

## CHLAMYDIA; SEXUALLY TRANSMITTED

### Background

This case definition was developed in 2013 by the Armed Forces Health Surveillance Center (AFHSC) for the purpose of epidemiological surveillance of a sexually transmitted infection important to military associated populations.

### Clinical Description

Chlamydia infection is the most frequently reported bacterial Sexually Transmitted Infection (STI) in the United States. It is common in both men and women. A major concern with the infection is that 70% of infected women and 50% of infected men are asymptomatic.<sup>1</sup> If symptoms are present they are generally mild and individuals often do not seek treatment. If left untreated chlamydia infection can lead to pelvic inflammatory disease (PID), ectopic pregnancy, and infertility in women and prostatitis and epididymitis in men.<sup>2</sup> To prevent the consequences of infection, the Centers for Disease Control and Prevention (CDC) recommends annual screening for chlamydia infection in all sexually active women 25 years and younger and in women 25 year and older who are at risk of STIs. The CDC also recommends that screening be considered for sexually active men seen in clinical settings with a high prevalence of chlamydia (e.g. STI clinics). Once detected, the infection can usually be effectively treated with antibiotics.

### Case Definition and Incidence Rules

For surveillance purposes, a case of chlamydia infection is defined as:

- *One outpatient medical encounter* with any of the defining diagnoses of chlamydia (see ICD9 code list below) in the *primary or secondary* diagnostic position; or
- *One record of a reportable medical event* of chlamydia infection.

#### **Incidence rules:**

For individuals who meet the case definition:

- An individual is considered a new incident case if *at least 30 days* have passed since the last medical encounters with a case defining diagnosis of chlamydia infection (*see explanation of "gap" rule below*).
- The incidence date is considered the date of the first reportable medical event or outpatient medical encounter with a defining diagnosis of chlamydia infection.

<sup>1</sup> <http://www.cdc.gov/std/Chlamydia/STDFact-Chlamydia.htm>; accessed Sept 16, 2013

<sup>2</sup> Clark, KL, Howell, R, Yuanhzung, et. al. Hospitalization Rates in Female US Army Recruits Associated with a Screening Program for Chlamydia trachomatis. *Sexually Transmitted Diseases*, January 2012.



### Case Definition and Incidence Rules *(continued)*

#### Exclusions:

- None

### Codes

The following ICD9 and ICD10 codes are included in the case definition:

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Chlamydia; sexually transmitted	<i>Translated code to broad for inclusion</i>	099.41 (other nongonococcal urethritis, <i>Chlamydia trachomatis</i> )
	A56 <i>Other sexually transmitted chlamydial diseases</i>	099.5 <i>Other venereal diseases due to Chlamydia trachomatis</i>
	A56.0 (chlamydial infection of lower genitourinary tract)	- 099.53 (other venereal diseases due to <i>Chlamydia trachomatis</i> , lower genitourinary sites)
	- A56.00 (chlamydial infection of lower genitourinary tract, unspecified)	
	- A56.01 (chlamydial cystitis and urethritis)	
	- A56.02 (chlamydial vulvovaginitis)	
	- A56.09 (other chlamydial infection of lower genitourinary tract)	
	A56.1 (chlamydial infection of pelviperitoneum and other genitourinary organs)	--
	- A56.11 (chlamydial female pelvic inflammatory disease)	- 099.54 (other venereal diseases due to <i>Chlamydia trachomatis</i> , other genitourinary sites)
	- A56.19 (other chlamydial genitourinary infection)	- 099.50 (other venereal diseases due to <i>Chlamydia trachomatis</i> , unspecified site) - 099.54 (above)
	A56.2 (chlamydial infection of genitourinary tract, unspecified)	- 099.55 (other venereal diseases due to <i>Chlamydia trachomatis</i> , unspecified genitourinary site)
	A56.3 (chlamydial infection of anus and rectum)	- 099.52 (other venereal diseases due to <i>Chlamydia trachomatis</i> , anus and rectum)
	A56.4 (chlamydial infection of pharynx)	- 099.51 (other venereal diseases due to <i>Chlamydia trachomatis</i> , pharynx)

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	A56.8 (sexually transmitted chlamydial infection of other sites)	<ul style="list-style-type: none"> <li>- 099.56 (other venereal diseases due to <i>Chlamydia trachomatis</i>, peritoneum)</li> <li>- 099.59 (other venereal diseases due to <i>Chlamydia trachomatis</i>, other specified site)</li> </ul>
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## Development and Revisions

- In April of 2014 the case definition was updated to include ICD10 codes.
- In 2013, AFHSC updated the case definitions for sexually transmitted infections (STIs) to be more specific for each of the individual STIs. For chlamydia the case defining criteria were updated to include outpatient medical encounters only and ICD9 codes in the primary and secondary diagnostic positions only. Reports using this case definition were featured in a March 2013 Webinar on “STDs in Military Populations.”<sup>3</sup>

This case definition was developed based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses. The definition was developed by the AFHSC Medical Surveillance Monthly Report (MSMR) staff for a February 2013 article on chlamydia infection and other STIs.<sup>4</sup>

- In September 2009, a case definition for sexually transmitted infections (STIs) was developed by AFHSC and a Department of Defense (DoD) HIV/STI Prevention working group. The definition was used for a descriptive epidemiology report on the most frequent sexually transmitted infections among active component members of the U.S. Armed Forces.<sup>5</sup> The case defining criteria in this definition included hospitalizations, used ICD9 codes in *any* diagnostic position, and were the same for all STIs in the report.

### Case Definition and Incidence Rule Rationale

- This case definition uses a 30-day “gap in care” incidence rule for medical encounters to define a new incident case of chlamydia infection. Use of this methodology presumes that medical encounters for chlamydia infection that occur within 30 days of a previous such encounter constitute follow-up care of the previously diagnosed case. The goal of the “gap in care” rule is to lessen the frequency with which encounters for follow-up care are treated as new incident cases of infection.

The “gap in care” rule differs slightly from an absolute 30-day incidence rule in which an individual may be considered an incident case once every 30 days. Analyses comparing the two incidence rules show an approximate 2% difference between the methodologies, with the gap in care rule being slightly more specific. Use of the “gap in care rule” for this case definition is consistent with the methodology used by other investigators doing gonorrhea surveillance.

- A period of 30 days between encounters is used to allow for adequate resolution of infection after treatment and to avoid confusing medical encounters for follow-up care with medical encounters for a new infection.<sup>6</sup>

<sup>3</sup> Focus on the Treatment of STDs in Military Populations – 2010 STD Treatment Guidelines Webinar. See <http://www.cdc.gov/std/training/webinars.htm>.

<sup>4</sup> Armed Forces Health Surveillance Center. Sexually Transmitted Infections, Active Component, U.S. Armed Forces, 2000-2012. *Medical Surveillance Monthly Report (MSMR)*. 2013 February; 20(2): 5-10.

<sup>5</sup> Armed Forces Health Surveillance Center. *Sexually Transmitted Infections, U.S. Armed Forces, 2004-2009*. *Medical Surveillance Monthly Report (MSMR)*; 2010 August; Vol 17(8): 2-10.

<sup>6</sup> <http://www.cdc.gov/std/treatment/2010/chlamydial-infections.htm>; accessed October 2013.



### Code Set Determination and Rationale

- ICD9 code 099.41 (other nongonococcal urethritis, *Chlamydia trachomatis*) translates to ICD10 N34.1 (nonspecific urethritis). Codes for nonspecific and unspecified urethritis, (i.e., ICD10 N34.1 and ICD9 codes 099.40 (other nongonococcal urethritis, unspecified) and 597.80 (urethritis, unspecified) are not included in this code set as they are not specific for infection with chlamydia.
- A 2010 MSMR article on recurrent chlamydia diagnoses in the active component included the following ICD9 codes to define a case of chlamydia infection: 078.88 (other specified diseases due to chlamydia), 079.88 (other specified chlamydial infection), and 079.98 (unspecified chlamydia infection).<sup>7</sup> The code set used for this newer case definition does not include these three codes as they are infrequently used and are not specific for chlamydia trachomatis and STIs.

### Reports

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AFHSC reports on chlamydia in the following reports:

- Monthly: AFHSC Reportable Events Monthly Report. Available on the AFHSC website at: <http://www.afhsc.mil>; see “Reports and Publications”.

### Review

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Apr 2014	Case definition reviewed and updated by the AFHSC Surveillance Methods and Standards (SMS) working group
Oct 2013	Case definition reviewed and adopted by the AFHSC Surveillance Methods and Standards (SMS) working group.
Feb 2013	Case definition developed and reviewed by the AFHSC MSMR staff.

### Comments

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None

<sup>7</sup> Armed Forces Health Surveillance Center, *Brief Report: Recurrent Chlamydia Diagnoses, Active Component, 2000-2009*. Medical Surveillance Monthly Report (MSMR); 2010 August; Vol 17(8): 15-17.

