Background
More than 1.2 million persons in the United States are estimated to be living with human immunodeficiency virus (HIV) infection, and approximately one in eight of them are not aware of their positive status. According to the Centers for Disease Control and Prevention (CDC), the number of new HIV diagnoses in the United States declined by 19% from 2005 to 2014, though notable increases were observed among African American and Latino men who have sex with men (MSM).1 The annual number of new HIV cases diagnosed each year in Alaska varies, but the state is considered by CDC to have low HIV incidence. Persons at greatest risk for acquiring HIV in Alaska are gay, bisexual, and other MSM, particularly young MSM of color, and high-risk heterosexuals. We describe here a summary of HIV cases reported during 1982–2016, a summary of the epidemiology of HIV in 2016, and a discussion of strategies that can be implemented to prevent HIV transmission. A comprehensive HIV Surveillance Report for 1982–2016 in Alaska is available online at: http://dhss.alaska.gov/dph/Epi/hivdata.aspx.

Methods
HIV and acquired immune deficiency syndrome (AIDS) are reportable conditions in Alaska. The Section of Epidemiology (SOE) receives reports from health care providers and laboratories for newly diagnosed cases of HIV and for persons living in Alaska who were previously diagnosed out-of-state. All persons newly diagnosed with HIV infection are offered an interview to determine risk factors and identify sexual and needle-sharing partners that need to be tested. Case and interview data are recorded in two secure SOE databases.

Summary of HIV Cases
From January 1, 1982 through December 31, 2016, 1,757 cases of HIV were reported to SOE. Of these reported cases:
- 1,153 (66%) ever had a diagnosis of AIDS;
- 1,197 (68%) were initially diagnosed in Alaska; and
- 1,134 (65%) are not known to have died, 692 (61%) of whom are currently living in Alaska.

During 2016, 76 cases of HIV infection were reported to SOE, 38 (50%) of which were newly diagnosed in Alaska, yielding a state incidence of 5 cases per 100,000 persons. The remaining 38 (50%) reported cases were in persons with a previous out-of-state diagnosis. Of the 38 newly diagnosed HIV patients in Alaska, the median age at diagnosis was 28 years (range: 22–69), 30 (79%) were male, 28 (74%) were non-whites, 25 (66%) were MSM, and none are known to have died. Of the 36 newly diagnosed cases, 36 (95%) were linked to medical care within 90 days of their HIV diagnosis, and 31 (82%) achieved viral suppression (Figure).

Figure. Linkage to Care (L2C) Outcomes for Newly Diagnosed HIV Cases (n=38) — Alaska, 2016

Testing
Of the 38 persons who were newly-diagnosed with HIV in 2016, their reasons for being tested include the following: 8 (21%) had symptoms of HIV or AIDS, 7 (18%) received routine screening for HIV, 7 (18%) were tested because they had an HIV-infected partner, 6 (16%) were tested as part of an STD visit, 5 (13%) were named during an HIV/STD partner services investigation, and 5 (13%) were by patient request without another specified reason. Of the 7 persons who were tested for HIV because they had an HIV-infected sexual partner, 3 were diagnosed on an HIV test conducted during an evaluation for initiation of pre-exposure prophylaxis (PrEP), a once-daily medication that can prevent HIV infection in HIV-negative individuals.2 Nine (24%) of the persons who were newly diagnosed with HIV in 2016 had tested negative within the 12 months prior to testing positive.

Risk Factors
While HIV is primarily transmitted through unprotected sex and sharing of drug injection equipment, other factors contribute to high-risk behaviors and may facilitate transmission and acquisition of HIV. The following risk factors were identified among the 38 persons who were newly diagnosed with HIV in 2016: drug and alcohol abuse (18, 47%), a history of incarceration (19, 50%), and co-infection with a bacterial sexually transmitted disease (8, 21%). Among the 27 newly-diagnosed MSM in 2016, the most commonly reported venues to meet sexual partners were online and through mobile applications (15; 56%). Sex associated with travel, both to urban cities in Alaska and out-of-state, was also reported by some of the newly diagnosed MSM (5; 19%).

Prevention for Persons at Increased Risk for HIV
Advances in biomedical interventions for persons at highest risk for HIV acquisition such as PrEP create new and important opportunities for prevention. Partners of persons living with HIV and patients who request HIV testing due to risk factors should be referred for PrEP.3 When presenting for testing, these patients should also be counseled about other effective strategies for preventing HIV transmission, including using condoms routinely and ensuring that their HIV-infected partner is virally suppressed on antiretroviral medication.

Recommendations
1. Routinely screen all patients aged 13–64 years for HIV at least once. Screen patients with HIV risk factors at least annually and those at highest risk every 3–6 months, and screen all pregnant women as part of the routine panel of prenatal screening tests.
2. Offer frequent HIV testing and, if appropriate, PrEP to partners of persons living with HIV and those with known risk factors.
3. Include HIV testing as part of routine STD screening.
4. Link HIV-infected patients to medical care. SOE Linkage to Care staff are available to assist with linkage and retention support as needed at (907) 269-8000.
5. 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; reports should include HIV-positivity in persons with a previous diagnosis out-of-state and pregnancy status in HIV-positive women.

References
1. CDC. HIV in the United States At A Glance. Available at: https://www.cdc.gov/hiv/stats/statglance.html
3. Emory University PrEP Locator. Available at: https://preplocator.org/

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