

DEDUPLICATION STANDARDS FOR CHLAMYDIA AND GONORRHEA CASE REPORTS BASED ON LABORATORY TEST RESULTS

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BACKGROUND

National deduplication standards on the minimum amount of time between positive laboratory test results to trigger a report of a new case are included in the 2022 *Chlamydia trachomatis* and 2023 *Neisseria gonorrhoeae* infection surveillance case definitions (1, 2). The deduplication standards were informed by scientific literature on nucleic acid amplification tests (NAATs) that are commonly used to diagnose both infections, current Centers for Disease Control and Prevention (CDC) test of cure recommendations, a 2015 CDC assessment of STD surveillance practices in local and state jurisdictions, and feedback from STD surveillance programs during the process of updating the Council of State and Territorial Epidemiologists (CSTE) chlamydia and gonorrhea position statements.

Chlamydia and gonorrhea can be diagnosed with a highly sensitive NAAT (3). A positive NAAT test result in the weeks following successful treatment may indicate residual genetic material rather than a new or persistent infection and should not be reported as a second case (4). Residual nucleic acid from bacteria rendered noninfective by antibiotics might still give a positive *C. trachomatis* NAAT result up to 4 weeks after therapy (3, 5). Detection of *N. gonorrhoeae* nucleic acid has been observed for up to 2 weeks following therapy although the majority of patients who were treated effectively for gonorrhea had a negative NAAT 1 week after treatment (6). For these reasons, current CDC guidelines for chlamydia recommend test of cure to detect therapeutic failure for pregnant persons at 4 weeks. For any person diagnosed with pharyngeal gonorrhea, test of cure is recommended 7–14 days after initial treatment by using either culture or NAAT (3).

A 2015 assessment of STD surveillance practices among CDC-funded project areas showed that the reported timeframe used for deduplicating chlamydia and gonorrhea case reports based on laboratory test results varied by jurisdiction and by pathogen. Sites reported using a range of 7 to 90 days for deduplication for both chlamydia and gonorrhea case report data. Most jurisdictions deduplicated case data when laboratory test results were within 30 days of each other: 57% of jurisdictions reported 30 days for chlamydia and 54% of jurisdictions reported 30 days for gonorrhea. A few jurisdictions had additional deduplication rules for certain populations (e.g., different time periods for pregnant women). Several jurisdictions reported different time periods of deduplication for gonorrhea and chlamydia with some of these jurisdictions using a shorter time period to deduplicate gonorrhea cases. In jurisdictions that provided enough details, deduplication methods also varied across jurisdictions with 28% using automated deduplication within their surveillance information system, 20% using manual methods (e.g., data clerk deciding whether to enter the laboratory test result as a new case), and 22% using a combination of methods.

Feedback on deduplication standards was also collected from state and local STD surveillance programs during the process of updating the CSTE chlamydia and gonorrhea position statements.

During this process, jurisdictions were asked to review proposed deduplication standards for chlamydia and gonorrhea. While jurisdictions acknowledged that time to NAAT clearance varied by pathogen, several jurisdictions noted that it may be difficult to implement different deduplication time periods for each condition. Ultimately, the approved position statements updated the case definitions for chlamydia and gonorrhea to include national deduplication standards for case reports based on laboratory test results (1, 2). Although the specific wording used to describe the criteria to distinguish a new case is not identical in the two position statements, the deduplication standards are intended to be the same for both conditions.

ACTION ITEMS

To strengthen national chlamydia and gonorrhea surveillance, CDC recommends that jurisdictions:

1. Learn about the national standards for deduplicating chlamydia and gonorrhea case reports based on laboratory test results that are described in the current CSTE position statements for each condition (1, 2) and shown in Figure 1: deduplicate case reports if there is a previously reported case with a specimen collection date or documented treatment date in the prior 30 days, AND no evidence of reinfection.
2. Routinely review available laboratory, treatment completion, and partner services data to determine if a positive laboratory test result represents a prior, previously reported case that should not be reported as a new case.
3. Apply the national deduplication standards within STD surveillance programs, incorporating a deduplication algorithm (Figure 1) into electronic surveillance information systems, if possible.
4. Ensure that chlamydia and gonorrhea case report data are reviewed and deduplicated as appropriate prior to data submission to CDC.

ADDITIONAL CONSIDERATIONS

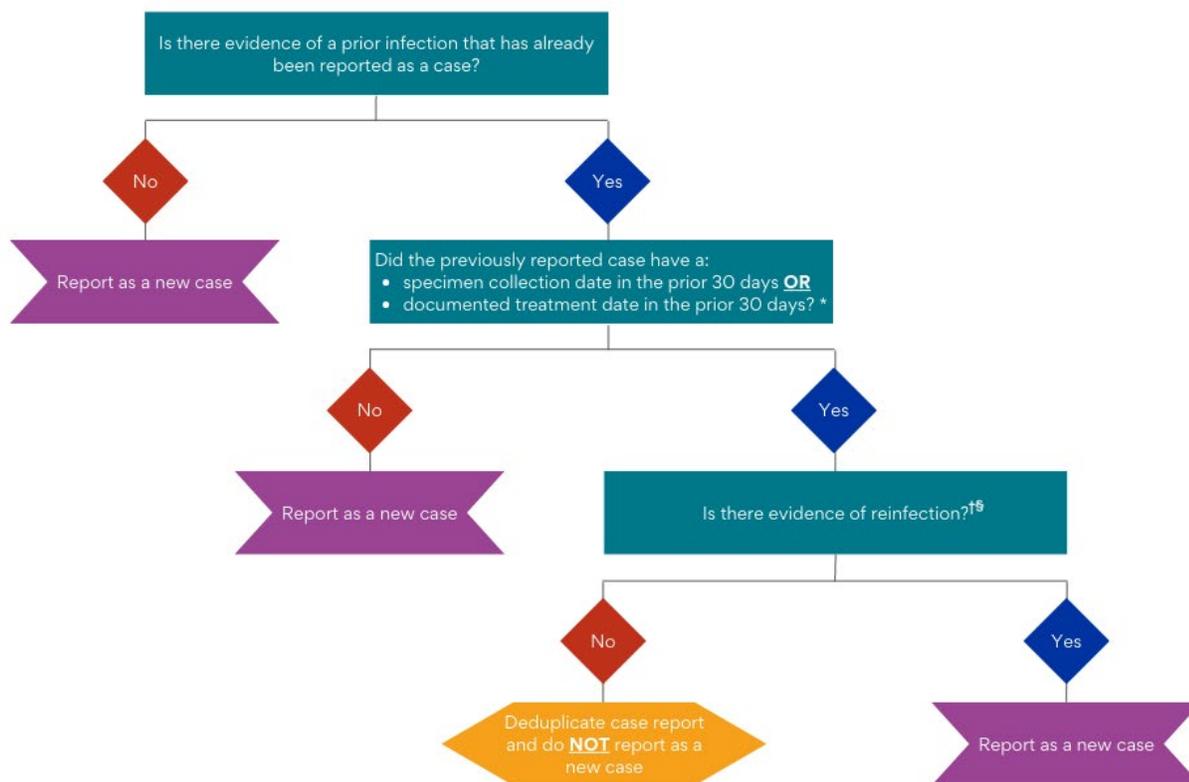
Jurisdictions should keep the following considerations in mind:

1. Deduplication standards are intended to inform reporting of chlamydia and gonorrhea cases for the purpose of disease surveillance. These standards are not intended to be used for clinical treatment purposes.
2. If a positive laboratory test result is not reported as a new case, it should be retained in the surveillance database to aid in patient follow-up and for ongoing chlamydia and gonorrhea surveillance activities.

RESOURCES

Figure 1 is a visual aid to help jurisdictions implement the algorithm for deduplicating chlamydia and gonorrhea case reports based on laboratory test results.

Figure 1. Algorithm for deduplicating chlamydia and gonorrhea case reports based on laboratory test results



* Some chlamydia infections may resolve without treatment, but data on natural history of disease are limited (7). It is possible that a small number of previously identified and untreated infections may be reported as a new case based on the treatment criteria.

† Reinfection can occur from sexual contact with a new partner, with an untreated partner, or with a treated partner prior to eradication of partner's infection (seven days post-treatment and after resolution of symptoms, if present). Evidence of reinfection requires examination into available sources (e.g., laboratory, treatment completion, and partner services data). Additional methods may occur as needed.

§ For chlamydia cases where there is confirmatory laboratory evidence indicating lymphogranuloma venereum (LGV), evidence of reinfection is indicated if there is both a positive and negative LGV test result or if there are ≥ 2 positive test results with different strains of LGV.

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