



# Indiana State Department of Health

## Indiana Health Alert Network Notification – Oct. 29, 2019

### Identification of Disseminated Gonococcal Infection (DGI) Cases in Indiana

DGI is a rare but very serious complication of untreated *Neisseria gonorrhoeae* infection, occurring in up to 3% of gonorrhea cases. DGI occurs when this normally localized sexually transmitted infection enters the bloodstream and leads to serious complications including arthritis, endocarditis, and/or meningitis. DGI can cause irreversible damage to organ systems and can be life-threatening.

The Michigan Department of Health and Human Services (MDHHS) continues to investigate a cluster of what is now ten cases of DGI in southwest Michigan over the past 3 months. Two cases have now been identified northern Indiana. The Indiana State Department of Health (ISDH) is encouraging healthcare providers, especially those practicing in urgent care and hospital emergency departments, to consider DGI in the differential diagnosis, particularly if patients are experiencing symptoms, including:

- Fever or chills
- Feeling ill or generally unwell (malaise)
- Pain or swelling of the joints
- Pain in the tendons of the wrists or heels
- Skin rash with pink or red spots that become filled with pus

With the close proximity of DGI cases near the Indiana-Michigan border, patients may have sex partners in both jurisdictions or frequently travel between the two states. Providers assessing sexual history, along with symptoms, is beneficial for public health officials to identify links among DGI cases in the future.

Guidelines from the Centers for Disease Control and Prevention (CDC) state that if DGI is suspected specimens from urogenital and extragenital sites (as applicable) should be collected for nucleic amplification testing (NAAT) and culture, in addition to specimens from disseminated sites of infection (e.g., skin, synovial fluid, blood, and the central nervous system). All *N. gonorrhoeae* culture isolates should be tested for antimicrobial susceptibility. Hospitalization and consultation with an infectious disease specialist are recommended for initial therapy, especially for persons who might not comply with treatment, have an uncertain diagnosis, or have purulent synovial effusions or other complications. CDC guidelines also suggest examination for clinical evidence of endocarditis and meningitis.

Treatment for DGI is outlined on the CDC website (<https://www.cdc.gov/std/treatment/default.htm>) and consists of intravenous therapy with ceftriaxone. Consultation with an infectious disease specialist is recommended.

Knowledge on the strains of *N. gonorrhoeae* and risk factors that cause the infection to migrate to the bloodstream is limited. Studies into genomic sequencing and strain identification, in conjunction with case investigations, are ongoing. Laboratories are encouraged to submit all invasive isolates of *N.*



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*gonorrhoeae* to CDC under the direction of CDC and the ISDH. If you have a patient with suspected DGI, please contact us immediately for specimen collection instructions and shipping information.

For questions about DGI, testing/treatment procedures, or specimen submission, please contact Justin Holderman, Resistant Gonorrhea Epidemiologist, at 317-233-7749 or [juholderman@isdh.in.gov](mailto:juholderman@isdh.in.gov).

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News sources for MI cases:

<https://www.michiganradio.org/post/rare-form-gonorrhea-turning-southwest-michigan>

and

<http://outbreaknewstoday.com/michigan-health-officials-report-5-confirmed-disseminated-gonorrhea-cases-1-possible-27602/>

Clinical references:

<https://www.cancertherapyadvisor.com/home/decision-support-in-medicine/hospital-medicine/disseminated-gonorrhea/>

<https://www.cdc.gov/std/treatment/default.htm>