

Guidance on classifying STD case reports into *MMWR* week

(revised February 2021)

Background

State and local jurisdictions report cases of notifiable conditions to the Centers for Disease Control and Prevention (CDC)'s Nationally Notifiable Disease Surveillance System (NNDSS) and assign cases to designated weeks of the epidemiologic year (*MMWR* week). Using the reported *MMWR* week, CDC's Division of STD Prevention assigns reported cases of chlamydia, gonorrhea, syphilis (excluding congenital syphilis), and chancroid to corresponding years for annual reporting and into weeks, months, or quarters for other reporting and quality assurance activities. Cases of congenital syphilis are similarly assigned using the infant's birthdate.

CDC's NNDSS recommends that *MMWR* week be assigned according to the variable "event date" and jurisdictions indicate the type of date used for "event date" in a separate variable "event date type." Jurisdictions should select the available date that most closely approximates the date of interest, which is often disease onset (incidence); however, as *MMWR* week may be used for other purposes, such as data management or reporting, assignment may vary by notifiable condition (e.g., a state's immunization program may assign *MMWR* week using different 'rules' compared to the state's STD or TB program). For programs wishing to monitor trends relevant to the incident case and its management, NNDSS provides guidance on which "event date type" to use, based on a hierarchy approach [1]:

- Date of disease onset
- Date of diagnosis
- Date of laboratory result
- Date of first report to public (community) health system
- State or *MMWR* report date

For jurisdictions reporting case notifications to CDC via HL7 messaging, the generic message mapping guide (MMG) and the STD MMG contain variables for all of the dates in this hierarchy [2]; however, the current National Electronic Telecommunications System for Surveillance (NETSS) record layout for transmission of STD morbidity data [3] does not allow for transmission of three of the date variables used in the NNDSS guidance (date of disease onset, date of diagnosis, and date of laboratory result), but does allow for transmission of a date variable (date of laboratory specimen collection) not included in the NNDSS guidance.

Based on a review of chlamydia cases reported by 11 jurisdictions during 2013–2014 (all sent via NETSS), almost 75% of chlamydia cases were assigned an *MMWR* week using date of first report to public (community) health system even though a date of laboratory specimen collection had been reported to CDC. [4] Classifying the *MMWR* week based on date of laboratory specimen collection instead of the "event date" resulted in reclassifying 60% of cases into a different *MMWR* week, including the reclassification of 4% of cases into an *MMWR* week with a difference of ≥ 8 weeks and 0.7% of cases into a different *MMWR* year.

Using an *MMWR* week relatively distant from the true date of the acquisition of infection - such as the date first reported to the public (community) health system - may be a suboptimal measure of incidence compared with other dates closer to the time of infection. Although few cases would be classified into a different year when using a date closer to time of infection (such as date of laboratory specimen collection), many would be classified into different weeks, which may affect analyses involving more granular time periods such as aberration detection or quarterly reporting, as well as quality assurance measures such as timeliness of reporting to CDC.

Statement of action to be taken

Specific guidance for assigning *MMWR* week for nationally notifiable STDs are provided below, which prioritize using a date that most closely represents date of disease onset (incidence).

For reporting chlamydia, gonorrhea, syphilis (excluding congenital syphilis), and chancroid

Date of specimen collection appears to be available for many cases but is not currently listed in the CDC NNDSS hierarchy for “event date” or included as an option for “event date type.” Because at least one positive laboratory result is required to meet the case definition for chlamydia, gonorrhea, syphilis (excluding congenital syphilis), and chancroid, date of specimen collection, date of laboratory result, and date of diagnosis are expected to occur within several days of each other. Therefore, when date of disease onset, date of disease diagnosis, or date of laboratory result are not available, but date of laboratory specimen collection date is available, date of laboratory specimen collection should be considered a proxy for date of diagnosis and should be used to assign *MMWR* week.

For reporting cases of chlamydia, gonorrhea, syphilis (excluding congenital syphilis), and chancroid to to CDC, jurisdictions should adhere to the hierarchy provided by CDC NNDSS for assignment of *MMWR* week:

- Date of disease onset
- Date of diagnosis (proxy: Date of laboratory specimen collection)
- Date of laboratory result
- Date of first report to public (community) health system
- State or *MMWR* report date

For reporting congenital syphilis

Because laboratory tests are not required for infants to meet the congenital syphilis case definition (e.g., infants may be identified as probable congenital syphilis cases based on inadequate treatment of maternal syphilis during pregnancy), the hierarchy for assigning *MMWR* week is different than for other nationally notifiable STDs.

For congenital syphilis cases, infant’s date of birth most closely approximates date of disease onset (incidence). Although most congenital infections are diagnosed at birth or soon after, congenital infections can be identified years later (e.g., in a two-year-old). All cases of congenital syphilis, including those diagnosed with a date of birth in a prior *MMWR* year should be reported to CDC; however, for jurisdictions reporting via NETSS, cases with an

MMWR year outside of the current reporting year are not able to be accepted at CDC. Therefore, date of birth is not currently able to be used in the hierarchy to assign “event date” for congenital syphilis cases.

When reporting cases of congenital syphilis to CDC, jurisdictions should continue to assign *MMWR* week and “event date” based on date of first report to public (community) health system to indicate when the health department was notified of the diagnosis. CDC will continue to assign reporting year for cases of congenital syphilis based on the infant’s date of birth.

References

1. CDC. *MMWR* Weeks. Available at: https://wwwn.cdc.gov/nndss/document/MMWR_week_overview.pdf (Accessed: March 2, 2019)
2. National Notifiable Diseases Surveillance System: Message Mapping Guides and Artifacts. Available at: <https://wwwn.cdc.gov/nndss/case-notification/message-mapping-guides.html> (Accessed: March 2, 2019)
3. The National Electronic Telecommunications System for Surveillance (NETSS) CDC Implementation Plan for STD Surveillance Data (Effective as of January 2018). Available at: https://www.cdc.gov/std/program/std-netssimpln-v5_2018jan.pdf (Accessed: March 2, 2019)
4. Pitasi MA, Kidd SE, Kirkcaldy RD, Torrone EA. Incidence and Timeliness in National Chlamydia Surveillance: The Role of Date Type. Council of State and Territorial Epidemiologist Annual Meeting. June, 2016. Anchorage, AK. Available at: <https://cste.confex.com/cste/2016/webprogram/Paper6444.html> (Accessed: March 2, 2019)