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## A Fatal Case of Disseminated Gonococcal Infection — Alaska, 2025

## Background

Disseminated gonococcal infection (DGI) is a rare but severe complication of untreated gonorrhea (GC).<sup>1</sup> It occurs when the sexually transmitted pathogen *Neisseria gonorrhoeae* invades the bloodstream from infected mucosal sites and can spread to distant sites in the body. DGI classically presents with rash, tendon inflammation, and pain in multiple joints (arthritis-dermatitis syndrome), but may also primarily present as sepsis, single or multiple-joint septic arthritis, polyarthralgia, tenosynovitis, or petechial/pustular skin lesions. Endocarditis and meningitis are rare sequelae.<sup>1</sup> Patients with DGI frequently report no preceding urogenital or other localized gonococcal infection prior to presentation with disseminated infection.<sup>2</sup> Screening of asymptomatic, sexually active patients for GC with prompt treatment for those with GC and their partners, is the mainstay of DGI prevention.

DGI is a reportable condition in Alaska. A previous *Bulletin* summarized an increase in DGI cases in the Anchorage/Mat-Su region during 2023–2024 and relayed concerns about gonococcal strains circulating in southcentral Alaska that might be more likely to cause disseminated infection.<sup>3</sup> This *Bulletin* describes a fatal DGI case, summarizes 2025 DGI cases to date, and provides updated recommendations for Alaska clinicians and healthcare facilities.

## Case report

In spring 2025, a woman in her 50s presented to an Anchorage emergency department in respiratory distress and was diagnosed with septic shock and heart failure secondary to endocarditis. Testing revealed *N. gonorrhoeae* bacteremia and positive mucosal tests at multiple sites. She did not survive. There was no record of GC testing in the year prior to her illness. In the 6 months prior to her presentation, she had had two healthcare visits, both related to opioid use disorder.

During January–May 2025, eight cases of DGI were reported in Alaska, all patients were evaluated in emergency departments in Anchorage. Five (63%) cases were in women. The median age was 40 years (range: 32–59 years). Three patients (38%) had a history of a previously diagnosed sexually transmitted infection (STI). Blood or synovial fluid cultures were positive for *N. gonorrhoeae* in five (63%) cases. Genital or urine gonorrhea (GC) tests were positive in two (25%) cases, and pharyngeal or rectal GC tests were positive in three cases (including two patients whose genital or urine tests were negative). Two (25%) patients had urethritis or other typical symptoms of GC in the 6 months prior to their DGI presentation. One (13%) patient had sought testing 2 months prior to their DGI presentation and was prescribed oral cefixime after declining intramuscular ceftriaxone.

The epidemiologic investigation did not establish connections between any of the DGI cases. Risk factors identified through medical records review included methamphetamine use (four cases), opioid use disorder (two cases), alcohol use disorder (two cases), injection drug use (one case), homelessness (one case), and multiple sexual partners in the last year (one case). None of the patients reported male-male sexual contact.

## Discussion

We report here a rare fatality due to DGI in Alaska. People in the Anchorage area with a new sexual partner, more than one sexual partner, or a partner with multiple partners might be at risk of acquiring a strain of *N. gonorrhoeae* thought to carry a higher risk of causing DGI.<sup>3</sup> While no specific sexual network has been identified, this strain may be circulating more broadly among persons with gonorrhea infection in Southcentral Alaska.

The absence of documented gonorrhea risk factors in most DGI cases suggests patients may not be asked about or disclosing key sexual history. Few had symptoms before presenting with DGI, consistent with its progression from untreated mucosal infections. Asymptomatic or mildly symptomatic patients with GC are less likely to seek health care and may be at a higher risk of persistent untreated infection leading to disseminated infection. Notably, several patients had negative genital or urine tests but tested positive at pharyngeal or rectal sites—underscoring the need for site-specific GC testing based on sexual exposure. Pharyngeal gonorrhea, often asymptomatic, is increasingly linked to DGI.<sup>2</sup>

## Recommendations

1. Test sexually active patients for GC if they have at least one risk factor for GC: age under 25 years, a new partner, more than one sexual partner or a partner with multiple partners, a previous or coexisting STI, a history of incarceration, or a history of sex in exchange for money or drugs.
2. Consider opt-out approaches for GC testing.
3. Collect or have the patient collect their own pharyngeal, genital, and rectal specimens based on sites of sexual contact (if not disclosed, test each site).
4. Retest sexually active persons with a new partner, drug use, or a recent (<1 year) STI every 3–6 months.
5. Consider using rapid point-of-care testing or another rapid testing methodology to facilitate same-visit treatment.<sup>4</sup>
6. Consider empiric treatment for gonorrhea if testing will not be resulted during the visit for patients with symptoms of uncomplicated gonorrhea or who face barriers to follow-up.
7. Obtain blood cultures from patients with signs or symptoms of DGI, and culture specimens from other suspected sites of infection (e.g., pharyngeal, genital, and rectal sites; synovial fluid; and cerebrospinal fluid).
8. Perform nucleic acid amplification testing (NAAT).
9. Manage DGI cases per [CDC STI Treatment Guidelines](#) (note: hospitalization and consultation with an infectious disease specialist are recommended for initial therapy).<sup>2</sup>
10. Provide [expedited partner therapy](#) (EPT) with a single oral dose of 800 mg of cefixime for partners of patients with GC or DGI if follow up for partner testing and presumptive treatment is not certain.<sup>5</sup> Consider EPT for chlamydia if chlamydia infection has not been excluded.
11. Instruct patients with GC or DGI to refer sex partners from the past 60 days for testing and presumptive GC treatment.
12. Report all lab-confirmed and clinically suspected DGI cases to SOE within 24 hours, [preferably electronically](#).
13. Assure that all DGI case isolates receive antimicrobial susceptibility testing (AST), which requires culture. AST is available through commercial reference laboratories.
14. Call SOE at 907-269-8000 for additional testing guidance.
15. Submit gonorrhea isolates to the State Public Health Laboratory: 5455 Dr. Martin Luther King Jr Ave, Anchorage, AK 99507; telephone 907-334-2100.

## References

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3. SOE *Bulletin*. [Increase in Disseminated Gonococcal Infections — Alaska, 2023–2024](#). No. 7, Mar. 19, 2025.
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