DEPARTMENT OF HEALTH AND HUMAN SERVICES

December 5, 2019

Dear Colleagues,

In recent months, CDC has received increasing reports of disseminated gonococcal infection (DGI), an uncommon, but severe, complication of untreated gonorrhea. CDC is working with the Michigan Department of Health and Human Services on a cluster of DGI cases, where the majority of cases have reported amphetamine and some opioid injection drug use. However, because DGI is likely underdiagnosed and underreported, at a national level, we do not know the true magnitude of this problem nor do we have a good understanding of risk factors associated with cases of DGI. We're writing this letter to alert you to this troubling rise and offer additional guidance and resources so that we can get our arms around this emerging threat.

DGI occurs when the sexually transmitted pathogen *Neisseria gonorrhoeae* invades the bloodstream and spreads to distant sites in the body. Infection leads to clinical manifestations like septic arthritis, polyarthralgia, tenosynovitis, petechial/pustular skin lesions, bacteremia, or, on rare occasions, endocarditis or meningitis. 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 delays in treatment and reporting.

If there is clinical suspicion for DGI, nucleic acid amplification test (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 cerebrospinal fluid [CSF]). All *N. gonorrhoeae* isolates in DGI cases should be tested for antimicrobial susceptibility, which requires culture.

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.

What You Can Do

To better understand the magnitude of DGI in the US and if other clusters are occurring, CDC is requesting:

State/Local STD Program Staff, including DIS

- Immediately investigate any DGI case (confirmed, probable, and suspect) to ascertain demographic, epidemiologic, and clinical factors associated with the case. Conduct partner services to obtain behavioral risk factors and ensure partner treatment.
- Continue to report confirmed DGI cases to CDC as gonorrhea via routine case notification mechanisms; if there are positive laboratory results from multiple anatomic sites, prioritize the sterile site (i.e., blood, CSF, or other aspirate) as the reported specimen source when reporting the case. Regardless of clinical manifestations, isolation of *N. gonorrhoeae* from a sterile site (e.g., blood, synovial fluid, or CSF) would constitute confirmed DGI.
- Facilitate submission of any culture isolates from sterile and/or genital and extragenital sites to the state public health laboratory to forward on to CDC.
- Alert clinical microbiology laboratory directors
    - All *N. gonorrhoeae* isolates from sterile sites should be submitted to local/state public health laboratories so they can be forwarded to CDC for comprehensive antimicrobial susceptibility testing (AST) using agar dilution and whole genome sequencing (WGS).
    - *N. gonorrhoeae* isolates from sterile sites should be reported to the state health department as per state or local reporting requirements.
- Notify medical providers
    - Any laboratory confirmed or clinically suspected cases of DGI, including those empirically treated without laboratory evidence of *N. gonorrhoeae*, should be reported to the state STD health department as per state or local reporting requirements.
    - Providers should be reminded that NAAT and culture specimens of genital, and extragenital sites if exposed, should be obtained before initiating empiric antimicrobial treatment for patients with clinical findings suggestive of DGI.

State and local public health laboratories

- Send all *N. gonorrhoeae* isolates from sterile sites and genital and extragenital sites to CDC within 5 days of receipt.

Tools and Resources

CDC has developed the following tools which may be useful (attached):

- Health alert template;
- DGI case report form currently used by the Active Bacterial Core surveillance (ABCs) for the Emerging Infections Program (EIP);
- A working case definition used in previous DGI clusters; and
- Information on how to submit isolates to the CDC laboratory.

CDC is planning a webinar to provide more information on DGI investigations for STD programs in early 2020.

For more information, please contact:

- **Laura Quilter (lquilter@cdc.gov)** *and* **Brian Raphael (braphael@cdc.gov)** if you have DGI isolates to submit to the CDC laboratory. Additional information is available on the CDC Test Directory.
- **Laura Quilter (lquilter@cdc.gov)** *and* your assigned **DSTDP Prevention Specialist** to request any assistance related to DGI investigations, training or technical assistance.
- **The NNPTC consultation warm line (https://www.stdccn.org)** to refer clinical management questions.

We look forward to working with you and appreciate your help in identifying the magnitude of DGI, a serious complication of *N. gonorrhoeae* infection, in the U.S.

Sincerely,

Gail Bolan, M.D.
Director, Division of STD Prevention
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
U.S. Centers for Disease Control and Prevention