routinely throughout pregnancy, these tools can reliably prevent the transmission of syphilis to a newborn. In doing so, this type of care is demonstrably more cost effective than CS treatment in newborns: Once identified, best practice for CS treatment is to immediately begin a 10 to 14 day course of intravenous penicillin G (CDC, 2021). Administering penicillin intravenously and treating the multiple physical sequelae of CS in newborns requires hospitalizations ranging from \$18,151 to \$56,802 (Tanne, 2023; Boodman et al., 2022; Umapathi et al., 2019). This eclipses the cost associated with non-CS newborn hospitalizations (Staneva et al., 2023).

Given the high financial cost of treating CS, CS prevention is much more cost-effective and reliably prevents the severe consequences associated with CS. Assuming that all pregnant individuals screened receive treatment as needed, syphilis screening during pregnancy can reduce preterm birth risk associated with CS by 52% (Tong et al., 2023). Up to 90% of CS cases are preventable with timely testing and adequate treatment during pregnancy (Harris, 2023).

#### **Health care disparities**

Structural inequities that inhibit pregnant individuals' access to care also inhibit the receipt of services to prevent CS. As a result, groups



disproportionately affected by these structural barriers due to race and income experience a disproportionate burden of CS (Cuffe et al., 2022; Fang et al., 2022; Aslam et al., 2019; Kimball et al., 2020). This burden is especially true for black individuals – where previous research has demonstrated that despite continuous Medicaid coverage ensuring a higher likelihood of receiving first trimester syphilis screening, Black pregnant individuals were less likely to have received first-trimester syphilis screening compared to white pregnant persons enrolled in Medicaid (Hammerslag et al., 2023).

## Supporting Evidence for Screening, Timing and Treatment

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In pregnant individuals, syphilis screening involves a nontreponemal antibody test or treponemal antibody test followed by a confirmatory treponemal antibody test or a nontreponemal antibody test (respectively). Syphilis transmission between a pregnant individual and fetus is related to the stage of infection in the pregnant individual (Lin, 2018; Round et al., 2022; Adhikari, 2020). As such, screening for syphilis early in pregnancy empowers clinicians to treat infectious syphilis before fetal transmission occurs. More frequent screenings allow providers to mitigate the risk of syphilis being transmitted to the fetus after the initial screening: an especially relevant strategy for groups at high risk of exposure/re-exposure (Peng et al., 2023; Pham et al., 2022). Rapid, point of care tests may be an effective solution to mitigate disparities relating to health care access, but there are limited U.S.-based recommendations for their use in pregnant individuals.

The United States Preventive Services Task Force (USPSTF) recommends that all pregnant individuals receive syphilis screening at their first presentation to care, or at delivery if they do not receive prenatal care (Lin, 2018). The USPSTF also recommends providing additional screenings at 28 weeks gestation and at delivery for individuals with characteristics that place them at high risk of infection (i.e., living in areas with high syphilis prevalence, HIV infection, history of incarceration and/or commercial sex work, exposure to infected partner). The World Health Organization (WHO) recommends that all pregnant individuals are screened for syphilis at first presentation to antenatal care (World Health Organization (WHO) Global Health Observatory, 2024; Centers for Disease Control and Prevention, Division of STI Prevention, 2021). The Centers for Disease Control and Prevention (CDC) 2021 CS prevention guidelines largely mirror USPSTF recommendations.

Recent recommendations from the American College of Obstetricians and Gynecologists (ACOG) are more robust, stating that all pregnant individuals should be screened for syphilis at the first prenatal care visit, followed by universal rescreening during the third trimester and at birth (rather than a risk-based approach to rescreening) (American College of Obstetricians and Gynecologists, 2024). Many public health authorities echo this recommendation (Plotzker et al., 2020; Georgia Department of Public Health, 2023; Minnesota Department of Health, Infectious Disease Epidemiology, Prevention, and Control Division, 2024; New Mexico Department of Health, Epidemiology and Response Health Alert Network, 2023; Oklahoma State Department of Health Sexual Health and Harm Reduction Service, 2022; Texas Department of State Health Services, 2023; Oregon Health Authority, Oregon STD Authority, and Oregon Perinatal Collaborative, 2023; Watkins & Huff, 2022).

Treatment for syphilis in pregnant individuals after a positive screen is a standard course of long-acting penicillin G (Centers for Disease Control and Prevention, Division of STI Prevention, 2021; Peeling et al., 2023; Adhikari, 2020). Recommended dosages depend on the stage of syphilis. A single dose is typically adequate for early, secondary and early latent syphilis; however, two doses administered over two consecutive weeks is often cited as best practice. Late latent syphilis in pregnancy requires three doses administered over three consecutive weeks. Prompt identification of syphilis throughout pregnancy allows full treatment regimens to be followed to prevent fetal transmission (Peeling et al., 2023; Adhikari, 2020).

## Policy and Quality Measurement

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Legislation in all U.S. states necessitates that every individual receiving prenatal care also receives a screening test for syphilis at their first prenatal visit (Centers for Disease Control and Prevention, Division of STI Prevention, 2023). Many public health authorities require or strongly recommend applying additional screenings (typically limited to high-risk populations) to all pregnant individuals (Plotzker et al., 2020; Georgia Department of Public Health, 2023; Minnesota Department of Health, Infectious Disease Epidemiology, Prevention, and Control Division, 2024; New Mexico Department of Health, Epidemiology and Response Health Alert Network, 2023; Oklahoma State Department of Health Sexual Health and Harm Reduction Service, 2022; Texas Department of State Health Services, 2023; Oregon Health Authority, Oregon STD Authority, and Oregon Perinatal Collaborative, 2023; Watkins & Huff, 2022).

There is a gap in national-level quality measurement for CS prevention. Some existing measures are intended for use in quality improvement (QI) programs that only target a subset of the U.S. population (AmeriHealth Caritas Louisiana, 2022; Cigna Healthcare, 2023; Partnership for Quality Measurement, 2024; California Maternal Quality Care Collaborative (CMQCC) Maternal Data Center (MDC), 2024). Others encompass larger population bases but are only designed and implemented for public health surveillance (World Health Organization (WHO) Global Health Observatory, 2024; Diesel et al., 2022).

National-level measurement activities related to prenatal care and STI screening demonstrate that a more robust CS prevention measure is feasible. NCQA's *Prenatal and Postpartum Care* (PPC) measure assesses timely provision of appropriate prenatal care to pregnant individuals and is used in multiple QI programs with national reach (National Committee for Quality Assurance (NCQA), 2024b). Similarly, NCQA's *Chlamydia Screening in Women* (CHL) measure and the Health Resources and Services Administration's (HRSA) *Sexually Transmitted Disease Screening for Chlamydia, Gonorrhea, and Syphilis* measure both incentivize STI screenings at a national level, albeit not specifically for pregnant individuals (National Committee for Quality Assurance (NCQA), 2024a; Health Resources and Services Administration (HRSA) Ryan White HIV/AIDS Program, 2023).

## Digital Considerations

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As part of NCQA's strategic transition to a fully digital quality measurement portfolio, we conducted a feasibility assessment to inform eventual digital measure implementation. The assessment evaluates the measure's intent and associated clinical concepts within a digital framework.

Overall, this measure has medium feasibility, with identifying completed screening being more feasible than identifying positive screening results and follow-up. All the clinical concepts used in the measure are feasible related to interoperability data standards (FHIR, USCDI). Terminology standards are available for all concepts; however, there are challenges related to the SNOMED CT codes being utilized for screening results. There are also challenges with all screening results and medication treatments being available and in structured fields, which impacts accessibility to data for health plans. Workflow challenges exist due to the flexible sequencing of syphilis screenings to confirm a positive diagnosis, which does lead to challenges in identifying necessary data and timing components for the measure concept. Refer to Appendix A for more detail.

## References

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## Appendix A: Digital Feasibility

As part of NCQA's strategic transition to a fully digital quality measurement portfolio, we conduct a feasibility assessment to evaluate the measure's intent and associated clinical concepts within a digital framework. The primary objectives were to determine whether the clinical concepts could be represented using standardized data models and nationally recognized terminologies, and to assess the availability of discrete, structured data necessary to support accurate and reliable digital measurement.

### Data and Terminology Standards

NCQA's digital quality measures are built on the Fast Healthcare Interoperability Resources (FHIR®) standard, developed by HL7®, to support interoperable exchange of electronic health data. In the U.S., FHIR US Core profiles provide detailed implementation guidance aligned with the United States Core Data for Interoperability (USCDI), a federal standard maintained by ASTP (formerly ONC). USCDI defines essential data classes and elements, while FHIR US Core specifies how to represent and exchange them. Additionally, NCQA uses nationally recognized clinical terminologies (e.g., ICD-10, CPT, LOINC) to define value sets, ensuring standardized interpretation and representation of clinical data in quality measures.

### Digital Feasibility Assessment

The digital feasibility assessment is conducted at two stages during the measure development process, pre-testing phase and post-testing phase, summarized below. This assessment examines each measure concept across three high-level categories:

- **Data Standards & Terminology.** Evaluates the alignment with national standards (FHIR, USCDI) and recognized terminology standards (i.e., LOINC, ICD).
- **Clinical Workflow & Data Accuracy.** Evaluates whether the concept aligns with standard clinical practice and the likelihood that the data will be accurate, complete and reliable.
- **Data Availability & Structure.** Assesses if the data is likely to be present, in structured fields, and accessible to health plans.

### Post-Testing Feasibility Findings.

**Summary:** Overall, this measure has medium feasibility, with identifying completed screening being more feasible than identifying positive screening results and follow-up. All the clinical concepts used in the measure are feasible related to interoperability data standards (FHIR, USCDI). Terminology standards are available for all concepts; however, there are challenges related to the SNOMED CT codes being utilized for screening results. There are also challenges with all screening results and medication treatments being available and in structured fields, which impacts accessibility to data for health plans. Workflow challenges exist due to the flexible sequencing of syphilis screenings to confirm a positive diagnosis, which does lead to challenges in identifying necessary data and timing components for the measure concept.

The digital feasibility assessment (shown in Figure A) rates each concept from high to low. High = Feasible with no concerns, Medium = Feasible with some concerns (with a potential mitigation strategy); Low = Low feasibility with concerns (with little to no mitigation strategy for the current development cycle).

**Data Standards & Terminology.** All the clinical concepts used in the measure can be modeled in the FHIR data standard. The clinical concepts can be represented using nationally recognized terminologies including LOINC, CPT, ICD-10, and Systematized Medical Nomenclature for Medicine (SNOMED), however SNOMED codes for screening results are not consistently utilized.

**Data Availability & Structure.** There are challenges related to availability of data in structured fields for syphilis screening results to identify positive findings. Some medication treatment data may be challenging to access if occurring during an inpatient delivery encounter. Screenings, results and medication administration data will all be found in clinical systems, so health plans may not currently have access to all the data.

**Clinical Workflow & Data Accuracy.** There are some workflow feasibility challenges related to finding the correct screening data due to sequencing flexibility that needs to be accounted for in the measure specification.

**Figure A-2: Post-Testing Digital Concept Feasibility Assessment**

| Score key: H = high, M = medium, L = low   |                              |                       |                                   |               |                               |                    |
|--|------------------------------|-----------------------|-----------------------------------|---------------|-------------------------------|--------------------|
|  | Data Standards & Terminology |                       | Clinical Workflow & Data Accuracy |               | Data Availability & Structure |                    |
| Clinical Concept                           | Data Standards               | Terminology Standards | Workflow                          | Data Accuracy | Data Availability             | Data Accessibility |
| Procedure/Encounter: Deliveries            | H                            | H                     | H                                 | H             | H                             | H                  |
| Diagnosis/Observation: Gestational age     | M                            | H                     | H                                 | H             | M                             | M                  |
| Encounter: Pregnancy encounter             | H                            | H                     | H                                 | H             | H                             | H                  |
| Laboratory Test: Syphilis screening        | H                            | H                     | M                                 | H             | M                             | M                  |
| Laboratory Test: Syphilis screening result | H                            | M                     | M                                 | H             | M                             | M                  |
| Treatment: Medication administration       | H                            | H                     | H                                 | H             | M                             | M                  |

**Pre-Testing Feasibility Findings.**

**Summary:** All the clinical concepts used in the measure have high feasibility for interoperability standards (FHIR and USCDI), with one element (gestational age) having medium feasibility. Terminology standards are available for all concepts, with some potential concerns about screening results terminology being utilized. There are concerns about some key data elements (syphilis screenings, results, medication treatment) being available in structured fields and accessible to health plans. Due to the screening sequencing, there may be some workflow challenges related to clear documentation and finding the appropriate screening and results data for the measure. To achieve overall feasibility as the measure is currently specified, testing should seek to understand if these elements are captured in structured fields and mapped to standard terminology.

The digital feasibility assessment (shown in Figure A) rates each concept from high to low. High = Feasible with no concerns, Medium = Feasible with some concerns (with a potential mitigation strategy); Low = Low feasibility with concerns (with little to no mitigation strategy for the current development cycle).

**Data Standards & Terminology.** All the clinical concepts used in the measure can be modeled in the FHIR data standard. While procedures, encounters, laboratory tests, and medications are included in the USCDI standard, gestational age observations are not directly included. the clinical concepts can be represented using nationally recognized terminologies including LOINC, CPT, ICD-10, and Systematized Medical Nomenclature for Medicine (SNOMED).

**Data Availability & Structure.** There may be some potential challenges related to availability of data in structured fields for several data elements, including availability of syphilis screening results to identify positive findings and availability of data related to treatment for a positive syphilis screening. Regarding data accessibility by health plans, syphilis screening results and medication treatment are more likely to be captured in clinical data in the EHR and not found in administrative data, so health plans may not currently have access to all the data.

**Clinical Workflow & Data Accuracy.** While screening for syphilis during pregnancy is recommended via clinical guidelines, there may be some workflow challenges related to when screening occurs based on how soon a pregnant person is seen for care, and challenges related to identifying the two sequence testing necessary to confirm a positive diagnosis.



**Figure A-1: Pre-Testing Digital Concept Feasibility Assessment**

| Score key: H = high, M = medium, L = low   |                              |                       |                                   |               |                               |                    |
|--|------------------------------|-----------------------|-----------------------------------|---------------|-------------------------------|--------------------|
|  | Data Standards & Terminology |                       | Clinical Workflow & Data Accuracy |               | Data Availability & Structure |                    |
| Clinical Concept                           | Data Standards               | Terminology Standards | Workflow                          | Data Accuracy | Data Availability             | Data Accessibility |
| Procedure/Encounter: Deliveries            | H                            | H                     | H                                 | H             | H                             | H                  |
| Diagnosis/Observation: Gestational age     | M                            | H                     | H                                 | H             | H                             | M                  |
| Encounter: Pregnancy encounter             | H                            | H                     | H                                 | H             | H                             | H                  |
| Laboratory Test: Syphilis screening        | H                            | H                     | M                                 | H             | M                             | M                  |
| Laboratory Test: Syphilis screening result | H                            | M                     | M                                 | H             | M                             | M                  |
| Treatment: Medication administration       | H                            | H                     | H                                 | H             | M                             | M                  |