

Health Alert: Disseminated Gonococcal Infection (DGI)

Summary:

In recent months, the California Department of Public Health (CDPH) has received increasing reports of disseminated gonococcal infections (DGI), an uncommon but severe complication of untreated gonorrhea.

As of November 10, 2020, one case of disseminated gonococcal infection (DGI) has been diagnosed and reported in Contra Costa County. The reduction in clinic-based visits during the COVID-19 pandemic may be resulting in reduced screening and treatment of acute STI infections. Acute care providers are strongly encouraged to screen for and treat STIs to avoid complications such as DGI.

DGI occurs when the sexually transmitted pathogen *Neisseria gonorrhoeae* invades the bloodstream and spreads to distant sites in the body, leading to clinical findings such as septic arthritis, polyarthralgia, tenosynovitis, petechial/pustular skin lesions, bacteremia, or, on rare occasions, endocarditis or meningitis.

If there is clinical suspicion for DGI, nucleic acid amplification test (NAAT) and culture specimens from urogenital and extragenital (e.g., pharyngeal and rectal) mucosal site(s), as applicable, should be collected and processed, in addition to culture specimens from disseminated sites of infection (e.g., skin, synovial fluid, blood, or cerebrospinal fluid).

Management of DGI cases should be guided by the [CDC STD Treatment Guidelines](#). Hospitalization and consultation with an infectious disease specialist are recommended for initial therapy.

Providers should instruct patients to refer sex partners with whom they have had sexual contact in the past 60 days for evaluation, testing, and presumptive treatment for *gonorrhoeae*.

Report all laboratory-confirmed and clinically suspected cases of DGI to the Contra Costa health department within 24 hours of identification using the STD CMR: https://cchealth.org/cd/pdf/cmr_std_110a.pdf

Please inform your patients that a representative from the Public Health Department will be contacting them to conduct an interview.

All *gonorrhoeae* isolates in DGI cases should be tested for antimicrobial susceptibility, which requires culture. Please contact Melody Hung-Fan, Public Health Lab Director, for guidance and approval to send specimens to the State lab for additional testing: melody.hung-fan@cchealth.org / 925-370-5775

Background:

DGI occurs when the sexually transmitted pathogen *Neisseria gonorrhoeae* invades the bloodstream and spreads to distant sites in the body, leading to clinical manifestations such as septic arthritis, polyarthralgia, tenosynovitis, petechial/pustular skin lesions, bacteremia, or, on rare occasions, endocarditis or meningitis. DGI is uncommon and thought to occur in 0.5-3% of untreated gonorrhea cases. Cultures from disseminated sites of infection are often negative and mucosal sites of infection (e.g. urogenital, rectal, or pharyngeal) are often asymptomatic and not tested before empiric antimicrobial treatment is started despite having a higher diagnostic yield. As a result, DGI is usually a clinical diagnosis without microbiologic confirmation, which likely contributes to underdiagnosis and treatment delays.

Recommendations:

Continue to screen, test, and treat for STDs per the [CDC STD Treatment Guidelines](#). When facility-based and in-person clinical services are limited, follow guidance from the [CDC dear colleague letter](#) on STD care and prevention during disruption of clinical services due to the COVID-19 pandemic.

If there is clinical suspicion for DGI, NAAT and culture specimens from urogenital and extragenital mucosal site(s), as applicable, should be collected and processed, in addition to culture specimens from disseminated sites of infection (e.g., skin, synovial fluid, blood, or CSF). All *N. gonorrhoeae* isolates in DGI cases should be tested for antimicrobial susceptibility, which requires culture.

Obtaining a behavioral risk assessment, including a nonjudgmental sexual history, providing STD/HIV prevention counseling, and appropriately treating patients and their sex partners are all necessary to interrupt disease transmission. Management of DGI cases should be guided by the [CDC STD Treatment Guidelines](#). Hospitalization and consultation with an infectious disease specialist are recommended for initial therapy.

Clinical consultation for DGI management is available through the [STD Clinical Consultation Network](#).

CDC is interested in receiving all clinical isolates from DGI cases for additional testing. Please work with your laboratory facility to ensure all available isolates from DGI cases are not discarded and are sent to the Contra Costa Public Health Laboratory.

Resources

CDC Dear Colleague Letter - Increasing Reports of DGI:

https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/DGI_Dear_Colleague_Letter.pdf

Instructions for Shipping Disseminated Gonorrhea Infection Isolates to CDC:

https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/DGI_Isolate_Shipping_Instructions.pdf

Contra Costa County STD CMR: https://cchealth.org/cd/pdf/cmr_std_110a.pdf

CDC DGI Case Reporting form: <https://www.cdc.gov/std/program/outbreakresources/DGICaseReportingForm-508.pdf>

Recommendations for the Laboratory-Based Detection of *C. trachomatis* and *N. gonorrhoeae* – 2014 <https://www.cdc.gov/std/laboratory/2014labrec/default.htm>

2015 CDC STD Treatment Guidelines, “Gonococcal Infections”: <https://www.cdc.gov/std/tg2015/gonorrhea.htm>

The STD Treatment (Tx) Guidelines mobile app is free and available for [Apple devices](#) and [Android devices](#)

Dear Colleague Letter: STD Care and Prevention Guidance During Disruption of Clinical Services due to the COVID-19 pandemic (April 6, 2020): <https://www.cdc.gov/std/dstddp/DCL-STDTreatment-COVID19-04062020.pdf>

Guidance for obtaining a sexual history is available on the CDC Division of STD Prevention resource page: <https://www.cdc.gov/std/treatment/resources.htm>

National Network of STD Clinical Prevention Training Centers STD Clinical Consultation Network <https://www.stdccn.org/external/icon>

California Department of Public Health STD Control Branch: <http://www.std.ca.gov/>

- Gonorrhea page: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Gonorrhea.aspx>