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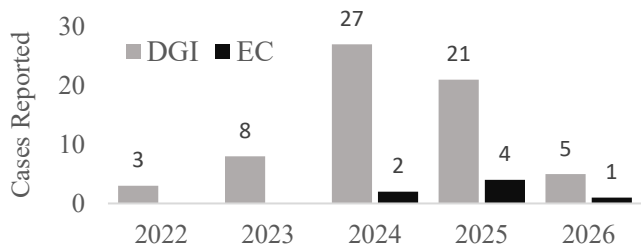
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Increase in Gonococcal Endocarditis Cases — Alaska, 2024–2026

Background

Since the advent of effective antimicrobial therapy, gonococcal endocarditis has become rare.¹ It occurs as a complication of disseminated gonococcal infection (DGI), an uncommon but serious consequence of untreated gonorrhea in which *Neisseria gonorrhoeae* spreads from its usual mucosal sites into the bloodstream and distant tissues. DGI occurs in about 0.5–3% of gonorrhea cases; gonococcal endocarditis occurs in about 1–2% of DGI cases and carries an estimated fatality rate of 19–23%.^{1,2} DGI case counts in Alaska have been increasing in recent years (Figure).³ From December 2024 through March 2026, seven cases of gonococcal endocarditis were reported among 30 DGI cases, all in Anchorage. Notably, the Section of Epidemiology (SOE) has no record of reported gonococcal endocarditis cases prior to 2024, though underreporting of a rare complication cannot be excluded.

Figure. Reported Cases of Disseminated Gonococcal Infection (DGI) and DGI Endocarditis (EC) — Alaska, January 2022–March 2026



Methods

We abstracted selected demographic, clinical, and social risk factor data from medical records for all DGI cases reported to SOE to characterize the epidemiology of DGI endocarditis and identify potential risk factors for illness.

Clinical Summary of Cases

Among the seven patients diagnosed with gonococcal endocarditis during 2024–2026, the median age was 34 years (range: 29–59 years). Selected demographic and socio-behavioral factors differed between DGI cases with and without endocarditis (Table). Six patients (86%) met the case definition for verified DGI based on isolation of *N. gonorrhoeae* from a disseminated site.⁴ One patient met the criteria for likely DGI, defined as clinical features consistent with DGI, no alternative diagnosis, and a positive test result for *N. gonorrhoeae* at a mucosal site without isolation of *N. gonorrhoeae* from a disseminated site. In this patient, two blood cultures and a peritoneal abscess fluid culture were negative.⁴

Endocarditis involved the mitral valve in three patients (43%), the aortic valve in three (43%), the tricuspid valve in one (14%), and right-sided cardiac structures in one (14%); percentages exceed 100% because one patient had both mitral and aortic involvement. In one mitral valve case, vegetation extended into the aortic wall without aortic valve involvement. All patients developed sepsis, commonly complicated by septic shock (71%) and respiratory failure (57%). Fever was present in 6 patients (86%); sore throat was reported by two (29%), mucosal symptoms by three (43%), and a prior gonorrhea infection by three (43%). Four patients (57%) had hepatitis C infection; none had HIV infection.

One patient died after 8 days of hospitalization (case fatality rate: 14%). Among the six survivors, the median length of hospital stay was 28 days (range: 16–47). Four patients (67%) required invasive cardiac intervention: three underwent valve replacement (one of whom also required annular abscess debridement and placement of a pericardial patch), and one underwent transcatheter mechanical extraction (AngioVac procedure) of tricuspid valve vegetation. All patients received intravenous (IV) ceftriaxone, although dosing regimens varied. Two patients did not require invasive intervention and were treated with antimicrobial therapy alone.

Table. Selected Characteristics of DGI Cases, by Endocarditis (EC) Status — Alaska, December 2024–March 2026

Factor	EC (n=7)	EC %	No EC (n=23)	No EC %	Total (N=30)	Total %
Sex: Female	5	71	11	48	16	53
Sex: Male	2	29	12	52	14	47
Homeless: Yes	4	57	7	30	11	37
Homeless: No	2	29	14	61	16	53
Homeless: Unknown	1	14	2	9	3	10
Meth: Yes	7	100	9	39	16	53
Meth: No	0	0	9	39	9	30
Meth: Unknown	0	0	5	22	5	17
Fentanyl: Yes	6	86	1	4	7	23
Fentanyl: No	1	14	17	74	18	60
Fentanyl: Unknown	0	0	5	22	5	17
IDU: Yes	5	71	2	9	7	23
IDU: No	2	29	17	74	19	63
IDU: Unknown	0	0	4	17	4	13

Meth = Methamphetamine; IDU = Injection Drug Use

Discussion

Since December 2024, seven cases of gonococcal endocarditis were reported to SOE. Compared with DGI cases overall, endocarditis cases more frequently reported substance use and homelessness within 12 months preceding their diagnosis, highlighting the role of behavioral and social factors in the development of this serious disease. The high frequency of sepsis, septic shock, and respiratory failure, along with prolonged hospitalization and frequent need for invasive cardiac procedures, underscores the considerable morbidity associated with this complication. Early recognition and prompt initiation of IV ceftriaxone,⁵ with timely surgical intervention when indicated, are essential to improving outcomes.

Recommendations

1. Assess for DGI and gonococcal endocarditis in patients with systemic illness (e.g., fever, sepsis, bacteremia) or new cardiac findings (e.g., murmur, heart failure, emboli), regardless of urogenital symptoms, particularly among women and individuals with risk factors such as housing instability, fentanyl and methamphetamine use, and injection drug use.
2. In patients with suspected or confirmed DGI, assess for evidence of endocarditis through focused cardiac examination; pursue echocardiography if endocarditis is suspected.
3. Obtain nucleic acid amplification testing (NAAT) or cultures from urogenital, pharyngeal, and rectal sites, as well as from disseminated sites when present (e.g., blood, synovial fluid, skin lesions, cerebrospinal fluid), recognizing that microbiologic testing can be negative in some DGI cases.^{2,5}
4. Hospitalize patients with suspected DGI or gonococcal endocarditis and obtain an infectious disease consultation.⁵
5. Initiate empiric IV ceftriaxone 1–2 g every 12–24 hours for >4 weeks when gonococcal endocarditis is strongly suspected; add doxycycline 100 mg orally twice daily for 7 days if chlamydia has not been excluded, per [CDC guidelines](#).⁵
6. Refer or instruct patients to notify sexual partners from the preceding 60 days for evaluation, testing, and treatment.
7. Submit all DGI *N. gonorrhoeae* isolates to the State Public Health Laboratory: 5455 Dr. Martin Luther King Jr Ave, Anchorage, AK 99507 (phone: 907-334-2100).
8. Report suspected or confirmed DGI cases to SOE (907-269-8000) within 2 working days. [The report form can be found here.](#)

References

1. Jackman JD Jr, Glamann DB. Gonococcal endocarditis: twenty-five year experience. *Am J Med Sci* 1991;301(3):221–30.
2. Ramos A, et al. Gonococcal endocarditis: a case report and review of the literature. *Infection* 2014;42(2):425–28.
3. SOE Bulletin. Increase in Disseminated Gonococcal Infections – Alaska, 2023–2024. No. 7, Mar. 19, 2025.
4. CDC. Gonorrhea (*N. gonorrhoeae* infection) 2023 case definition. 2023.
5. CDC. Sexually Transmitted Infections Treatment Guidelines, 2021. *MMWR Recomm Report* 2021;RR-70(4).