SYPHILIS (Treponema pallidum) **IMMEDIATE NOTIFICATION** **STD PROGRAM**

Event Name:	Syphilis
Event Time Period:	180 days

Clinical Description (CDC 2014)	Syphilis is a complex sexually transmitted disease that has a highly variable clinical course. Adherence to the following surveillance case definitions will facilitate understanding the epidemiology of this disease across the U.S.

NOTE: All syphilis events will be entered as SUSPECT by ISIS

PRIMARY SYPHILIS

Clinical Description (CSTE 2017)	A stage of infection with *Treponema pallidum* characterized by one or more ulcerative lesions (e.g. chancre), which might differ considerably in clinical appearance.	
CSTE Event Classification (2017):	*Confirmed*	A case that meets the clinical description of primary syphilis and the confirmatory laboratory criteria: • Demonstration of *T. pallidum* by darkfield microscopy in a clinical specimen that was not obtained from the oropharynx and is not potentially contaminated by stool, **OR** • Demonstration of *T. pallidum* by polymerase chain reaction (PCR) or equivalent direct molecular methods in any clinical specimen.
	Probable	A case that meets the clinical description of primary syphilis and the supportive laboratory criteria: • A reactive nontreponemal serologic test (Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], or equivalent serologic methods), **OR** • A reactive treponemal serologic test (*T. pallidum* particle agglutination [TP-PA], enzyme immunoassay [EIA], chemiluminescence immunoassay [CIA], or equivalent serologic methods).* * These treponemal tests supersede older testing technologies, including microhemagglutination assay for antibody to *T. pallidum* [MHA-TP].
Massachusetts Event Classification:	*Confirmed*	*Follows CSTE, requires review by STI HN*
	Probable	*Follows CSTE, requires review by STI HN*
	Suspect	Morbidity card, Boston Reporting Card or Case Reporting Form

SECONDARY SYPHILIS

Clinical Description (CSTE 2017)	A stage of infection caused by T. pallidum characterized by localized or diffuse mucocutaneous lesions (e.g., rash – such as non-pruritic macular, maculopapular, papular, or pustular lesions), often with generalized lymphadenopathy. Other signs can include mucous patches, condyloma lata, and alopecia. The primary ulcerative lesion may still be present.* *Because of the wide array of symptoms and signs possibly indicating secondary syphilis, serologic tests for syphilis and a physical examination are crucial to determining if a case should be classified as secondary syphilis.	
CSTE Event Classification (2017):	*Confirmed*	A case that meets the clinical description of secondary syphilis and the confirmatory laboratory criteria: • Demonstration of *T. pallidum* by darkfield microscopy in a clinical specimen that was not obtained from the oropharynx and is not potentially contaminated by stool, **OR** • Demonstration of *T. pallidum* by polymerase chain reaction (PCR) or equivalent direct molecular methods in any clinical specimen.
	Probable	A case that meets the clinical descriptions of secondary syphilis and the supportive laboratory criteria: • A reactive nontreponemal serologic test (Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], or equivalent serologic methods), **AND** • A reactive treponemal serologic test (*T. pallidum* particle agglutination [TP-PA], enzyme immunoassay [EIA], chemiluminescence immunoassay [CIA], or equivalent serologic methods).
Massachusetts Event Classification:	*Confirmed*	*Follows CSTE, requires review by STI HN*
	Probable	*Follows CSTE, requires review by STI HN*
	Suspect	Morbidity card, Boston Reporting Card or Case Reporting Form Cases that meet the clinical descriptions of secondary syphilis but lack the reactive treponemal serologic test.

SYPHILIS, EARLY NON-PRIMARY, NON-SECONDARY

Clinical Description (CSTE 2017)	A stage of infection caused by *T. pallidum* in which initial infection has occurred within the previous 12 months, but there are no signs or symptoms of primary or secondary syphilis.	
CSTE Event Classification (2017)	*Confirmed*	*None*
	Probable	A person with no clinical signs or symptoms of primary or secondary syphilis who has one of the following: • No prior history of syphilis, **AND** a current reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods), **AND** a current reactive treponemal test (e.g., TP-PA, EIA, CIA, or equivalent serologic methods), **OR** • A prior history of syphilis and meets the supportive laboratory criteria. **AND** evidence of having acquired the infection within the previous 12 months based on one or more of the following criteria: • Documented seroconversion or fourfold or greater increase in titer of a nontreponemal test during the previous 12 months, unless there is evidence that this increase was not sustained for >2 weeks • Documented seroconversion of a treponemal test during the previous 12 months • A history of symptoms consistent with primary or secondary syphilis during the previous 12 months • Meets epidemiologic criteria Epidemiological Criteria: • A history of sexual exposure to a partner within the previous 12 months who had primary, secondary, or early non-primary non-secondary syphilis (documented independently as duration <12 months). • Only sexual contact (sexual debut) was within the previous 12 months.
Massachusetts Event Classification:	*Confirmed*	*Follows CSTE, requires review by STI HN*
	Probable	*Follows CSTE, requires review by STI HN*
	Suspect	Morbidity card, Boston Reporting Card or Case Reporting Form Cases that meet the above criteria but lack the reactive treponemal serologic test.

SYPHILIS, UNKNOWN DURATION OR LATE

Clinical Description (CSTE 2017)	A stage of infection caused by *T. pallidum* in which initial infection has occurred >12 months previously or in which there is insufficient evidence to conclude that infection was acquired during the previous 12 months.	
CSTE Event Classification (2017)	*Confirmed*	*None*
	Probable	A person with no clinical signs or symptoms of primary or secondary syphilis who meets one of the following sets of criteria: • No prior history of syphilis, and a current reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods), and a current reactive treponemal test (e.g., TP-PA, EIA, CIA, or equivalent serologic methods), **OR** • A prior history of syphilis, and a current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer, unless there is evidence that this increase was not sustained for >2 weeks, **OR** • Clinical signs or symptoms and laboratory results that meet the likely or verified criteria for neurologic, ocular, or late clinical manifestations syphilis (see below) **AND** who has no evidence of having acquired the disease within the preceding 12 months (see Syphilis, early non-primary non-secondary).
Massachusetts Event Classification:	*Confirmed*	*Follows CSTE, requires review by STI HN*
	Probable	*Follows CSTE, requires review by STI HN*
	Suspect	Morbidity card, Boston Reporting Card or Case Reporting Form

CONGENITAL SYPHILIS

Clinical Description (CSTE 2017)	A condition caused by infection in utero with Treponema pallidum. A wide spectrum of severity exists, from inapparent infection to severe cases that are clinically apparent at birth. An infant or child (aged less than 2 years) may have signs such as hepatosplenomegaly, rash, condyloma lata, snuffles, jaundice (nonviral hepatitis), pseudoparalysis, anemia, or edema (nephrotic syndrome and/or malnutrition). An older child may have stigmata (e.g., interstitial keratitis, nerve deafness, anterior bowing of shins, frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, rhagades, or Clutton joints).	
CSTE Event Classification (2017)	*Confirmed*	A case that is laboratory confirmed. **Laboratory Criteria for Diagnosis** Demonstration of *Treponema pallidum* by: • Darkfield microscopy of lesions, body fluids, or neonatal nasal discharge, OR • Polymerase chain reaction (PCR) or other equivalent direct molecular methods of lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material, OR • Immunohistochemistry (IHC), or special stains (e.g., silver staining) of specimens from lesions, placenta, umbilical cord, or autopsy material.

	Probable	A condition affecting an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant, **OR** an infant or child who has a reactive non-treponemal test for syphilis (Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], **OR** equivalent serologic methods) **AND** any one of the following: • Any evidence of congenital syphilis on physical examination (see Clinical description) • Any evidence of congenital syphilis on radiographs of long bones • A reactive cerebrospinal fluid (CSF) venereal disease research laboratory test (VDRL) test • In a non-traumatic lumbar puncture, an elevated CSF leukocyte (white blood cell, WBC) count or protein (without other cause): o Suggested parameters for abnormal CSF WBC and protein values: 1. During the first 30 days of life, a CSF WBC count of >15 WBC/mm3 or a CSF protein >120 mg/dl is abnormal. 2. After the first 30 days of life, a CSF WBC count of >5 WBC/mm3 or a CSF protein >40 mg/dl, regardless of CSF serology. The treating clinician should be consulted to interpret the CSF values for the specific patient. *Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery.
Massachusetts Event Classification:	*Confirmed*	Congenital outcome: Confirmed Case, *Follows CSTE, requires review by STI HN*
	Probable	Congenital outcome: Presumptive Case, *Follows CSTE, requires review by STI HN*
	Revoked	Congenital outcome: Not a Case, Case that does not meet confirmed or probable case definition listed above

SYPHILITIC STILLBIRTH

Clinical Description (CSTE 2017)	A fetal death that occurs after a 20-week gestation or in which the fetus weighs greater than 500 g and the mother had untreated or inadequately treated* syphilis at delivery. *Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery. Comments

	For reporting purposes, congenital syphilis includes cases of congenitally acquired syphilis among infants and children as well as syphilitic stillbirths.
Massachusetts Event Classification:	See congenital case definition above for additional details.

CLINCAL MANIFESTATIONS OF REPORTED SYPHILIS CASES

NEUROLOGICAL MANIFESTATIONS (NEUROSYPHILIS)

***NOTE: Neurosyphilis can occur at any stage of syphilis. If the patient has neurologic manifestations of syphilis, the case should be reported with the appropriate stage of infection (as if neurologic manifestations were not present) and "neurologic manifestations" should be noted in the case report data. If no other stage is appropriate, the case should be staged as "Syphilis, Unknown Duration or Late".**

Clinical Description (CSTE 2017)	Infection of the central nervous system with *T. pallidum*, as evidenced by manifestations including syphilitic meningitis, meningovascular syphilis, general paresis, including dementia, and tabes dorsalis.	
CSTE Classification (2017):	*Verified*	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) with both of the following: • Clinical symptoms or signs that are consistent with neurosyphilis without other known causes for these clinical abnormalities **AND** • A reactive VDRL in CSF in the absence of grossly bloody contamination of the CSF.
	Likely	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) with both of the following: • Clinical symptoms or signs that are consistent with neurosyphilis without other known causes for these clinical abnormalities **AND** • Elevated cerebrospinal fluid (CSF) protein (>50 mg/dL2) or leukocyte count (>5 white blood cells/cubic millimeter CSF) in the absence of other known causes of these abnormalities.

	Possible	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and clinical symptoms or signs that are consistent with neurosyphilis without other known causes for these clinical abnormalities.
Massachusetts Event Classification:	*Confirmed*	Verified, *Follows CSTE, requires review by STI HN*
	Probable	Likely, Follows *CSTE, requires review by STI HN*
	Suspect	Possible, Morbidity card, Boston Reporting Card or Case Reporting Form

OCULAR MANIFESTATIONS

***NOTE: Ocular manifestations can occur at any stage of syphilis. If the patient has ocular manifestations of syphilis, the case should be reported with the appropriate stage of infection (as if ocular manifestations were not present) and ocular manifestations should be noted in the case report data. If no other stage is appropriate, the case should be staged as "Syphilis, Unknown Duration or Late".**

Clinical Description (CSTE 2017)	Infection of any eye structure with *T. pallidum*, as evidenced by manifestations including posterior uveitis, panuveitis, anterior uveitis, optic neuropathy, and retinal vasculitis. Ocular syphilis may lead to decreased visual acuity including permanent blindness.	
CSTE Classification (2017):	*Verified*	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and both of the following: • Clinical symptoms or signs consistent with ocular syphilis without other known causes for these clinical Abnormalities **AND** • Demonstration of *T. pallidum* in aqueous or vitreous fluid by darkfield microscopy, or by polymerase chain reaction (PCR) or equivalent direct molecular methods.
	Likely	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and both of the following: • Clinical symptoms or signs consistent with ocular syphilis without other known causes for these clinical Abnormalities **AND** • Findings on exam by an ophthalmologist that are consistent with ocular syphilis in the absence of other known causes for these abnormalities

	Possible	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and clinical symptoms or signs consistent with ocular syphilis without other known causes for these clinical abnormalities.
Massachusetts Event Classification:	*Confirmed*	Verified, *Follows CSTE, requires review by STI HN*
	Probable	Likely, Follows *CSTE, requires review by STI HN*
	Suspect	Possible, Morbidity card, Boston Reporting Card or Case Reporting Form

OTIC MANIFESTATIONS

***NOTE: Otic manifestations can occur at any stage of syphilis. If the patient has otic manifestations of syphilis, the case should be reported with the appropriate stage of infection (as if otic manifestations were not present) and otic manifestations should be noted in the case report data. If no other stage is appropriate, the case should be staged as "Syphilis, Unknown Duration or Late".**

Clinical Description (CSTE 2017)	Infection of the cochleovestibular system with *T. pallidum*, as evidenced by manifestations including sensorineural hearing loss, tinnitus, and vertigo.	
CSTE Classification (2017):	*Verified*	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and both of the following: • Clinical symptoms or signs consistent with otosyphilis without other known causes for these clinical abnormalities **AND** • Demonstration of *T. pallidum* in inner ear fluid by darkfield microscopy, or by polymerase chain reaction (PCR) or equivalent direct molecular detection methods.
	Likely	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and both of the following: • Clinical symptoms or signs consistent with otosyphilis without other known causes for these clinical abnormalities **AND** • Findings on exam by an otolaryngologist that are consistent with otosyphilis in the absence of other known causes for these abnormalities

	Possible	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and clinical symptoms or signs consistent with otosyphilis without other known causes for these clinical abnormalities.
Massachusetts Event Classification:	*Confirmed*	Verified, *Follows CSTE, requires review by STI HN*
	Probable	Likely, Follows *CSTE, requires review by STI HN*
	Suspect	Possible, Morbidity card, Boston Reporting Card or Case Reporting Form

LATE CLINICAL MANIFESTATIONS

***NOTE: Late clinical manifestations of syphilis usually develop only after a period of 15–30 years of untreated infection. If the patient has late clinical manifestations of syphilis, the case should be reported with the appropriate stage of infection (for the vast majority of cases, unknown duration or late syphilis) and late clinical manifestations should be noted in the case report data.**

Clinical Description (CSTE 2017)	Late clinical manifestations of syphilis (tertiary syphilis) may include inflammatory lesions of the cardiovascular system (e.g., aortitis, coronary vessel disease), skin (e.g., gummatous lesions), bone (e.g., osteitis), or other tissue. Rarely, other structures (e.g., the upper and lower respiratory tracts, mouth, eye, abdominal organs, reproductive organs, lymph nodes, and skeletal muscle) may be involved. In addition, certain neurologic manifestations (e.g., general paresis and tabes dorsalis) are also late clinical manifestations of syphilis.

CSTE Classification (2017):	*Verified*	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and either of the following: • Characteristic abnormalities or lesions of the cardiovascular system (e.g., aortitis, coronary vessel disease), skin (e.g., gummatous lesions), bone (e.g., osteitis), or other tissue in the absence of other known causes of these abnormalities, in combination with either demonstration of *T. pallidum* in late lesions by special stains or equivalent methods, or by polymerase chain reaction (PCR) or equivalent direct molecular methods, or demonstration of pathologic changes that are consistent with *T. pallidum* infection on histologic examination of late lesions, **OR** • Clinical signs and symptoms consistent with late neurologic manifestations of syphilis (e.g., general paresis, including dementia, or tabes dorsalis) in a case that meets the criteria for verified neurologic manifestations of syphilis (see above).
	Likely	A person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) with either of the following: • Characteristic abnormalities or lesions of the cardiovascular system (e.g., aortitis, coronary vessel disease), skin (e.g., gummatous lesions), bone (e.g., osteitis), or other tissue, in the absence of other known causes of these abnormalities **OR** • Clinical signs and symptoms consistent with late neurologic manifestations of syphilis (e.g., general paresis, including dementia, or tabes dorsalis) in a case that meets the criteria for likely neurologic manifestations of syphilis (see above)
Massachusetts Event Classification:	*Confirmed*	Verified, *Follows CSTE, requires review by STI HN*
	Probable	Likely, Follows *CSTE, requires review by STI HN*
	Suspect	Possible, Morbidity card, Boston Reporting Card or Case Reporting Form

Note: all syphilis events will be entered by ISIS as SUSPECT. Disease classification status for syphilis will be reviewed and updated by Division of STD Prevention Staff.

SYPHILIS (continued)

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory report	(Not a valid test)	Clinical specimen	*T. Pallidum*	Yes	New event SUSPECT
				No	Same event
Select:	Microorganism: Prld: Pt: xxx: Nom: Culture				
Select:	Microorganism: Prld: Pt: IsIt: Nom: Bacterial subtyping				
Laboratory report	(Not a valid test)	Clinical specimen	*T. Pallidum*	Yes	New event SUSPECT
				No	Same event
Select:	Microorganism: Prld: Pt: xxx Nom: Sterile body fluid culture				
Laboratory report	Darkfield	Clinical specimen	*T. Pallidum*	Yes	New event SUSPECT
				No	Same event
Select:	Microscopy: Prld: Pt:xxx: Nom Dark field examination				
Laboratory report	Generic stain	Clinical specimen	*T. Pallidum*	Yes	New event SUSPECT
				No	Same event
Select:	Microscopy: Prld: Pt: xxx: Nom: xxx stain				
Laboratory report	RPR	Clinical specimen	Positive or titer value	Yes	New event SUSPECT
				No	Same event
Select:	Reagin Ab: ACnc: Pt: Ser: Ord: Rapid test				
Laboratory report	VDRL	CSF	Positive or titer value	Yes	New event SUSPECT
				No	Same event
Select:	Reagin Ab : ACnc : Pt : CSF : Ord : VDRL				

SYPHILIS (continued)

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory report	FTA or FTA_Abs	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select:	Treponema Ab: Prld: Pt: xxx: Ord:FTA				
Laboratory report	IgG and IgM	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select:	Treponema pallidum Ab. IgG +IgM: ACnc: Pt: Ser: Ord:				
Laboratory report	TP IgG	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select:	Treponema pallidum Ab. IgG: ACnc: Pt: Ser: Qn:				
Laboratory report	TP IgM	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select:	Treponema pallidum Ab: IgM: ACnc:Pt: Ser: Qn:				
Laboratory report	Agglutination Assay Or TPPA	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select:	Treponema pallidum Ab: ACnc: Pt: Ser: Ord: Aggl				
Laboratory report	EIA	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select:	Treponema pallidum Ab: ACnc: Pt: Ser: Ord: EIA				

SYPHILIS (continued)

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory report	TP Ab	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select:	Treponema pallidum Ab: ACnc: Pt: Ser: Qn:				
Select:	Treponema pallidum DNA : ACnc : Pt : XXX : Ord : Probe.amp.tar				
Select:	Reagin Ab : ACnc : Pt : XXX : Qn : VDRL				
Select:	Treponema pallidum Ab [Presence] in Serum by Hemagglutination				
Laboratory report	DFA	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select:	Treponema pallidum: ACnc: Pt: XXX: Ord: IF				