State of Alaska Epidemiology **Bulletin**

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HIV Outbreak in a Rural Alaska Community, 2016

Background

During 2011–2015, an average of 28 newly diagnosed cases of human immunodeficiency virus (HIV) were reported to the Section of Epidemiology (SOE) annually. The majority (54%) of these cases occurred in men who have sex with men (MSM), most of whom live in urban areas of Alaska.[1] While clusters of HIV cases in rural Alaska are infrequent, they do occasionally occur. We describe here a recent HIV outbreak among MSM in a small Alaska community.

Introduction/Methods

In February 2016, SOE received a report of a new case of acquired immune deficiency syndrome (AIDS) in Community A (population <1000 people). In October and November 2016, two additional cases of AIDS in Community A were reported. Upon diagnosis, these three cases were investigated and two additional positive cases were identified.

All five newly diagnosed cases were interviewed to identify potential sexual and needle sharing contacts; no needle sharing contacts were identified. Sexual contacts were located and tested for HIV. Sexual contacts and clinicians were asked to name other persons in the community who they thought might be at increased risk for HIV infection (e.g., males with male sexual partners or those with a history of injection drug use), and thus would benefit from testing.

All persons who tested positive were immediately linked to HIV medical care and offered antiretroviral therapy. All persons who tested negative were counseled to use condoms and get tested at least annually. Those who were determined to be at ongoing risk for exposure to HIV were counseled about the availability of pre-exposure prophylaxis (PrEP), a once-daily oral medication used to prevent HIV acquisition.[2]

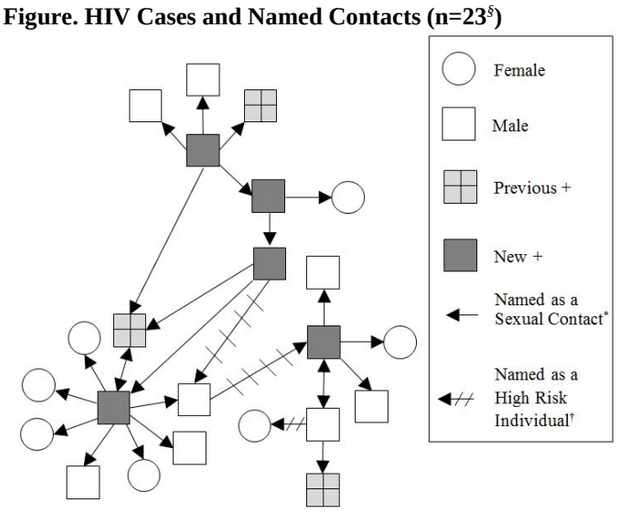
Results

Five new cases of HIV infection were identified in Community A between February 1, 2016 and December 1, 2016. All five cases were in adult MSM (median age: 34 years; range: 20s – 50s. Two (40%) had never been tested, and three (60%) had a documented negative HIV test that was >5 years prior to their current HIV diagnosis. Two (40%) were also positive for previously undiagnosed gonorrhea or chlamydia infections in oropharyngeal or urethral sites.

Of the 28 persons who were identified for testing during the investigation, 20 (71%) were named as being sexual contacts to an HIV-infected person and 8 (29%) were named as people who might benefit from HIV testing (see Methods). Of the 28 persons identified for testing, 14 (50%) had either never been tested for HIV or had been tested >10 years ago. Of the 20 sexual contacts named, 15 (75%) were male, three (15%) had been previously diagnosed with HIV, and one (5%) tested newly positive for HIV (Figure). Of the eight persons named as being at increased risk for HIV infection, six (75%) were male and one (13%) was positive for HIV (Figure). The risky behaviors most frequently reported by all persons interviewed were unprotected sexual activity with multiple partners and drug and alcohol use that contributed to unprotected sexual activity. Needle sharing was not reported as a risk factor.

All five of the newly-diagnosed HIV patients tested positive on a rapid HIV 1/2 antibody test *and* a confirmatory HIV type 1/2 differentiation assay or an HIV-1 RNA PCR test, and all five patients had the same three minor mutations on HIV genotypic drug resistance testing. Three (60%) had an AIDS-defining CD4 blood cell count of ≤200 mm^3 (mean: 75; range <20–187 mm^3) at the time of their HIV diagnosis; all three of these patients had clinical signs and symptoms of AIDS (e.g., weight loss, fatigue, and opportunistic infections).

Figure. HIV Cases and Named Contacts (n=23[§])



**A sexual contact is someone who was named as a sexual partner during the investigation period.*
†A person who was named by someone during the investigation as being at high-risk for HIV infection and would benefit from testing.
§Five high risk persons identified for testing that were not linked to a known case or named as a contact are not represented.

Discussion

We describe here an outbreak of five newly-diagnosed cases of HIV infection among MSM in a small Alaska community. Drug resistance testing results suggested that the infections may be genetically linked. Three of the newly-diagnosed patients had signs and symptoms of AIDS and an AIDS-defining CD4 blood cell count. Two of the newly-diagnosed patients were identified through the contact investigation; both were asymptomatic at the time of their HIV diagnosis.

This outbreak underscores the importance of vigilant adherence to routine HIV screening practices in all Alaska communities, as early diagnosis and treatment improves health outcomes for HIV-infected persons and helps prevent transmission to others.[3] Barriers to screening and testing in rural Alaska may include lack of routine screening policies, limited access to health care, patient concerns about stigma and confidentiality, and limited access to HIV education.[4]

Recommendations

1. Screen all patients aged 13–64 years in *all* Alaska communities for HIV at least once.[3]
2. Screen patients with risk factors for HIV and STDs *at least annually*, and counsel these patients to use condoms regularly.[3]
3. Recommend PrEP for patients who are HIV-negative and at substantial risk for HIV infection.[2]
4. Link newly-identified HIV patients to clinical care.[3]
5. Provide ongoing risk-reduction counseling and STD screening to persons diagnosed with HIV.
6. Report confirmed and suspected cases of HIV and AIDS to SOE within 5 working days via fax (907) 561-4239 or telephone (907) 269-8000.

References

1. Alaska Section of Epidemiology HIV/STD Program. "HIV in Alaska An Epidemiologic Profile 1982-2015." September 2016. Available at: http://dhss.alaska.gov/dph/Epi/hivstd/Documents/HIVProfile1982-2015.pdf
2. Alaska Epidemiology *Bulletin*. "New Pre-exposure Prophylaxis Recommendations for the Prevention of HIV Infection." No. 12, June 24, 2014. Available at: http://www.epi.alaska.gov/bulletins/docs/b2014_12.pdf
3. CDC. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR* 2006;55(RR14);1-17. Available at: https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm
4. AETC-NMC Promoting HIV Testing in Diverse Populations. Available at: https://www.aetcnmc.org/curricula/promoting/mod4_6.html

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