

Congenital Syphilis v1

Definition Factsheet & Technical Brief

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Definition Description: This definition is used to identify visits of congenital syphilis in patients ages 4 years old and younger. Congenital syphilis is a condition caused by infection with *Treponema pallidum* in utero or at the time of delivery. Please note that the queries are developed using congenital syphilis-related free text terms from chief complaint fields and congenital syphilis-related International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and ICD-10-CM discharge diagnosis codes as the basis for identifying patient visits of interest and not the Council of State and Territorial Epidemiologists (CSTE) congenital syphilis surveillance case definition. The queried patient visits may or may not represent data for a case patient included in National Notifiable Diseases Surveillance System (NNDSS) case data and further public health investigation may be required.

Key Notes

This case definition is intended for surveillance and public health reporting and may not fully align with clinical diagnosis or management or disease intervention practices. This definition should not be utilized for individual patient management or for determining the types of partner services interventions that should be implemented.

Citations

1. Council of State and Territorial Epidemiologists (CSTE). **Congenital Syphilis (2015 Case Definition)**. Available at: <https://ndc.services.cdc.gov/case-definitions/congenital-syphilis-2015/>
2. Centers for Disease Control and Prevention (CDC). **Congenital Syphilis – CDC Fact Sheet**. Available at: <https://www.cdc.gov/std/syphilis/congenital.htm>.

New or Revised Definition: New Definition

Date Added to ESSENCE: August 2025

Use-Cases for Definition:

Case-finding: Tertiary

Trend monitoring: Primary

Early outbreak detection: Secondary

Emergent Condition: Not Intended as Use Case

Justification: There is no syndrome definition for congenital syphilis currently available in ESSENCE. CDC wants to use emergency department data to monitor trends.

Data Source During Development: Emergency Department Visits. Chief Complaint Query Validation dataset (CCQV) in ESSENCE.

Validation Methods: This definition is part of the collection of definitions created by CDC NSSP for the rapid reportables project. The rapid reportables project is led by the CDC NSSP team to create definitions for all nationally reportable diseases for use in querying NSSP emergency department data. These definitions focus on chief complaint text and diagnostic codes of the disease or its causative agents with no mention of symptoms. Select members of the Community of Practice were then asked to review line-level results for their jurisdictions and provide feedback to ensure the intended results of the definitions were met.

Limitations:

Congenital syphilis is a particularly challenging infection to diagnose, and no studies have evaluated the validity of chief complaint data or ICD-9-CM, ICD-10-CM, or SNOMED CT codes for monitoring trends in congenital syphilis diagnoses. Due to a lack of widely available, reliable, cost-effective, and rapid direct detection testing options, congenital syphilis diagnosis relies on a combination of serologic nontreponemal test results, neonatal clinical examination, other laboratory and radiographic findings, and maternal syphilis diagnosis and treatment history. However, clinical examination is normal in up to 60% of infants with congenital syphilis, and findings, when present, may be subtle or be confused with other conditions. Maternal history may be incomplete, and may not account completely for reinfection or recrudescence. As such, congenital syphilis diagnostic codes may reflect in utero exposure to syphilis as opposed to infection, or may indicate that evaluation for congenital syphilis was pursued without subsequent evidence of infection. In light of these limitations, the congenital syphilis data gathered through the use of this definition may represent under- or overestimates of congenital syphilis diagnoses, and these data should be interpreted with caution.

Definition Fields and Structure:

The Chief Complaint Discharge Diagnosis (CCDD) parsed field is used to query both the discharge diagnosis codes and chief complaint free text, and exclusions are incorporated as necessary.

- Inclusion based on congenital syphilis complaint free text terms:
 - The visit is included if it contains:
 1. A chief complaint related to congenital syphilis – (“siphilis” or “syphylis” or “syphylus” or “syphilus” or “siphylis” or “siphilus” or “syphilis” or “siphillis” or “syphyllis” or “syphyllus” or “syphillus” or “siphyllis” or “siphillus” or “syphillis” or “sifilis” or “syfylis” or “syfylus” or “syfilus” or “sifylis” or “sifilus” or “syfilis”) **OR**
- Inclusion based on ICD-9 discharge diagnosis codes related to congenital syphilis:
 - The visit is included if it contains:
 1. A discharge diagnosis code related to early congenital syphilis – (090.0 or 090.10 or 090.2) **OR**
 2. A discharge diagnosis code for syphilitic interstitial keratitis – (090.30) **OR**
 3. A discharge diagnosis code related to neurosyphilis – (090.40 or 090.41 or 090.42 or 090.49) **OR**
 4. A discharge diagnosis code related to late congenital syphilis – (090.50 or 090.60 or 090.70) **OR**
 5. A discharge diagnosis code related to early syphilis – (091 or 092) **OR**
 6. A discharge diagnosis code for cardiovascular syphilis – (093) **OR**
- Inclusion based on ICD-10 discharge diagnosis codes related to Congenital Syphilis:
 - The visit is included if it contains:
 1. A discharge diagnosis code related to congenital syphilis – (A50 or A50.9) **OR**
 2. A discharge diagnosis code related to early congenital syphilis – (A50.0 or A50.01 or A50.02 or A50.03 or A50.04 or A50.05 or A50.06 or A50.07 or A50.08 or A50.09 or A50.1 or A50.2) **OR**
 3. A discharge diagnosis code related to late congenital syphilis - (A50.3 or A50.30 or A50.31 or A50.32 or A50.39 or A50.5 or A50.54 or A50.55 or A50.56 or A50.59 or A50.6 or A50.7 or A52) **OR**.
 4. A discharge diagnosis code related to late congenital neurosyphilis - (A50.4 or A50.40 or A50.41 or A50.42 or A50.43 or A50.44 or A50.45 or A50.49) **OR**
 5. A discharge diagnosis code for Clutton’s joints (A50.51) **OR**
 6. A discharge diagnosis code for Hutchinson’s teeth (A50.52) **OR**
 7. A discharge diagnosis code for Hutchinson’s triad (A50.53) **OR**

8. A discharge diagnosis code for Syphilitic saddle nose (A50.57) **OR**
 9. A discharge diagnosis code for early congenital syphilis (A51) **OR**
 10. A discharge diagnosis code for Other and unspecified syphilis (A53) **OR**
- Inclusion based on SNOMED discharge diagnosis codes related to Congenital Syphilis:
 - The visit is included if it contains:
 1. A discharge diagnosis code related to congenital syphilis - (35742006 or 87318008 or 9941009 or 192008 or 27648007) **OR**
 2. A discharge diagnosis code related to early congenital syphilis - (4359001 or 186833000 or 266125005 or 721583004 or 46235002) **OR**
 3. A discharge diagnosis code for Hutchinson's teeth - (86443005) **OR**
 4. A discharge diagnosis code related to late congenital neurosyphilis - (266126006 or 6267005)
 5. A discharge diagnosis code related to late congenital syphilis - (82323002 or 827006 or 73551500 or 1142095003 or 1142031005 or 866106004 or 11142112002) **OR**
 6. A discharge diagnosis code for Moon's molar teeth - (109436001) **OR**
 7. A discharge diagnosis code for Mulberry molar teeth - (1177081002) **OR**
 8. A discharge diagnosis code for syphilis in mother complicating childbirth - (10759921000119107) **OR**
 9. A discharge diagnosis code for pericellular fibrosis of congenital syphilis - (235898000) **OR**
 10. A discharge diagnosis code for hypoplasia of enamel due to congenital syphilis - (703134008) **OR**
 11. A discharge diagnosis code for congenital nephrotic syndrome due to congenital infection - (722118005)
 - There are no exclusions in this query.

Plain Language Description

The definition uses discharge diagnosis codes and free-text chief complaint terms. The definition requires that an emergency department visit contains a reference to the condition by its discharge diagnosis code (in at least one of the following: ICD-9-CM, ICD-10-CM, SNOMED diagnostic codes), or by the condition name listed in the chief complaint text. Therefore, the congenital syphilis v1 syndromic surveillance definition includes ICD-9-CM, ICD-10-CM, and SNOMED diagnostic codes for congenital syphilis, along with direct mentions of syphilis (including misspellings of syphilis) in chief complaint text. To ensure that only congenital syphilis was captured, we limit the visits to those in children ages 0-4.

Detailed Definition Components

Table 1. Inclusion and exclusion terms

Terms	Description
Inclusion	
International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)	
090.0	Early congenital syphilis symptomatic
090.10	Early congenital syphilis latent
090.20	Early congenital syphilis unspecified
090.30	Syphilitic interstitial keratitis
090.4	Juvenile neurosyphilis
090.40	Juvenile neurosyphilis unspecified
090.41	Congenital syphilitic encephalitis
090.42	Congenital syphilitic meningitis
090.49	Other juvenile neurosyphilis
090.50	Other late congenital syphilis symptomatic
090.60	Late congenital syphilis latent
090.70	Late congenital syphilis unspecified
090.90	Congenital syphilis unspecified
091	Early syphilis symptomatic

092	Early syphilis latent
093	Cardiovascular syphilis
International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)	
A50	Congenital syphilis
A50.0	Early congenital syphilis, symptomatic
A50.01	Early congenital syphilitic oculopathy
A50.02	Early congenital syphilitic osteochondropathy
A50.03	Early congenital syphilitic pharyngitis
A50.04	Early congenital syphilitic pneumonia
A50.05	Early congenital syphilitic rhinitis
A50.06	Early cutaneous congenital syphilis
A50.07	Early mucocutaneous congenital syphilis
A50.08	Early visceral congenital syphilis
A50.09	Other early congenital syphilis, symptomatic
A50.1	Early congenital syphilis, latent
A50.2	Early congenital syphilis, unspecified
A50.3	Late congenital syphilitic oculopathy
A50.30	Late congenital syphilitic oculopathy unspecified
A50.31	Late congenital syphilitic interstitial keratitis
A50.32	Late congenital syphilitic chorioretinitis
A50.39	Other late congenital syphilitic oculopathy
A50.4	Late congenital neurosyphilis [juvenile neurosyphilis]
A50.40	Late congenital neurosyphilis, unspecified
A50.41	Late congenital syphilitic meningitis
A50.42	Late congenital syphilitic encephalitis
A50.43	Late congenital syphilitic polyneuropathy
A50.44	Late congenital syphilitic optic nerve atrophy
A50.45	Juvenile general paresis
A50.49	Other late congenital neurosyphilis
A50.5	Other late congenital syphilis, symptomatic
A50.51	Clutton's joints
A50.52	Hutchinson's teeth
A50.53	Hutchinson's triad
A50.54	Late congenital cardiovascular syphilis
A50.55	Late congenital syphilitic arthropathy
A50.56	Late congenital syphilitic osteochondropathy
A50.57	Syphilitic saddle nose
A50.59	Other late congenital syphilis, symptomatic
A50.6	Late congenital syphilis, latent
A50.7	Late congenital syphilis, unspecified
A50.9	Congenital syphilis, unspecified
A51	Early syphilis
A52	Late syphilis
A53	Other and unspecified syphilis
SNOMED Concepts	
35742006	Congenital syphilis (disorder)
87318008	Congenital syphilis with gumma
9941009	Congenital syphilitic choroiditis

192008	Congenital syphilitic hepatomegaly
27648007	Congenital syphilitic periostitis
4359001	Early congenital syphilis (less than 2 years)
86443005	Hutchinson's teeth
266126006	Late congenital neurosyphilis
82323002	Late congenital syphilis (2 years or more)
109436001	Moon's molar teeth
1177081002	Mulberry molar teeth
10759921000119107	Syphilis in mother complicating childbirth
827006	Late congenital syphilis, latent (positive serology - cerebrospinal fluid, 2 years OR more)
186833000	Early congenital syphilis - latent
735515000	Symptomatic late congenital syphilis
6267005	Congenital syphilitic meningitis
266125005	Early congenital syphilis with symptoms
721583004	Mucocutaneous early congenital syphilis
1142095003	Late congenital syphilis of cardiovascular system
235898000	Pericellular fibrosis of congenital syphilis
1142031005	Optic atrophy due to late congenital syphilis
703134008	Hypoplasia of enamel due to congenital syphilis
866106004	Interstitial keratitis due to late congenital syphilis
1142112002	Sensorineural deafness due to late congenital syphilis
46235002	Early latent congenital syphilis, positive serology, negative spinal fluid
722118005	Congenital nephrotic syndrome due to congenital infection
Chief Complaint	
"siphilis" or "syphylis" or "syphylus" or "syphilus" or "siphylis" or "siphilus" or "syphilis"	
"siphillis" or "syphyllis" or "syphyllus" or "syphillus" or "siphyllis" or "siphillus" or "syphillis"	
"sifilis" or "syfyilis" or "syfylus" or "syfilus" or "sifyilis" or "sifilus" or "syfilis"	

Table 2. *ESSENCE syntax in the CCDD parsed field*

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^;09[0-9];^,OR,^;A50;^,OR,^;A50[0-9];^,OR,^;A50[0-9][0-9];^;A51;^,OR,
^;A52;^,OR,^;A53;^,OR,^;35742006;^,OR,^;87318008;^,OR,^;9941009;^,OR,^;192008;^,OR,^;27648007;^,OR,^;
4359001;^,OR,^;86443005;^,OR,^;266126006;^,OR,^;82323002;^,OR,^;109436001;^,OR,^;1177081002;^,OR,^;
827006;^,OR,^;186833000;^,OR,^;735515000;^,OR,^;6267005;^,OR,^;266125005;^,OR,^;721583004;^,OR,^;11
42095003;^,OR,^;235898000;^,OR,^;1142031005;^,OR,^;703134008;^,OR,^;866106004;^,OR,^;1142112002;^,
OR,^;46235002;^,OR,^;722118005;^,OR,^s[iy]ph[iy]l[iu]s^,OR,^s[iy]ph[iy]ll[iu]s^,OR,^s[iy]f[iy]l[iu]s^
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Use the following URL and click Configuration Options to see the query setup:

https://essence2.syndromicsurveillance.org/nssp_essence/servlet/TemporalTimeSeriesViewer?datasource=va_hosp&startDate=4May2025&medicalGroupingSystem=essencesyndromes&userId=5024&age=00-04&endDate=9Aug2025&percentParam=noPercent&agtTarget=TimeSeries&geographySystem=hospital&detector=nodetectordetector&CCDDParsedFreeText=%5E;09%5B0-9%5D;%5E,OR,%5E;A50;%5E,OR,%5E;A50%5B0-9%5D;%5E,OR,%5E;A50%5B0-9%5D%5B0-9%5D;%5E;A51;%5E,OR,%20%5E;A52;%5E,OR,%5E;A53;%5E,OR,%5E;35742006;%5E,OR,%5E;87318008;%5E,OR,%5E;9941009;%5E,OR,%5E;192008;%5E,OR,%5E;27648007;%5E,OR,%5E;4359001;%5E,OR,%5E;86443005;%5E,OR,%5E;266126006;%5E,OR,%5E;82323002;%5E,OR,%5E;109436001;%5E,OR,%5E;1177081002;%5E,OR,%5E;827006;%5E,OR,%5E;186833000;%5E,OR,%5E;735515000;%5E,OR,%5E;6267005;%5E,OR,%5E;266125005;%5E,OR,%5E;721583004;%5E,OR,%5E;1142095003;%5E,OR,%5E;235898000;%5E,OR,%5E;1142031005;%5E,OR,%5E;703134008;%5E,OR,%5E;866106004;%5E,OR,%5E;1142112002;%5E,OR,%5E;46235002;%5E,OR,%5E;722118005;%5E,OR,%5Es%5Biy%5Dph%5Biy%5DI%5Biu%5Ds%5E,OR,%5Es%5Biy%5Dph%5Biy%5DII%5Biu%5Ds%5E,OR,%5Es%5Biy%5Df%5Biy%5DI%5Biu%5Ds%5E&timeResolution=weekly