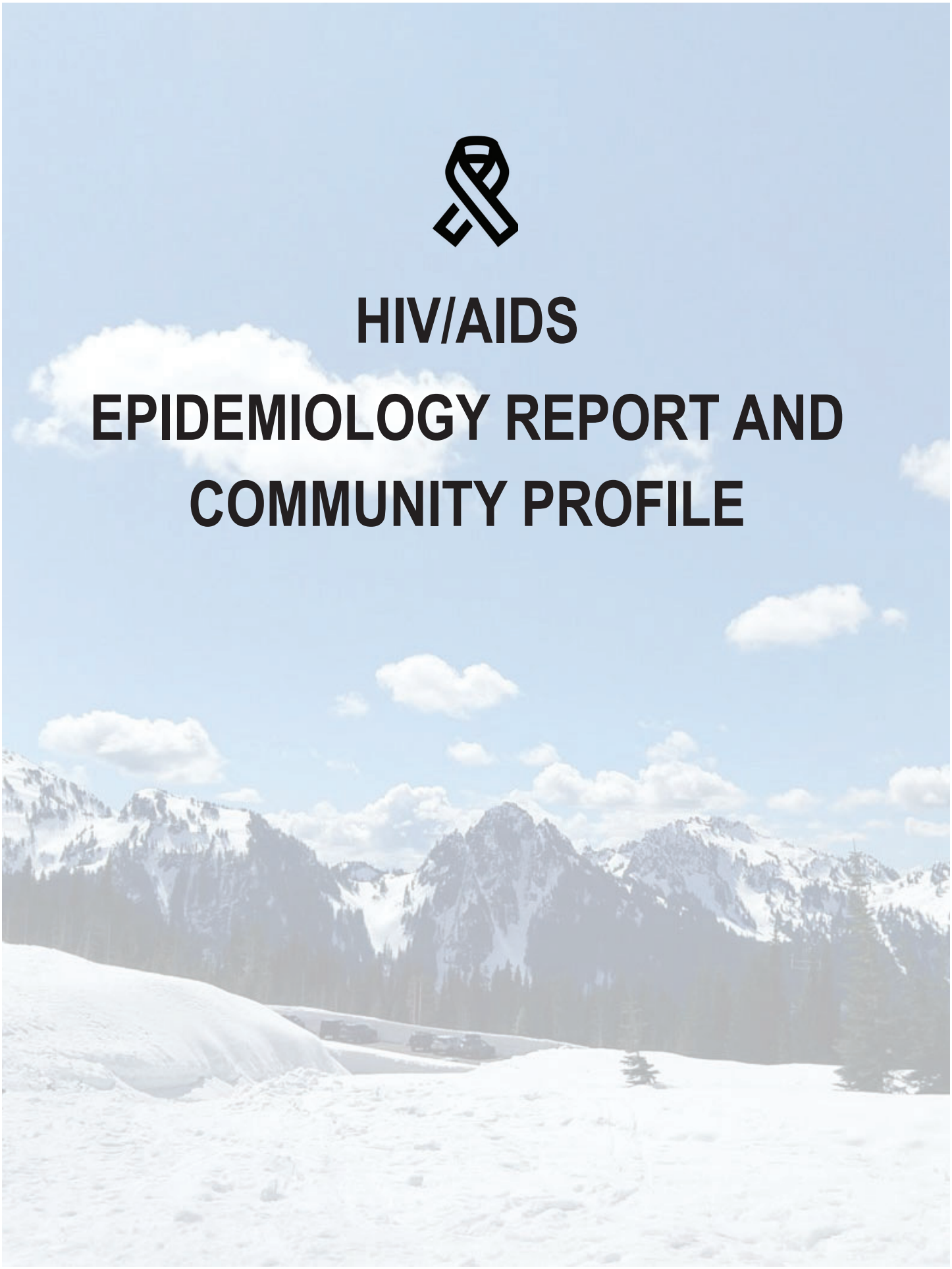
# HIV/AIDS EPIDEMIOLOGY REPORT AND COMMUNITY PROFILE

2019

WASHINGTON STATE & KING COUNTY



# HIV/AIDS

# EPIDEMIOLOGY REPORT AND COMMUNITY PROFILE

# Acknowledgements

This 88th edition of the HIV/AIDS Epidemiology Report & Community Profile includes data available through July 2019. Public Health – Seattle & King County and the Infectious Disease Assessment Unit, Washington State Department of Health jointly produce this report. It is funded partly by a Centers for Disease Control and Prevention cooperative agreement for HIV/AIDS surveillance. We thank the medical providers caring for people with HIV/AIDS and the clinics and patients participating in epidemiologic projects. Their cooperation with public health department HIV/AIDS control efforts permits the collection of data included in this report – data which are used for further prevention and planning efforts. We also wish to acknowledge the outstanding assistance of our staff. Special thanks are due to Kaitlin Zinsli, UW MPH Practicum Student, for putting together this issue.

# Co-Editors

HIV/AIDS Epidemiology Program
Public Health Seattle & King County
401 5th Avenue, Suite 1250
Seattle, WA 98104

**Susan Buskin,** PhD, MPH, Senior Epidemiologist, and Affiliate Assistant Professor, University of Washington

**Sara Glick**, PhD, MPH, Research Assistant Professor, University of Washington

Public Health
Seattle & King County

Infectious Disease Assessment Unit
Washington State Department of Health PO Box 47838
Olympia, WA 98504-7838

**Jennifer Reuer,** MPH, Acting Section Manager/Senior Epidemiologist

Washington State Department of Health

# Directors

**Matthew Golden, MD, MPH**

**Elizabeth Crutsinger-Perry, MSSW, MA**

# Contributors

### WA State Department of Health
Jennifer Reuer, MPH
Kelly Naismith, MPH
Lori Delaney
Steven Erly, PhDc
Tom Jaenicke, MPH, MBA, MES

### Public Health – Seattle & King County
Allison Moore
Amy Bennett, MPH
Anna Berzkalns, MPH
Courtney Moreno
Jesse Chipps
Joe Tinsley
Jsani Henry, MPH, MSW
Julia Hood, PhD, MPH
Marcee Kerr
Richard Lechtenberg, MPH
Susan Buskin, PhD, MPH
Winnie Alston, MSW, MPA

### University of Washington (UW)
Ann Collier, MD
Andrea Martin
Christine Khosropour, PhD, MPH
Darcy Rao, MPH, PhD
Janine Maenza, MD
Julie Dombrowski, MD, MPH
Kaitlin Zinsli
Matthew Golden, MD, MPH
Meena Ramchandani, MD, MPH
Michael Louella
Roxanne Kerani, PhD, MPH
Sara Glick, PhD, MPH
Shireesha Dhanireddy, MD
Tigran Avoundjian, PhD, MPH

### Other Primary Affiliations
Bill Hall
David Aboulafia, MD
Peter Shalit, MD, PhD

# Photo Credit

Steven Erly

## HIV/AIDS Reporting Requirements

Detailed requirements for reporting of communicable diseases including HIV/AIDS are described in the Washington Administrative Code (WAC), section 246-101 (http://apps.leg.wa.gov/WAC/default.aspx?cite=246-101).

**Washington health care providers** are required to report all HIV infections, regardless of the date of the patient's initial diagnosis, to the health department. Providers are also required to report new diagnoses of AIDS in a person previously diagnosed with HIV infection. Local health department officials forward case reports to the Department of Health. Names are never sent to the federal government.

**Laboratories** are required to report evidence of HIV infection (i.e., positive HIV screening tests, p24 antigen detection, viral culture, and nucleic acid detection), all HIV viral load tests (detectable or not), and all CD4 counts in the setting of HIV infection. If the laboratory cannot distinguish tests, such as CD4 counts, due to HIV versus other diseases (such as cancer), the CD4 counts should be reported and the health department will investigate. However, laboratory reporting does not relieve health care providers of their duty to report, as some critical information necessary for surveillance and follow-up is not available to laboratories.

For further information about HIV/AIDS reporting requirements, please call your local health department or the Washington State Department of Health at 888-367-5555. In King County, call 206-263-2000.

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## Technical Note

**Past Data Estimates May Change:** HIV surveillance data are dynamic with databases often being updated with new data, including data on characteristics of people living with HIV, laboratory results, and causes of death. Health departments may also change their definitions for defining outcomes, including new HIV diagnoses (see definitions). These changes can affect current calculations of estimates from prior years. Thus, differences between annual Epidemiology Reports for estimates for a given year are expected.

# Definitions

**ACUTE HIV INFECTION:** A flu-like illness people may experience within 2 to 4 weeks after infection with HIV. Persons with acute infection usually have a high viral load and are very contagious.

**AIDS:** The late stage of HIV infection that is characterized by a severely damaged immune system due to the virus. A person is considered to have AIDS if their CD4+ T-cell count falls below 200 cells per cubic millimeter of blood (or the percent of T lymphocytes that are CD4+ is less than 14%), or if they develop one or more opportunistic illness (OI).

**CD4 COUNT:** A measure of the number of CD4+ T cells in the blood, normal range is between 500-1,500 CD4+ T-cells per $mm^3$ of blood. HIV virus infects and kills CD4+ T cells, decreasing the strength of the immune system at fighting various infections and eventually leading the individual to develop AIDS (CD4 < 200 cells/$mm^3$ or an OI). Through effective HIV treatment, CD4 count can rise to more normal levels.

**EPIDEMIOLOGY:** The branch of medicine which deals with the incidence, determinants, distribution, and possible control of diseases and other factors relating to health.

**GENDER:** The range of identities possible outside of the socially established categories of male and female.

**HIV VIRAL LOAD:** The amount of HIV viral RNA is in the bloodstream. Higher amounts of HIV viral load have been linked to faster HIV progression and poorer outcomes. Through taking antiretroviral therapy (ART) medication, individuals can reach viral suppression, which is the presence of less than 200 copies of HIV per milliliter of blood. People with suppressed viral loads cannot transmit HIV sexually.

**HIV:** Human immunodeficiency virus (HIV) is the virus that causes AIDS. HIV puts people at higher risk for some types of infection and other medical problems by targeting the cells that help the body fight infection. Contact with specific bodily fluids - most commonly through condomless sex or sharing of injection drug equipment - allows the virus to spread between individuals.

**HOMELESSNESS:** Lacking a stable and safe place to live. This includes those who are both unsheltered and sheltered, as well as those living in temporary settings due to lack of adequate economic resources.

**INCIDENCE OR INCIDENT DIAGNOSES:** Theoretically refers to newly acquired HIV in a time period, but the exact time of acquisition of HIV is often unknown, so incident diagnoses are a proxy. In **WA State** incident diagnoses exclude individuals reporting a positive HIV test six or more months before their first documented HIV (this is a new method with lower incidence relative to earlier reports). Incident diagnoses in **King County** exclude individuals first diagnosed with HIV outside WA State yet lacking documentation of that earlier diagnosis. Additionally, new HIV diagnoses in King County exclude people reporting an initial HIV diagnosis one year or more before an initial documented diagnosis.

**MSM:** An epidemiologic term defined as a man who has had at least one male sexual partner. Depending on the source and use of data, this may be defined as in the past 1 year, 5 years, since 1977, or during a man's lifetime. While this primarily includes MSM who identify as gay or bisexual, it also encompasses non-gay identified MSM.

**PWH (People living with HIV) or PLWdH (d=Diagnosed) or PREVALENT PWH**: These are HIV-infected persons presumed living in a jurisdiction at a certain point or period of time. They exclude individuals lost to follow up (no reported laboratory test results for 10 or more years). To increase the precision of the **King County care continuum** we further excluded individuals who had no HIV-related laboratory results reported for 18 months or more and for whom we had some evidence of a relocation, but the relocation was not confirmed by the other jurisdiction.

**POPULATION SIZES OF MEN WHO HAVE SEX WITH MEN (MSM) IN KING COUNTY:** The Behavioral Risk Factor Surveillance Survey (BRFSS) contains an annual percent of adult men who report being gay or bisexual. This serves as a proxy for MSM status. Based on BRFSS data from 2013 we estimated 5.7% of males age 15+ years old were MSM. Starting in 2014, we took the mean of the prior 2 years, estimating the proportion of males 15+ years of age who are MSM increased to 6.7% in 2018.

**PWID:** Defined as an individual who has used a syringe to inject drugs that were not prescribed to them, or drugs that were prescribed but are used in a different way than as prescribed (e.g. to get high). This is primarily based on current injection drug use (IDU) but can also be based on recent or lifetime IDU.

**SEX:** The various biological traits - such as hormone levels, anatomic structures, and genetic factors (e.g.,chromosomes) - characteristic of sex-determined males and females. Usually refers to sex assigned at birth.

**SURVEILLANCE:** The continuous collection, analysis, and distribution of data regarding a health-related event.

**TRANSGENDER MAN:** Person who identifies as a man but was assigned female sex at birth.

**TRANSGENDER WOMAN** Person who identifies as a woman but was assigned male sex at birth.

# Contents

# Executive Summary

The HIV/AIDS Epidemiology Report & Community Profile is a longstanding joint effort between Public Health – Seattle & King County (PHSKC) and the Washington State Department of Health (WA DOH). Our goal each year is to provide a comprehensive summary and evaluation of efforts related to HIV/AIDS in our respective jurisdictions. The report includes HIV surveillance data, snapshots of key populations affected by HIV, and critical evaluations of each component of our program. We aim to answer these questions: What is the scope of the HIV epidemic in King County and Washington State? Who does the epidemic affect? and What are we doing to prevent HIV and ensure the successful treatment of people living with HIV? In 2019, the U.S. Department of Health and Human Services released its Ending the HIV Epidemic (EtHE) plan, which includes jurisdictions most impacted by HIV, including King County. This report is the first component of our EtHE profile to understand HIV in King County. We anticipate a subsequent supplement to this report in early 2020 that expands on topics most relevant to the EtHE goals.

Over the past decade, Washington State and King County have met numerous goals related to HIV prevention, treatment, and care. King County was the first urban jurisdiction in the U.S. to meet the World Health Organization's 90-90-90 goals, including ensuring that 90% of all persons with HIV (PWH) know of their infection, 90% of diagnosed persons receive medical care, and that 90% of those in care are virally suppressed. However, some of our progress is now at risk due to increasing new HIV diagnoses attributable to injection drug use.

New Diagnoses, 2018: Washington State reported 402 new HIV diagnosis, with 218 (54%) of them occurring among King County residents.

Increase in Cases: In 2018, King County experienced its largest one-year increase in the number of new HIV diagnoses since 2002 (218 cases in 2018 vs. 162 in 2017). This increase was driven by a 400% increase in the number of new HIV diagnoses among persons who inject drugs (PWID), while the number of new diagnoses in persons with other risks, including men who have sex with men (MSM) who do not inject drugs, remained stable. WA also experienced a one-year increase in new HIV cases (402 vs. 371) that was attributable to an increase among PWID.

Prevalent Cases: An estimated 13,417 people are living with diagnosed HIV in WA, and 7,023 (52%) are living in King County.

Mortality: Mortality rates among PWH have been stable at 1 per 100 PWH over the past five years.

*Progress toward Meeting National Goals*

Washington State and King County use the National HIV/AIDS Strategy (NHAS) and the recently announced EtHE initiative as frameworks for monitoring progress related to HIV testing, care, and prevention. The three key NHAS

goals are to:

Reduce New HIV Infections: In 2014, King County aimed to reduce the rate of new HIV infections by 25% by 2020, which mirrors the NHAS goal. We met this goal in 2017. However, the increase in HIV diagnoses among PWID resulted in the county falling short of the 25% reduction goal in 2018. As part of End AIDS Washington, the WA DOH established a goal of reducing new infections by 50% by 2020. As of 2018, the rate of new HIV diagnoses in the state is unchanged from 2014.

Improve Health Care Access and HIV-Related Health Outcomes: NHAS aims for 90% of all people living with HIV to be engaged in care and 80% virally suppressed. Washington State has either met or is on pace to meet both goals; in 2018, 88% of PWH were receiving HIV medical care and 81% were virally suppressed. King County has higher local goals for both indicators (95% and 90%, respectively). In both cases, King County has met the national goal and is on pace to reach the local goal with 90% of diagnosed persons with HIV receiving care and 84% virally suppressed.

Reduce HIV-Related Disparities: Both Washington State and King County have made mixed progress toward reducing disparities in HIV outcomes across groups defined by race/ethnicity. On the one hand, rates of new HIV diagnoses in Washington State in 2018 were higher among U.S.-born Black persons than other racial groups; in King County rates were higher for both U.S.-born Black and U.S.-born Latinx persons. Among King County MSM, the rates of new HIV diagnoses among different racial/ethnic groups in 2018 were: 548 per 100,000 among Black MSM, 542 per 100,000 among Latinx MSM, and 199 among White MSM. On the other hand, both jurisdictions have observed a smaller differences in viral suppression between groups over the past several years.

*Changing Dynamics in HIV Risk and Prevention*

The 2018 increase in HIV diagnoses in King County was driven by a substantial increase in the number of HIV diagnoses among PWID. Increasing HIV diagnosis rates among PWID occur in the context of the nationwide opioid crisis, increasing rates of methamphetamine use, and high levels of homelessness in King County.

Increase in PWID Cases: Between 2017 and 2018, the percentage of all HIV diagnoses in King County that occurred in PWID increased from 10% to nearly 25%. This increase in new diagnoses among PWID occurred among both MSM-PWID (10 to 21 cases) and non-MSM PWID (7 to 31 cases).

HIV and Homelessness: The increase in HIV among PWID is concentrated among persons who are living homeless, many of whom are women who exchange sex. The occurrence of HIV in this population represents a shift in King County's HIV epidemic. HIV among PWID in King County has traditionally been concentrated in MSM who inject methamphetamine, 40-45% of whom are HIV positive, while 1-4% of non-MSM PWID are HIV positive.

In response to these changing dynamics in HIV risk and treatment outcomes, especially among PWID, PHSKC has expanded several intervention efforts. The syringe services program (SSP) distributed more syringes (8 million) than any previous year in its 30 year history. PHSKC also increased its HIV testing services to including outreach in North Seattle (941 tests as of June 2019) and the downtown jail (415 tests) and an expansion of syringe services in North Seattle (>40,000 syringes, 271 naloxone kits). PHSKC continues to focus on linking newly diagnosed and out of care persons to HIV care and treatment, including at the MAX Clinic, which provides intensive support and walk-in care to PWH who have been poorly engaged in traditional HIV care, many of who have substance use disorders.

## Snapshots of Key Populations and HIV Prevention Activities

Men who have Sex with Men (MSM): Although the diagnosis rate in King County among MSM has declined by more than 50% over the last decade, MSM, including MSM who inject drugs, continue to comprise the majority of new HIV infections in both Washington state (57%) and King County (70%). In King County, approximately 9% of all MSM are HIV-positive, but prevalence varies dramatically by race/ethnicity. About 15% of Black MSM, 14% of Latinx MSM, and 12% of American Indian/Alaska Native MSM have diagnosed HIV infection, compared to 9% of White MSM.

People of Color: HIV disproportionately affects Black and Latinx populations. Foreign-born Black persons have the highest rate of new HIV diagnosis, although prior work suggests that a majority of people newly diagnosed with HIV in this population acquired HIV prior to arrival in the U.S. The rate of new HIV diagnosis is higher among U.S.-born Black persons than other racial groups, as is the rate among Latinx persons in both Washington state and King County.

Differences in viral suppression rates between racial/ethnic groups have narrowed in the past few years. PrEP use is lowest among Black and Native American MSM.

Foreign-born Populations: The disproportionate impact of HIV on Black persons is partly due to a higher prevalence of HIV among foreign-born Black residents. In 2018, 52% of Black persons diagnosed with HIV in Washington State, and 55% of Black persons diagnosed in King County, were born outside of the U.S. (primarily born in sub-Saharan Africa). In King County, 64% of non-MSM Black persons diagnosed with HIV 2014-2018 were foreign-born.

Housing: We estimate that 11% of King County residents diagnosed with HIV were homeless in the past year. Homelessness among PWH is a critical problem in King County and an important barrier to ensuring that all HIV-infected persons successfully receive life-saving HIV treatment. In 2018, 21% of Ryan White Part A funds were spent to support housing for PWH.

Pre-Exposure Prophylaxis (PrEP): Nearly one-half (49%) of King County MSM at high risk for HIV infection, and 27% of all MSM, are on PrEP. Statewide, 25% of sexually active MSM use PrEP. PrEP use is under 1% among PWID. The largest single provider of PrEP in WA State is the PHSKC STD Clinic.

HIV Testing: We estimate that more than 50% of King County MSM newly diagnosed with HIV reported a negative test in the past year. However, 19% of all persons diagnosed with HIV were concurrently diagnosed with AIDS, suggesting that they likely had longstanding infections. PHSKC and the WA State DOH funded or directly performed 15,255 HIV tests in 2018, and 28% of all newly diagnosed cases were diagnosed through publicly funded HIV testing.

Syringe Services Programs (SSPs): King County has a robust SSP program including partnerships with community-based organizations. In 2018, the PHSKC SSP exchanged approximately 8 million syringes, which is an increase of 1 million syringes since 2017. To our knowledge, King County distributes more syringes per PWID than any other city in the U.S. The SSP also offers substance use disorder treatment referrals, naloxone training and distribution, social work services, and wound care.

Condom Distribution and Promotion: PHKSC, the WS DOH and community collaborators distributed over 450,000 male condoms in King County in 2018. More than 1.3 million male condoms have been distributed statewide by public health. Several innovative programs have been launched in the past two years which are aimed at promoting increased condom use for the prevention of HIV and other sexually transmitted infections. These programs include a greater distribution of free condoms, mostly in economically disadvantaged communities in South King County, and the provision of a wider variety of condoms to patients at the STD Clinic.

Outreach Services to Increase Engagement in HIV Care: Our current approach to "data-to-care" (D2C), or finding and re-engaging/engaging PWH who are out of care, mostly relies on seeking persons who are not engaged in HIV medical care when they are incarcerated, go to an emergency department, or have a hospital admission. Health department outreach staff work with care providers and out of care individuals in these settings to help remove barriers to care.

Ryan White and HIV Care (including Max Clinic): PHSKC, WA DOH, and local community collaborators received approximately $78 million in federal Ryan White funds in 2018 to support HIV care, prevention, and education. As a result of Ryan White funding and Medicaid expansion, no Washington State resident needs to go without HIV care due to a lack of money or health insurance. However, persons with mental illness and substance use disorders may have difficulty accessing standard medical care. To address this, the Ryan White program supports the Max Clinic at Harborview Medical Center. The Max Clinic provides walk-in HIV care, social services, and incentives to help individuals get in HIV care, stay in care, and achieve viral suppression. Among Max Clinic enrollees, 64% were virally suppressed at their most recent visit.

End the HIV Epidemic (EtHE) – In 2019, the federal government announced a national effort to decrease new HIV diagnoses by 50% over 5 years, with new funding and work concentrated on areas that have been highly impacted by the HIV epidemic, including King County, WA. PHSKC is currently planning new EtHE activities and will start associated efforts to increase HIV testing, PrEP use, syringe services, and HIV treatment in 2020.

# WA State and King County HIV Goals and Evaluation Metrics: 2019 Dashboard

| Washington State | 2020 End AIDS Washington Goals[1] | WA State Data, 2014-2018 2014 | 2018 | Current Trend (See Key Below) |
|---|---|---|---|---|
| New HIV diagnoses, rate | ↓50% | 5.3/100,000 | 5.4/100,000 | |
| In HIV care among PWDH[2] | 90% | 86% | 88% | |
| Viral suppression among PWDH | 80% | 73% | 81% | |
| HIV/AIDS mortality[3] | ↓25% (1.6/100,000) | 2.3/100,000<br>1.4/100 PWDH | 2.2/100,000<br>1.6/100 PWDH | |
| Disparities in viral suppression<br>All PWDH | Reference group | 77% | 81% | -- |
| Non-Latinx Black PWDH | Difference ≤ 4.0% | 69% | 78% | |
| Foreign-born Latinx PWDH | Difference ≤ 5.2% | 70% | 76% | |

| King County | 2020 Goals[1] National | 2020 Goals[1] King County | King County Data, 2014-2018 2014[4] | 2018 | Current Trend (See Key Below) |
|---|---|---|---|---|---|
| **HIV Testing, Case Finding, & Prevention** | | | | | |
| New HIV diagnoses, rate | ↓25% | ↓25%[5] | 11.0/100,000 | 10.0/100,000 | |
| Know HIV status[6] | 90% | 95% | 92% | 93% | |
| Late HIV diagnosis[7] | -- | <20% | 24% | 25% | |
| Recent HIV testing[8], MSM | -- | 75% | 73% | 69% | |
| PrEP use, high-risk MSM[9] | -- | 50% | 9% | 49% | |
| Syringe coverage[10] | 200/PWID | 365/PWID | 258/PWID | 300/PWID | |
| **HIV Care, Morbidity, & Mortality[11]** | | | | | |
| Linked to care in 1 month[12] | 85% | 90% | 88% | 89% | |
| Linked to care in 3 months[12] | -- | 95%[13] | 92% | 94% | |
| In HIV care[2] | 90% | 95% | 89% | 90% | |
| Viral suppression | 80% | 90% | 79% | 84% | |
| Viral suppression in 4 months[12, 14] | -- | 75% | 58% | 75% | |
| Homelessness[15] | <5% | <5% | 14% | 11% | |
| HIV/AIDS mortality[16, 17] | ↓33% | ↓33% (0.8/100) | 1.2/100 PWDH | 0.9/100 PWDH | |

Abbreviations: PrEP, pre-exposure prophylaxis for HIV; PWDH, people living with diagnosed HIV; MSM, men who have sex with men.
Technical notes and continuation of table on following page.

Key:

Goal met | On pace to meet goal | Not on pace to meet goal | National goal met, but the local goal has not been met

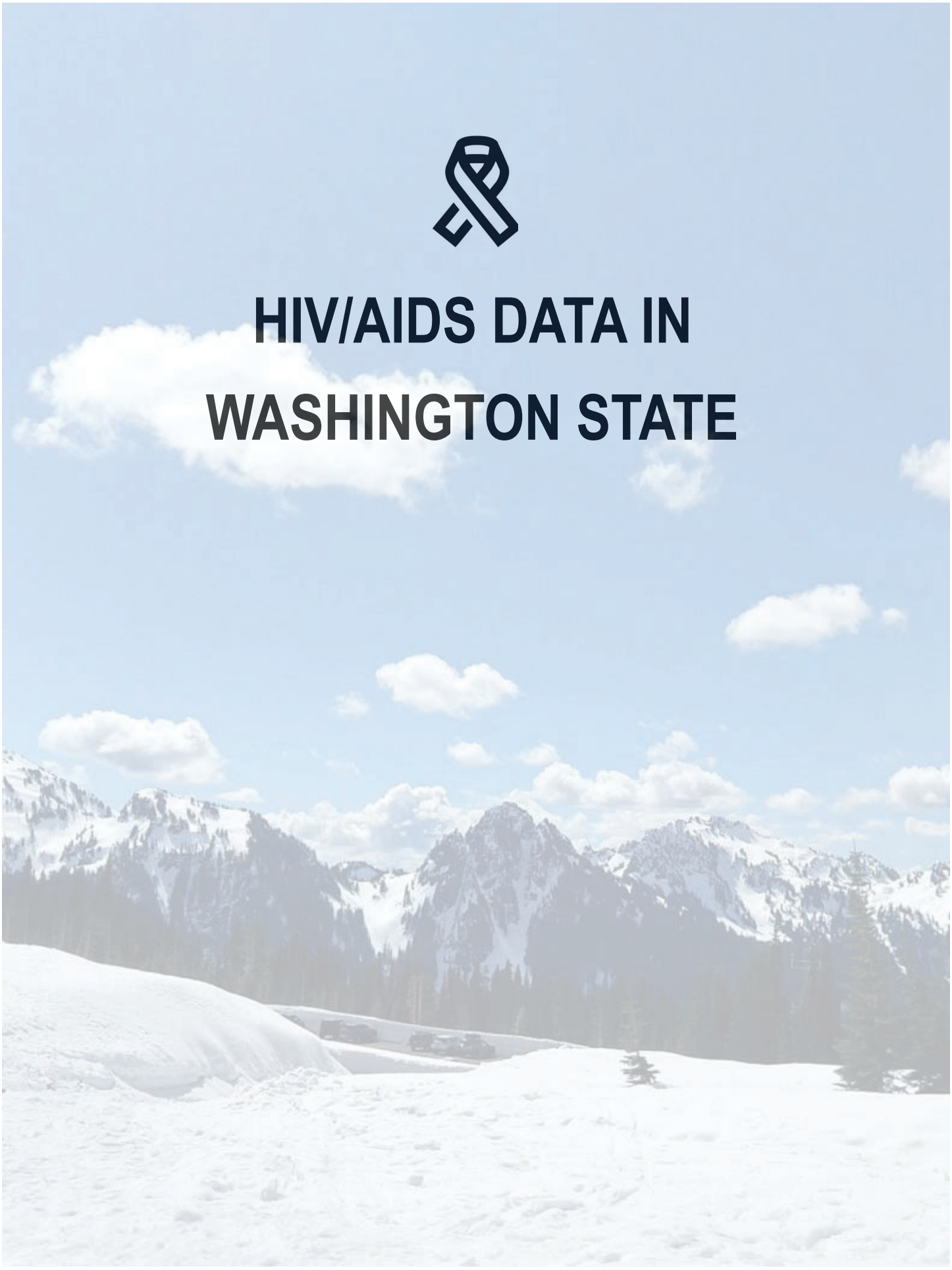
## King County Continued

| Disparities: Viral Suppression in PWDH[11] | 2020 King County Goal[1] | King County Data, 2014[4] | King County Data, 2018 | Current Trend (See Key on prior page) |
|---|---|---|---|---|
| Non-Hispanic White | No difference between groups | 81% | 85% | Comparison group |
| Non-Hispanic Black | | 72% | 80% | ↑ |
| Hispanic/Latino | | 75% | 83% | ↑ |
| Transgender | | 71% | 83% | ↑ |
| People who inject drugs | | 78% | 74% | ✗ |

Abbreviations: PrEP, pre-exposure prophylaxis for HIV; PWDH, people living with diagnosed HIV; MSM, men who have sex with men.

# Technical Notes to Dashboard

[1]All 2020 goals use 2014 as the baseline;
[2]Defined as 1+ HIV care visit in a calendar year (see NHAS/EtHE article);
[3]Mortality data from 2017; WA mortality goal is based on HIV/AIDS mortality rate per 100,000 population; PHSKC mortality goal is based on HIV/AIDS mortality rate per 100 persons living with HIV; for comparability between WA and PHSKC, both measures are provided for WA;
[4]Some 2014 estimates differ from previously published estimates due to enhanced methods and data cleaning efforts;
[5]The King County 2020 goal for a 25% reduction in the rate of new HIV diagnosis was established prior to End AIDS Washington, which has a goal of a 50% reduction for the same measure. The King County goal was based on data from 2008 to 2014 (19% decline in rate of new HIV diagnoses) and assumes an accelerated rate of decline in new HIV diagnoses with approximately 25% of new HIV cases imported from outside the U.S;
[6]Based partly on an estimation method developed by the University of Washington (see Undiagnosed Fraction Estimation section of HIV Testing and Case Finding article);
[7]AIDS within 1 year of HIV diagnosis, among persons diagnosed in 2016-2017;
[8]Among MSM with new HIV diagnoses and known testing history--last HIV test within prior 2 years (see HIV Testing and Case Finding article);
[9]In King County, "high-risk MSM" are defined as HIV-uninfected MSM with any: methamphetamine/popper use, 10+ sex partners, non-concordant condomless anal sex, bacterial STI diagnosis in the past year. The 2018 estimate of PrEP use among high-risk MSM is an average across multiple contemporaneous surveys (see PrEP article);
[10]Defined as the number of syringes provided by SSPs per PWID per year. There is no national goal, but the WHO has a benchmark of 200 syringes per PWID per year;
[11]Among HIV-infected persons with diagnosed HIV infections (see NHAS/EtHE article);
[12]Among persons with a new HIV diagnosis (see NHAS/EtHE article);
[13]The original King County goal of 85% was increased to 95% due to early achievement of this objective;
[14]Goal established in 2017;
[15]From Medical Monitoring Project (MMP), which is an annual cross-sectional survey conducted among people with diagnosed HIV. Facility-based sampling was used in 2014, which resulted in a sample limited to people receiving HIV care. In 2015-16, surveillance-based sampling was used, enhancing the representation of people less engaged in care. "Homelessness" was defined as living on the street, in a car, or in a single-room occupancy hotel in the 12 months preceding the MMP interview. The 2014 estimated prevalence of homelessness was weighted to account for probability of selection and non-response;
[16]Age-and lag-adjusted mortality rates per 100 people living with HIV/AIDS (see NHAS/EtHE article);
[17]2018 mortality data are estimated to be 30% complete.



# HIV/AIDS DATA IN WASHINGTON STATE

## TABLE 1-1. NEW HIV CASES, INCLUDING LATE HIV DIAGNOSES AND LINKAGE TO CARE, BY DEMOGRAPHIC AND RISK CHARACTERISTICS, WA STATE, 2018

| | New HIV Cases | | | Late HIV Diagnoses [A] | | Initial Linkage to HIV Care [B] | |
|---|---|---|---|---|---|---|---|
| | No. | Column % | Rate | No. | Row % | No. | Row % |
| Total | 402 | 100% | 5.4 | 104 | 26% | 331 | 82% |
| **Gender** | | | | | | | |
| Male | 310 | 77% | 8.4 | 74 | 24% | 253 | 82% |
| Female | 88 | 22% | 2.4 | 30 | 34% | 75 | 85% |
| Transgender male | 0 | 0% | n/a | 0 | 0% | 0 | 0% |
| Transgender female | 4 | 1% | n/a | 0 | 0% | 3 | 75% |
| **Age at HIV Diagnosis** | | | | | | | |
| < 13 | 0 | 0% | 0.0 | 0 | 0% | 0 | -- |
| 13-24 | 53 | 13% | 4.7 | 7 | 13% | 38 | 72% |
| 25-34 | 141 | 35% | 13.6 | 24 | 17% | 119 | 84% |
| 35-44 | 93 | 23% | 9.7 | 24 | 26% | 73 | 78% |
| 45-54 | 67 | 17% | 7.1 | 30 | 45% | 58 | 87% |
| 55-64 | 40 | 10% | 4.1 | 17 | 43% | 35 | 88% |
| 65+ | 8 | 2% | 0.7 | 2 | 25% | 8 | 100% |
| **Race/ethnicity** | | | | | | | |
| American Indian / Alaskan Native | 3 | 1% | 3.2 | 0 | 0% | 3 | 100% |
| Asian | 17 | 4% | 2.7 | 4 | 24% | 16 | 94% |
| Black | 87 | 22% | 31.4 | 31 | 36% | 74 | 85% |
| Foreign-born [C] | 45 | 11% | 75.4 | 22 | 49% | 40 | 89% |
| U.S.-born [C] | 32 | 8% | 15.6 | 7 | 22% | 25 | 78% |
| Latinx | 70 | 17% | 7.2 | 22 | 31% | 58 | 83% |
| Foreign-born [C] | 30 | 7% | 10.0 | 13 | 43% | 25 | 83% |
| U.S.-born [C] | 27 | 7% | 4.1 | 3 | 11% | 23 | 85% |
| Native Hawaiian / Pacific Islander | 5 | 1% | 9.6 | 2 | 40% | 4 | 80% |
| White | 202 | 50% | 4.0 | 42 | 21% | 162 | 80% |
| Multiple | 18 | 4% | 5.6 | 3 | 17% | 14 | 78% |
| **Mode of Exposure** | | | | | | | |
| Male / Male Sex (MSM) | 194 | 48% | n/a | 37 | 19% | 164 | 85% |
| Injection Drug Use (IDU) | 44 | 11% | n/a | 5 | 11% | 32 | 73% |
| MSM / IDU | 36 | 9% | n/a | 10 | 28% | 28 | 78% |
| Heterosexual | 44 | 11% | n/a | 17 | 39% | 39 | 89% |
| Blood/pediatric | 0 | 0% | n/a | 0 | 0% | 0 | 0% |
| No Identified Risk (NIR) | 84 | 21% | n/a | 35 | 42% | 68 | 81% |

*Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.*

[A] *Late HIV diagnoses = AIDS diagnoses within 12 months of HIV diagnoses.*

[B] *Initial linkage to care = at least one CD4 or viral load result within 30 days of HIV diagnoses.*

[C] *Country of origin data are missing for approximately 10% of newly diagnosed cases.*

TABLE 1-2. NEW HIV CASES, INCLUDING LATE HIV DIAGNOSES AND LINKAGE TO CARE, BY COUNTY AND HEALTH DISTRICT (HD) OF RESIDENCE AT HIV DIAGNOSIS, WA STATE, 2018

| County or Health District of Residence | New HIV Cases | | | Late HIV Diagnoses [A] | | Initial Linkage to HIV Care [B] | |
|---|---|---|---|---|---|---|---|
| | No. | Column % | Rate | No. | Row % | No. | Row % |
| ADAMS CO. | 1 | 0% | 5.0 | 1 | 100% | 1 | 100% |
| ASOTIN CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| BENTON CO. | 2 | 0% | 1.0 | 1 | 50% | 1 | 50% |
| BENTON-FRANKLIN HD | 6 | 1% | 2.1 | 4 | 67% | 4 | 67% |
| CHELAN CO. | 3 | 1% | 3.9 | 1 | 33% | 3 | 100% |
| CHELAN-DOUGLAS HD | 4 | 1% | 3.3 | 1 | 25% | 4 | 100% |
| CLALLAM CO. | 5 | 1% | 6.7 | 1 | 20% | 5 | 100% |
| CLARK CO. | 20 | 5% | 4.2 | 1 | 5% | 15 | 75% |
| COLUMBIA CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| COWLITZ CO. | 1 | 0% | 0.9 | 0 | 0% | 1 | 100% |
| DOUGLAS CO. | 1 | 0% | 2.4 | 0 | 0% | 1 | 100% |
| FERRY CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| FRANKLIN CO. | 4 | 1% | 4.3 | 3 | 75% | 3 | 75% |
| GARFIELD CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| GRANT CO. | 3 | 1% | 3.1 | 2 | 67% | 3 | 100% |
| GRAYS HARBOR CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| ISLAND CO. | 2 | 0% | 2.4 | 2 | 100% | 2 | 100% |
| JEFFERSON CO. | 1 | 0% | 3.2 | 0 | 0% | 1 | 100% |
| KING CO. | 229 | 57% | 10.5 | 56 | 24% | 184 | 80% |
| KITSAP CO. | 8 | 2% | 3.0 | 1 | 13% | 7 | 88% |
| KITTITAS CO. | 3 | 1% | 6.6 | 1 | 33% | 2 | 67% |
| KLICKITAT CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| LEWIS CO. | 1 | 0% | 1.3 | 1 | 100% | 1 | 100% |
| LINCOLN CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| MASON CO. | 5 | 1% | 7.8 | 0 | 0% | 5 | 100% |
| NE TRI-COUNTY HD | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| OKANOGAN CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| PACIFIC CO. | 1 | 0% | 4.7 | 1 | 100% | 1 | 100% |
| PEND OREILLE CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| PIERCE CO. | 49 | 12% | 5.6 | 10 | 20% | 37 | 76% |
| SAN JUAN CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| SKAGIT CO. | 3 | 1% | 2.4 | 2 | 67% | 3 | 100% |
| SKAMANIA CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| SNOHOMISH CO. | 20 | 5% | 2.5 | 8 | 40% | 16 | 80% |
| SPOKANE CO. | 17 | 4% | 3.3 | 4 | 24% | 17 | 100% |
| STEVENS CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| THURSTON CO. | 9 | 2% | 3.2 | 2 | 22% | 9 | 100% |
| WAHKIAKUM CO. | 0 | 0% | 0.0 | 0 | 0% | 0 | 0% |
| WALLA WALLA CO. | 1 | 0% | 1.6 | 1 | 100% | 1 | 100% |
| WHATCOM CO. | 3 | 1% | 1.4 | 1 | 33% | 3 | 100% |
| WHITMAN CO. | 3 | 1% | 6.1 | 1 | 33% | 3 | 100% |
| YAKIMA CO. | 6 | 1% | 2.4 | 3 | 50% | 6 | 100% |
| TOTAL | 402 | 100% | 5.4 | 104 | 26% | 331 | 83% |

Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.

[A] Late HIV diagnoses = AIDS diagnoses within 12 months of HIV diagnoses.

[B] Initial linkage to care = at least one CD4 or viral load result within 30 days of HIV diagnosis.

Note sums of columns will not equal totals due to listing some counties both alone and also as part of health districts (HD)s .

## Table 1-3. New HIV Case Counts over Time, by Demographic and Risk Characteristics, WA State, 2013-2018

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2014-2018 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | No. | No. | No. | No. | No. | Total No. | Avg. No. | % | Rate |
| **Total** | 390 | 372 | 406 | 371 | 371 | 402 | 1922 | 384 | 100% | 5.3 |
| **Gender** | | | | | | | | | | |
| Male | 329 | 311 | 343 | 293 | 297 | 310 | 1554 | 311 | 81% | 8.7 |
| Female | 55 | 56 | 59 | 74 | 68 | 88 | 345 | 69 | 18% | 1.9 |
| Transgender male | 1 | 2 | 0 | 1 | 1 | 0 | 4 | 1 | 0% | n/a |
| Transgender female | 5 | 3 | 4 | 3 | 5 | 4 | 19 | 4 | 1% | n/a |
| **Age at HIV Diagnosis** | | | | | | | | | | |
| < 13 | 4 | 2 | 4 | 1 | 3 | 0 | 10 | 2 | 1% | 0.2 |
| 13-24 | 69 | 59 | 64 | 63 | 58 | 53 | 297 | 59 | 15% | 5.3 |
| 25-34 | 112 | 115 | 149 | 117 | 142 | 141 | 664 | 133 | 35% | 13.3 |
| 35-44 | 103 | 93 | 84 | 79 | 63 | 93 | 412 | 82 | 21% | 8.9 |
| 45-54 | 76 | 74 | 69 | 63 | 62 | 67 | 335 | 67 | 17% | 7.1 |
| 55-64 | 23 | 20 | 30 | 36 | 34 | 40 | 160 | 32 | 8% | 3.4 |
| 65+ | 3 | 9 | 6 | 12 | 9 | 8 | 44 | 9 | 2% | 0.8 |
| **Race/ethnicity** | | | | | | | | | | |
| American Indian / Alaska Native | 3 | 5 | 4 | 9 | 5 | 3 | 26 | 5 | 1% | 5.7 |
| Asian | 18 | 25 | 26 | 28 | 24 | 17 | 120 | 24 | 8% | 4.2 |
| Black | 65 | 66 | 73 | 65 | 71 | 87 | 362 | 72 | 19% | 27.7 |
| Foreign-born [A] | 25 | 30 | 25 | 28 | 36 | 45 | 164 | 33 | 9% | 61.3 |
| U.S.-born [A] | 34 | 30 | 41 | 32 | 30 | 32 | 165 | 33 | 9% | 5.9 |
| Latinx | 69 | 52 | 81 | 62 | 79 | 70 | 344 | 69 | 18% | 7.6 |
| Foreign-born [A] | 36 | 34 | 44 | 31 | 38 | 30 | 177 | 35 | 9% | 12.1 |
| U.S.-born [A] | 23 | 12 | 23 | 26 | 33 | 27 | 121 | 24 | 6% | 3.9 |
| Native Hawaiian / Pacific Islander | 5 | 5 | 3 | 4 | 3 | 5 | 20 | 4 | 1% | 8.4 |
| White | 216 | 204 | 208 | 186 | 177 | 202 | 977 | 195 | 51% | 3.9 |
| Multiple | 14 | 15 | 11 | 17 | 12 | 18 | 73 | 15 | 4% | 4.4 |
| **Mode of Exposure** | | | | | | | | | | |
| Male / Male Sex (MSM) | 237 | 219 | 251 | 194 | 208 | 194 | 1066 | 213 | 55% | n/a |
| Injection Drug Use (IDU) | 19 | 21 | 31 | 27 | 19 | 44 | 142 | 28 | 7% | n/a |
| MSM / IDU | 32 | 29 | 25 | 26 | 23 | 36 | 139 | 28 | 7% | n/a |
| Heterosexual | 33 | 36 | 37 | 51 | 35 | 44 | 203 | 41 | 11% | n/a |
| Blood/pediatric | 2 | 2 | 4 | 1 | 5 | 0 | 12 | 2 | 1% | n/a |
| No Identified Risk (NIR) | 67 | 65 | 58 | 72 | 81 | 84 | 360 | 72 | 19% | n/a |

*Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.*

[A] *Country of origin data are missing for approximately 10% of newly diagnosed cases.*

## Table 1-4. New HIV Case Counts over Time, by County and Health District (HD) of Residence at HIV Diagnosis, WA State, 2013-2018

| County and Health District of Residence | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2014-2018 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | No. | No. | No. | No. | No. | Total No. | Avg. No. | % | Rate |
| ADAMS CO. | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0% | 2.0 |
| ASOTIN CO. | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0% | 0.9 |
| BENTON CO. | 5 | 7 | 0 | 7 | 2 | 2 | 18 | 4 | 1% | 1.9 |
| BENTON-FRANKLIN HD | 5 | 8 | 5 | 10 | 3 | 6 | 32 | 6 | 2% | 2.3 |
| CHELAN CO. | 3 | 3 | 5 | 6 | 1 | 3 | 18 | 4 | 1% | 4.7 |
| CHELAN-DOUGLAS HD | 5 | 3 | 8 | 6 | 2 | 4 | 23 | 5 | 1% | 3.9 |
| CLALLAM CO. | 3 | 1 | 4 | 2 | 2 | 5 | 14 | 3 | 1% | 3.8 |
| CLARK CO. | 23 | 20 | 19 | 17 | 24 | 20 | 100 | 20 | 5% | 4.3 |
| COLUMBIA CO. | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0% | 4.9 |
| COWLITZ CO. | 1 | 5 | 2 | 2 | 4 | 1 | 14 | 3 | 1% | 2.7 |
| DOUGLAS CO. | 2 | 0 | 3 | 0 | 1 | 1 | 5 | 1 | 0% | 2.5 |
| FERRY CO. | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0% | 2.6 |
| FRANKLIN CO. | 0 | 1 | 5 | 3 | 1 | 4 | 14 | 3 | 1% | 3.1 |
| GARFIELD CO. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | 0.0 |
| GRANT CO. | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 0% | 0.6 |
| GRAYS HARBOR CO. | 1 | 3 | 4 | 1 | 4 | 0 | 12 | 2 | 1% | 3.3 |
| ISLAND CO. | 3 | 1 | 1 | 2 | 3 | 2 | 9 | 2 | 0% | 2.2 |
| JEFFERSON CO. | 1 | 2 | 1 | 2 | 0 | 1 | 6 | 1 | 0% | 3.9 |
| KING CO. | 201 | 217 | 203 | 181 | 176 | 229 | 1,006 | 201 | 52% | 9.6 |
| KITSAP CO. | 6 | 6 | 10 | 7 | 9 | 8 | 40 | 8 | 2% | 3.1 |
| KITTITAS CO. | 1 | 1 | 1 | 1 | 0 | 3 | 6 | 1 | 0% | 2.7 |
| KLICKITAT CO. | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0% | 0.9 |
| LEWIS CO. | 1 | 1 | 1 | 0 | 0 | 1 | 3 | 1 | 0% | 0.8 |
| LINCOLN CO. | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0% | 3.7 |
| MASON CO. | 3 | 1 | 5 | 3 | 4 | 5 | 18 | 4 | 1% | 5.7 |
| NE TRI-COUNTY HD | 2 | 1 | 1 | 1 | 0 | 0 | 3 | 1 | 0% | 0.9 |
| OKANOGAN CO. | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0% | 0.5 |
| PACIFIC CO. | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0% | 1.9 |
| PEND OREILLE CO. | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0% | 1.5 |
| PIERCE CO. | 56 | 40 | 65 | 43 | 41 | 49 | 238 | 48 | 12% | 5.6 |
| SAN JUAN CO. | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | 0.0 |
| SKAGIT CO. | 9 | 5 | 1 | 7 | 3 | 3 | 19 | 4 | 1% | 3.1 |
| SKAMANIA CO. | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0% | 3.5 |
| SNOHOMISH CO. | 24 | 30 | 34 | 36 | 28 | 20 | 148 | 30 | 8% | 3.8 |
| SPOKANE CO. | 20 | 6 | 19 | 26 | 20 | 17 | 88 | 18 | 5% | 3.6 |
| STEVENS CO. | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0% | 0.5 |
| THURSTON CO. | 8 | 5 | 7 | 8 | 9 | 9 | 38 | 8 | 2% | 2.8 |
| WAHKIAKUM CO. | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0% | 5.0 |
| WALLA WALLA CO. | 0 | 0 | 0 | 1 | 2 | 1 | 4 | 1 | 0% | 1.3 |
| WHATCOM CO. | 8 | 5 | 5 | 2 | 8 | 3 | 23 | 5 | 1% | 2.2 |
| WHITMAN CO. | 0 | 1 | 1 | 0 | 0 | 3 | 5 | 1 | 0% | 2.1 |
| YAKIMA CO. | 6 | 7 | 6 | 11 | 26 | 6 | 56 | 11 | 3% | 4.5 |
| **TOTAL** | **390** | **372** | **406** | **371** | **371** | **402** | **1,922** | **384** | **100%** | **5.3** |

Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.

Note sums of columns will not equal totals due to listing some counties both alone and also as part of health districts (HD)s.

TABLE 1-5. NEW CASES OF HIV INFECTION, BY CURRENT GENDER[A], RACE/ETHNICITY, AND HIV EXPOSURE CATEGORY, WA STATE, 2014-2018

| | | White | | Black | | Latinx | | Asian | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gender | Exposure Category | No. | % | No. | % | No. | % | No. | % | No. | % |
| Male | Male / Male Sex (MSM) | 569 | 68% | 124 | 55% | 219 | 73% | 80 | 80% | 62 | 66% |
| | Injecting Drug Use (IDU) | 55 | 7% | 8 | 4% | 11 | 4% | 1 | 1% | 4 | 4% |
| | MSM and IDU | 98 | 12% | 8 | 4% | 15 | 5% | 0 | 0% | 13 | 14% |
| | Heterosexual Contact | 15 | 2% | 6 | 3% | 10 | 3% | 1 | 1% | 2 | 2% |
| | Blood/Pediatric | 2 | 0% | 5 | 2% | 0 | 0% | 0 | 0% | 0 | 0% |
| | No Identified Risk | 95 | 11% | 74 | 33% | 46 | 15% | 18 | 18% | 13 | 14% |
| | *Total Male* | 834 | 100% | 225 | 100% | 301 | 100% | 100 | 100% | 94 | 100% |
| Female | Injecting Drug Use (IDU) | 50 | 38% | 1 | 1% | 3 | 8% | 1 | 6% | 8 | 35% |
| | Heterosexual Contact | 24 | 18% | 21 | 16% | 12 | 31% | 3 | 17% | 5 | 22% |
| | Blood/Pediatric | 0 | 0% | 5 | 4% | 0 | 0% | 0 | 0% | 0 | 0% |
| | No Identified Risk | 56 | 43% | 108 | 80% | 24 | 62% | 14 | 78% | 10 | 43% |
| | *Total Female* | 130 | 100% | 135 | 100% | 39 | 100% | 18 | 100% | 23 | 100% |

*Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.*

[A]*Due to the small number of cases among transgendered persons (n=24), further stratification is not possible.*

## Table 1-6. Living Cases of HIV Infection, including Engagement in Care and Viral Load Suppression, by Demographic and Risk Characteristics, WA State, 2018

| | Living Cases of HIV Infection | | | Engaged in Care [A] | | Suppressed Viral Load [B] | |
|---|---|---|---|---|---|---|---|
| | No. | Column % | Rate | No. | Row % | No. | Row % |
| *Total* | 13417 | 100% | 180.6 | 11841 | 88% | 10866 | 81% |
| **Gender** | | | | | | | |
| Male | 11246 | 84% | 303.4 | 9914 | 88% | 9143 | 81% |
| Female | 2045 | 15% | 55.0 | 1812 | 89% | 1621 | 79% |
| Transgender male | 12 | 0% | n/a | 12 | 100% | 11 | 92% |
| Transgender female | 114 | 1% | n/a | 103 | 90% | 91 | 80% |
| **Current Age** | | | | | | | |
| < 13 | 36 | 0% | 3.0 | 34 | 94% | 33 | 92% |
| 13-24 | 287 | 2% | 25.3 | 251 | 87% | 201 | 70% |
| 25-34 | 1771 | 13% | 164.4 | 1472 | 86% | 1258 | 74% |
| 35-44 | 2715 | 20% | 282.1 | 2328 | 86% | 2078 | 77% |
| 45-54 | 4018 | 30% | 427.6 | 3553 | 88% | 3289 | 82% |
| 55-64 | 3382 | 25% | 349.1 | 3093 | 91% | 2936 | 87% |
| 65+ | 1208 | 9% | 102.9 | 1110 | 92% | 1071 | 89% |
| **Race/ethnicity [D]** | | | | | | | |
| American Indian / Alaska Native | 136 | 1% | 145.8 | 124 | 91% | 111 | 82% |
| Asian | 460 | 3% | 72.7 | 406 | 88% | 385 | 84% |
| Black | 2275 | 17% | 820.0 | 1987 | 87% | 1769 | 78% |
| Foreign-born [C] | 950 | 7% | 1591.2 | 854 | 90% | 790 | 83% |
| U.S.-born [C] | 1241 | 9% | 606.8 | 1067 | 86% | 922 | 74% |
| Latinx | 1900 | 14% | 196.4 | 1642 | 86% | 1504 | 79% |
| Foreign-born [C] | 946 | 7% | 314.0 | 812 | 86% | 756 | 80% |
| U.S.-born [C] | 805 | 6% | 122.8 | 704 | 87% | 635 | 79% |
| Native Hawaiian / Pacific Islander | 61 | 0% | 117.2 | 54 | 89% | 44 | 72% |
| White | 7802 | 58% | 153.4 | 6926 | 89% | 6423 | 82% |
| Multiple | 776 | 6% | 242.2 | 696 | 90% | 624 | 80% |
| **Mode of Exposure** | | | | | | | |
| Male / Male sex (MSM) | 8240 | 61% | n/a | 7322 | 89% | 6863 | 83% |
| Injection Drug Use (IDU) | 775 | 6% | n/a | 667 | 86% | 556 | 72% |
| MSM/IDU | 1225 | 9% | n/a | 1072 | 88% | 935 | 76% |
| Heterosexual | 1633 | 12% | n/a | 1447 | 89% | 1304 | 80% |
| Blood / pediatric | 180 | 1% | n/a | 167 | 93% | 147 | 82% |
| No Identified Risk (NIR) | 1364 | 10% | n/a | 1166 | 85% | 1061 | 78% |

Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.

[A] Engaged in care = at least one reported CD4 or VL result within calendar year.

[B] Suppressed viral load = last reported viral load result in calendar year was < 200 copies/mL.

[C] Country of origin data are missing for approximately 10% of newly diagnosed cases.

[D] Seven are missing race/ethnicity.

TABLE 1-7. LIVING CASES OF HIV INFECTION, INCLUDING ENGAGEMENT IN CARE AND VIRAL LOAD SUPPRESSION, BY COUNTY AND HEALTH DISTRICT (HD) OF CURRENT RESIDENCE, WA STATE, 2018

| County or Health District of Residence | Living Cases of HIV Infection, 2018 | | | Engaged in Care [A] | | Suppressed Viral Load [B] | |
|---|---|---|---|---|---|---|---|
| | No. | Column % | Rate | No. | Row % | No. | Row % |
| ADAMS CO. | 12 | 0% | 59.9 | 9 | 75% | 7 | 58% |
| ASOTIN CO. | 21 | 0% | 93.7 | 17 | 81% | 16 | 76% |
| BENTON CO. | 154 | 1% | 78.0 | 136 | 88% | 121 | 79% |
| BENTON-FRANKLIN HD | 232 | 2% | 80.0 | 148 | 64% | 131 | 56% |
| CHELAN CO. | 58 | 0% | 74.6 | 50 | 86% | 46 | 79% |
| CHELAN-DOUGLAS HD | 73 | 1% | 60.9 | 62 | 85% | 56 | 77% |
| CLALLAM CO. | 75 | 1% | 99.8 | 69 | 92% | 60 | 80% |
| CLARK CO. | 697 | 5% | 145.4 | 567 | 81% | 515 | 74% |
| COLUMBIA CO. | 4 | 0% | 96.4 | 4 | 100% | 4 | 100% |
| COWLITZ CO. | 140 | 1% | 130.5 | 125 | 89% | 110 | 79% |
| DOUGLAS CO. | 15 | 0% | 35.6 | 12 | 80% | 10 | 67% |
| FERRY CO. | 4 | 0% | 51.4 | 3 | 75% | 3 | 75% |
| FRANKLIN CO. | 78 | 1% | 84.3 | 67 | 86% | 60 | 77% |
| GARFIELD CO. | 3 | 0% | 135.7 | 3 | 100% | 2 | 67% |
| GRANT CO. | 42 | 0% | 43.1 | 39 | 93% | 34 | 81% |
| GRAYS HARBOR CO. | 90 | 1% | 122.3 | 80 | 89% | 73 | 81% |
| ISLAND CO. | 91 | 1% | 108.5 | 81 | 89% | 76 | 84% |
| JEFFERSON CO. | 50 | 0% | 158.3 | 47 | 94% | 44 | 88% |
| KING CO. | 7025 | 52% | 320.7 | 6296 | 90% | 5839 | 83% |
| KITSAP CO. | 311 | 2% | 116.4 | 272 | 87% | 255 | 82% |
| KITTITAS CO. | 25 | 0% | 54.8 | 24 | 96% | 24 | 96% |
| KLICKITAT CO. | 14 | 0% | 63.7 | 13 | 93% | 13 | 93% |
| LEWIS CO. | 66 | 0% | 84.2 | 54 | 82% | 47 | 71% |
| LINCOLN CO. | 5 | 0% | 46.3 | 4 | 80% | 4 | 80% |
| MASON CO. | 65 | 0% | 101.5 | 57 | 88% | 51 | 78% |
| NE TRI-COUNTY HD | 40 | 0% | 60.3 | 28 | 70% | 31 | 78% |
| OKANOGAN CO. | 24 | 0% | 56.5 | 20 | 83% | 18 | 75% |
| PACIFIC CO. | 28 | 0% | 130.7 | 24 | 86% | 24 | 86% |
| PEND OREILLE CO. | 9 | 0% | 66.5 | 7 | 78% | 7 | 78% |
| PIERCE CO. | 1486 | 11% | 170.4 | 1251 | 84% | 1112 | 75% |
| SAN JUAN CO. | 22 | 0% | 130.9 | 21 | 95% | 20 | 91% |
| SKAGIT CO. | 94 | 1% | 74.3 | 84 | 89% | 77 | 82% |
| SKAMANIA CO. | 7 | 0% | 58.9 | 5 | 71% | 5 | 71% |
| SNOHOMISH CO. | 1142 | 9% | 141.8 | 1032 | 90% | 956 | 84% |
| SPOKANE CO. | 652 | 5% | 128.4 | 568 | 87% | 497 | 76% |
| STEVENS CO. | 27 | 0% | 60.0 | 21 | 78% | 21 | 78% |
| THURSTON CO. | 317 | 2% | 112.5 | 276 | 87% | 246 | 78% |
| WAHKIAKUM CO. | 4 | 0% | 97.6 | 3 | 75% | 3 | 75% |
| WALLA WALLA CO. | 55 | 0% | 89.0 | 46 | 84% | 45 | 82% |
| WHATCOM CO. | 236 | 2% | 107.1 | 208 | 88% | 200 | 85% |
| WHITMAN CO. | 24 | 0% | 48.8 | 19 | 79% | 18 | 75% |
| YAKIMA CO. | 242 | 2% | 95.1 | 225 | 93% | 201 | 83% |
| TOTAL | **13417** | **100%** | **180.6** | **11841** | **88%** | **10866** | **81%** |

Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.

[A] Engaged in care = at least one reported CD4 or VL result within calendar year.

[B] Suppressed viral load = last reported viral load result in calendar year was < 200 copies/mL.

Note sums of columns will not equal totals due to listing some counties both alone and also as part of health districts (HD)s .

TABLE 1-8. LIVING CASES OF HIV INFECTION, BY CURRENT GENDER[A], RACE/ETHNICITY, AND HIV EXPOSURE CATEGORY, WA STATE, 2018

| | | White | | Black | | Latinx | | Asian | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gender | Exposure Category | No. | % | No. | % | No. | % | No. | % | No. | % |
| Male | Male / Male Sex (MSM) | 5,393 | 77% | 737 | 52% | 1,206 | 74% | 268 | 71% | 546 | 68% |
| | Injecting Drug Use (IDU) | 298 | 4% | 79 | 6% | 45 | 3% | 7 | 2% | 37 | 5% |
| | MSM and IDU | 826 | 12% | 100 | 7% | 141 | 9% | 10 | 3% | 126 | 16% |
| | Heterosexual Contact | 114 | 2% | 156 | 11% | 71 | 4% | 12 | 3% | 37 | 5% |
| | Blood/Pediatric | 41 | 1% | 38 | 3% | 7 | 0% | 3 | 1% | 6 | 1% |
| | No Identified Risk | 345 | 5% | 303 | 21% | 160 | 10% | 77 | 20% | 51 | 6% |
| | *Total Male* | 7,017 | 100% | 1,413 | 100% | 1,630 | 100% | 377 | 100% | 803 | 100% |
| Female | Injecting Drug Use (IDU) | 192 | 26% | 43 | 5% | 26 | 11% | 2 | 3% | 42 | 27% |
| | Heterosexual Contact | 436 | 60% | 503 | 60% | 159 | 68% | 51 | 65% | 89 | 57% |
| | Blood/Pediatric | 17 | 2% | 44 | 5% | 7 | 3% | 3 | 4% | 3 | 2% |
| | No Identified Risk | 83 | 11% | 247 | 30% | 43 | 18% | 23 | 29% | 21 | 14% |
| | *Total Female* | 728 | 100% | 837 | 100% | 235 | 100% | 79 | 100% | 155 | 100% |
| Transgender Female | Male sex partner | 30 | 68% | 16 | 89% | 24 | 69% | 4 | 100% | 9 | 69% |
| | Male sex partner and IDU | 11 | 25% | 1 | 6% | 7 | 20% | 0 | 0% | 3 | 23% |
| | Other | 0 | 0% | 0 | 0% | 2 | 6% | 0 | 0% | 0 | 0% |
| | No Identified Risk | 3 | 7% | 1 | 6% | 2 | 6% | 0 | 0% | 1 | 8% |
| | *Total Transgender Female* | 44 | 100% | 18 | 100% | 35 | 100% | 4 | 100% | 13 | 100% |

Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.

[A] Due to the small number of transgender male HIV cases, further stratification is not possible.

TABLE 1-9. NEW AIDS CASES AND DEATHS AMONG CASES OF HIV INFECTION, BY DEMOGRAPHIC AND RISK CHARACTERISTICS, WA STATE, 1982-2018

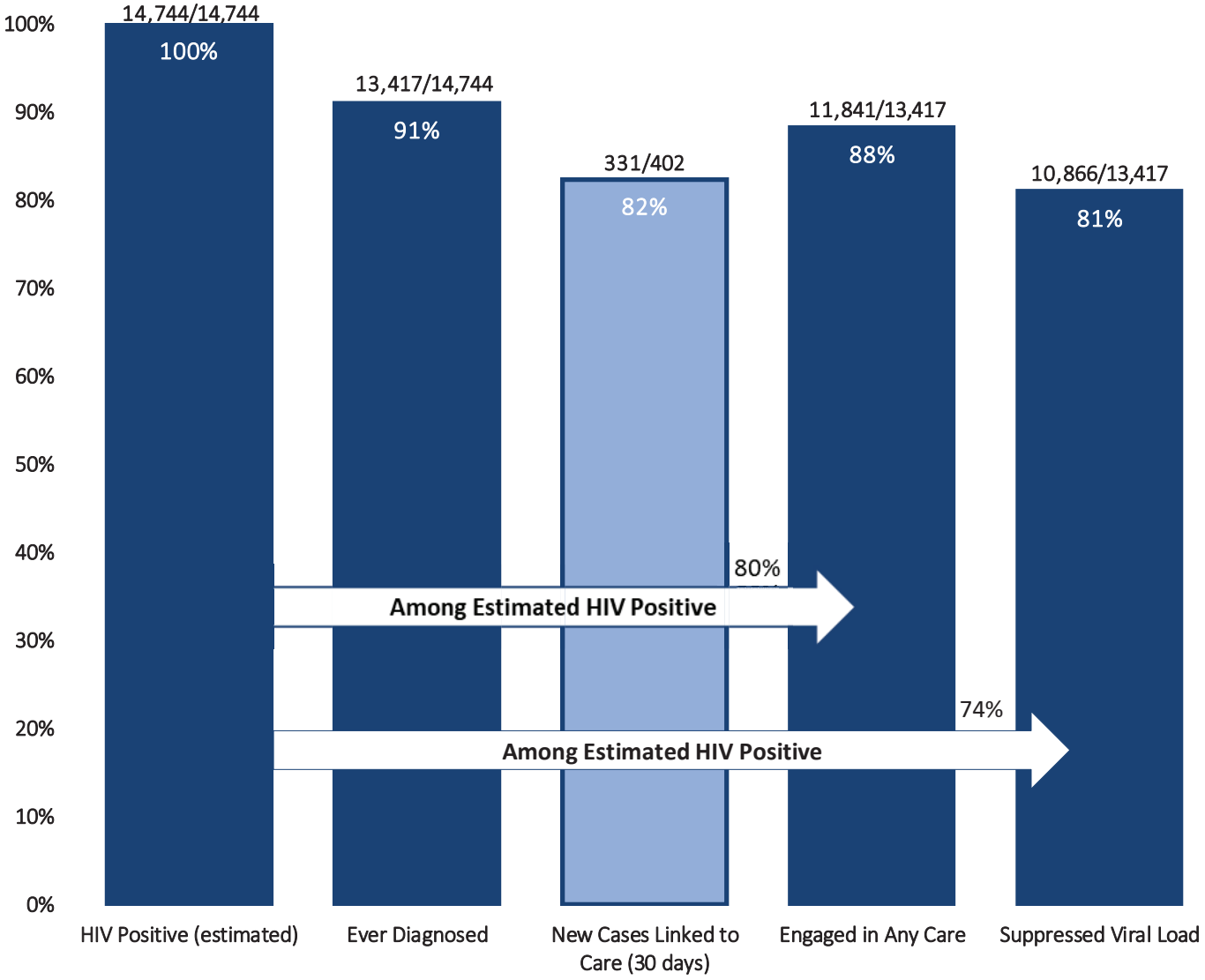
| | New AIDS Cases, 2018[B] | | | Deaths among Cases of HIV Infection | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 2017 | | | | 1983-2017 | |
| *Total* | No. | Column % | Crude rate | No. | Column % | Age-Adjusted Rate (per 100K) | Case Fatality Rate (per 1,000) | No. | Column % |
| | 193 | 100% | 2.6 | 164 | 100% | 2.2 | 12.2 | 8210 | 100% |
| **Gender** | | | | | | | | | |
| Male | 150 | 78% | 4.3 | 140 | 85% | 3.8 | 12.4 | 7489 | 91% |
| Female | 41 | 21% | 1.1 | 24 | 15% | 0.6 | 11.7 | 703 | 9% |
| Transgender male | 1 | 1% | n/a | 0 | 0% | 0.0 | 0.0 | 0 | 0% |
| Transgender female | 1 | 1% | n/a | 0 | 0% | 0.0 | 0.0 | 18 | 0% |
| **Current Age** | | | | | | | | | |
| < 13 | 0 | 0% | 0.0 | 0 | 0% | 0.0 | 0.0 | 19 | 0% |
| 13-24 | 12 | 6% | 1.1 | 0 | 0% | 0.0 | 0.0 | 100 | 1% |
| 25-34 | 44 | 23% | 4.2 | 9 | 5% | 0.9 | 5.3 | 1732 | 21% |
| 35-44 | 47 | 24% | 4.9 | 14 | 9% | 1.5 | 5.2 | 3019 | 37% |
| 45-54 | 48 | 25% | 5.1 | 54 | 33% | 5.7 | 13.4 | 1983 | 23% |
| 55-64 | 32 | 17% | 3.3 | 58 | 35% | 6.0 | 17.1 | 953 | 11% |
| 65+ | 10 | 5% | 0.9 | 29 | 18% | 2.5 | 24.0 | 404 | 5% |
| **Race/ethnicity** | | | | | | | | | |
| American Indian / Alaska Native | 0 | 0% | 0.0 | 1 | 1% | 1.1 | 7.4 | 127 | 2% |
| Asian | 7 | 4% | 1.1 | 4 | 2% | 0.6 | 8.7 | 95 | 1% |
| Black | 55 | 28% | 19.8 | 24 | 15% | 8.7 | 10.5 | 780 | 10% |
| Foreign-born[A] | 30 | 16% | 50.2 | 3 | 2% | 5.0 | 3.2 | 66 | 1% |
| U.S.-born[A] | 23 | 12% | 11.2 | 18 | 11% | 8.8 | 14.5 | 678 | 8% |
| Latinx | 35 | 18% | 3.6 | 18 | 11% | 1.9 | 9.5 | 528 | 6% |
| Foreign-born[A] | 20 | 10% | 6.6 | 4 | 2% | 1.3 | 4.2 | 182 | 2% |
| U.S.-born[A] | 8 | 4% | 1.2 | 13 | 8% | 2.0 | 16.1 | 299 | 4% |
| Native Hawaiian / Pacific Islander | 3 | 2% | 5.8 | 0 | 0% | 0.0 | 0.0 | 17 | 0% |
| White | 81 | 42% | 1.6 | 110 | 67% | 2.2 | 14.1 | 6394 | 78% |
| Multiple | 12 | 6% | 3.7 | 7 | 4% | 2.2 | 9.0 | 267 | 3% |
| **Mode of Exposure** | | | | | | | | | |
| Male / Male Sex (MSM) | 89 | 46% | n/a | 85 | 52% | n/a | 10.3 | 5270 | 64% |
| Injection Drug Use (IDU) | 10 | 5% | n/a | 26 | 16% | n/a | 33.5 | 918 | 11% |
| MSM/IDU | 17 | 9% | n/a | 20 | 12% | n/a | 16.3 | 891 | 11% |
| Heterosexual | 19 | 10% | n/a | 14 | 9% | n/a | 8.6 | 471 | 6% |
| Blood/pediatric | 3 | 2% | n/a | 0 | 0% | n/a | 0.0 | 184 | 2% |
| No Identified Risk (NIR) | 55 | 28% | n/a | 19 | 12% | n/a | 13.9 | 476 | 6% |

Table based on HIV surveillance data reported to the WA State Department of Health as of July 31, 2019.

[A] Country of origin data are missing for approximately 10% of newly diagnosed cases.

[B] Includes new cases concurrently diagnosed with both HIV and AIDS, as well as HIV cases that progressed to AIDS.

FIGURE 1-1. 2018 WASHINGTON STATE CARE CONTINUUM AS OF JULY 2019




Based on HIV surveillance data reported through July 31, 2019.

# Development and Impact of a New HIV Incidence Definition for Washington State

SUMMARY

In 2019, the Washington State Department of Health examined the definition of new diagnoses of HIV new diagnoses are a proxy for HIV incidence.

A self reported HIV diagnosis greater than 180 days before a reported diagnosis was selected as a new criteria to exclude diagnoses which were not incident (or new) diagnoses in WA.

Application of this new criteria resulted in excluding approximately 15% of diagnoses each year 2010-2018.

## Background and Aims

HIV incidence is defined as the number of people newly infected with HIV within a specified time period. Reducing incidence is a central target to both the "End AIDS Washington" and the nationwide "Ending the HIV Epidemic" initiatives. Incidence is difficult to measure for HIV, especially when using surveillance data. Not all people living with HIV have been diagnosed and the gap between infection and diagnosis can range widely; in Washington we estimate that 9% of people living with HIV have not yet been diagnosed. Additionally, not all of those who are diagnosed are reported to surveillance programs. As such, we can only estimate HIV incidence using newly reported diagnoses as a proxy measure.

New cases are reported to the Washington State Department of Health (DOH) or the Public Health – Seattle & King County HIV surveillance program when a person living with HIV is identified through lab reporting, medical providers, or other surveillance programs. Incident cases have been defined by DOH as persons whose first HIV-indicated laboratory results or first diagnosis by a healthcare provider occurred while living in Washington. This criterion is consistent with CDC methodology, but can lead to an overestimate of incident cases. For example, if a person was diagnosed with HIV in another country, their labs may not be available to a surveillance program and the individual

would appear to be newly diagnosed. Public health staff make attempts to distinguish new diagnoses from previously diagnosed individuals with case records from other jurisdictions, but this is not always successful. Differences in reporting over time and by geography limits the information that is available from different surveillance programs. As a result, DOH examined the possibility of refining our definition of incident cases to better characterize the epidemic in our state.

# Methods

The date of a person's first positive HIV test is routinely collected via self-report in HIV case investigations and HIV and STD partner services investigations. Assuming that people generally remember and accurately report their testing history, this information could be a useful supplement to laboratory data. We evaluated the reclassification of individuals who reported a positive HIV-test 180 days prior to their first HIV-indicating lab result reported to the state as a prior diagnosis (i.e., not an incident case in Washington). This rule assumes that had the person's test occurred in Washington, it would have been reported; therefore it is likely that their diagnosis occurred out of state. Additionally, we evaluated the potential of using this criterion in conjunction with two additional criteria: foreign-birth and viral suppression within 30 days of the traditional HIV diagnosis date. The lab records of people who are diagnosed with HIV in foreign countries are not reported reliably to the Washington State Department of Health, and many individuals are misclassified under the traditional case criteria. It was conjectured that people who achieve viral suppression within 30 days of their HIV diagnosis may be more likely to have transferred HIV care from another jurisdiction than to be newly infected.

To evaluate the new criteria, the results of HIV case reviews from King County were used as a gold standard for accurately identifying incident cases during the years of 2016 to mid-2019 that were reported by mid-2019. King County has access to an expanded set of information (including electronic medical records and direct access to partner services) that can be used to make case-by-case decisions regarding the date and location of HIV diagnosis. This information was used to review 760 King County cases that were considered incident using DOH criteria. The predictive value positive (the probability that an individual who meets the criteria for a non-incident diagnosis is truly a non-incident case in King County) and the sensitivity (the probability that a non-incident case in King County is correctly classified by the criteria) were used to evaluate the accuracy of the new incidence criteria.

**Table 2-1: Evaluation of Incident Case Criteria for 760 King County Cases Considered Incident by DOH from 2016 to mid-2019 (166 Considered Non-Incident in King County)**

| Attribute(s) | % of Incident Cases With Attribute(s) | N Correctly Classified as an Old Diagnosis (True Positive) | N Incorrectly Classified as Old Diagnosis (False Positive) | Predictive Value Positive | Sensitivity |
|---|---|---|---|---|---|
| Self-Reported Positive HIV Test >180 Days before Surveillance Diagnosis (SRP) | 20% | 136 | 11 | 93% | 82% |
| SRP + Foreign Born | 17% | 125 | 2 | 98% | 75% |
| SRP + Viral Suppression within 30 Days | 9% | 26 | 0 | 100% | 16% |
| All 3 Criteria | 9% | 24 | 0 | 100% | 14% |

# Results

Of 760 cases that met the traditional criteria for incidence between 2016 and mid-2019, 166 were considered non-incident after King County case review. Of these 166, 136 had a self-reported positive HIV Test >180 days before their surveillance diagnosis date (sensitivity=82%). These 136 came from a total of 147 individuals who had a self-reported positive >180 days before their diagnosis date (predictive value positive=93%). These results indicate that a self-reported positive >180 days before the lab-based surveillance diagnosis date is a reasonably accurate way to classify cases as non-incident. A rule using foreign birth as an additional criterion also performed well (sensitivity=75%, predictive value positive=98%), but was not used because of its increased complexity.

TABLE 2-2: COMPLETION OF SELF-REPORTED HIV TESTING HISTORY OF WASHINGTON STATE INCIDENT CASES FROM 2010-2018

| Year | Incident HIV Cases (Old Criteria) | Any Self-Reported HIV Testing Information | |
|---|---|---|---|
| | N | N | % |
| 2010 | 557 | 500 | 89.8 |
| 2011 | 492 | 440 | 89.4 |
| 2012 | 511 | 401 | 78.5 |
| 2013 | 456 | 356 | 78.1 |
| 2014 | 448 | 376 | 83.9 |
| 2015 | 461 | 369 | 80.0 |
| 2016 | 438 | 306 | 69.9 |
| 2017 | 445 | 294 | 66.1 |
| 2018 | 510 | 328 | 64.3 |

To explore the applicability of the criteria to previous years of data, the completion of self-reported testing history was examined from 2010 to 2018. The percentage of incident cases with any self-reported testing information was calculated (Table 2-2).

The high historical completion rates suggest that a rule based on self-reported positive dates could be consistently applied as far back as 2010. In more recent years, HIV testing data is less complete, suggesting that these criteria could perform worse, although a decrease in self-reported previous positives dates may represent better capture and reporting of documented first positive HIV test dates. Some drop-off may also be artifact of the data collection methods; while most self-reports are collected during new case investigations, there are additional opportunities to get this information during AIDS and STD investigations, which can occur years later. There was no decrease in sensitivity or predictive value positive when the data was analyzed by year, which suggests that the incidence-defining information is still being captured well.

# Conclusions

Based on our findings we made the decision to change the incident case definition to exclude individuals who report previous positive tests 180 days or more before their first laboratory evidence of HIV in Washington. Consequently, the reported number of incident cases

FIGURE 2-1: INCIDENT HIV CASES IN WASHINGTON STATE BY YEAR USING TWO INCIDENCE DEFINITIONS

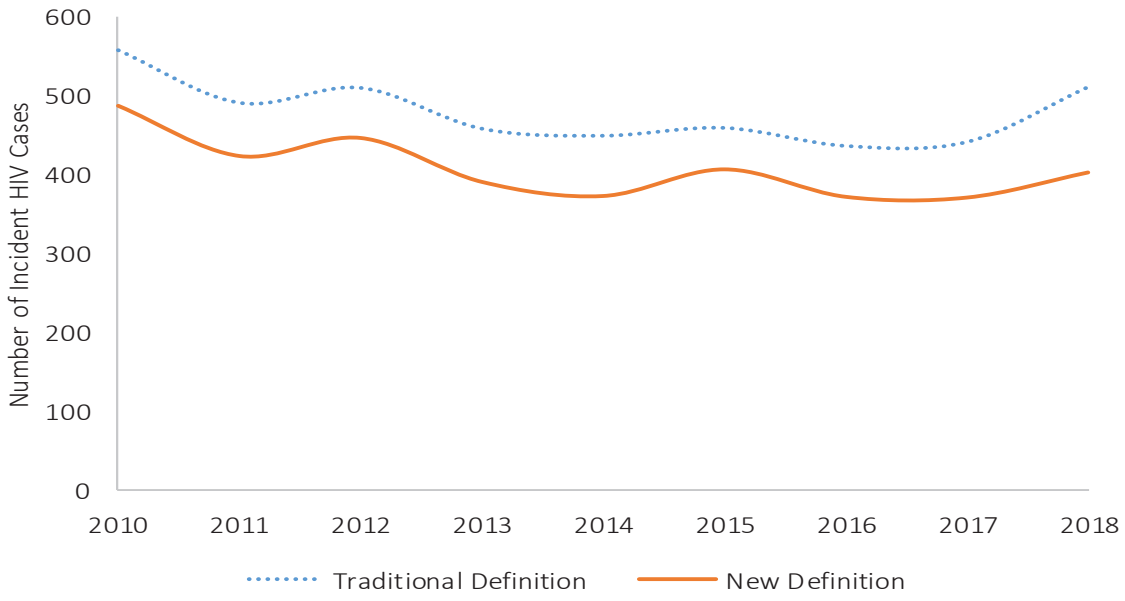
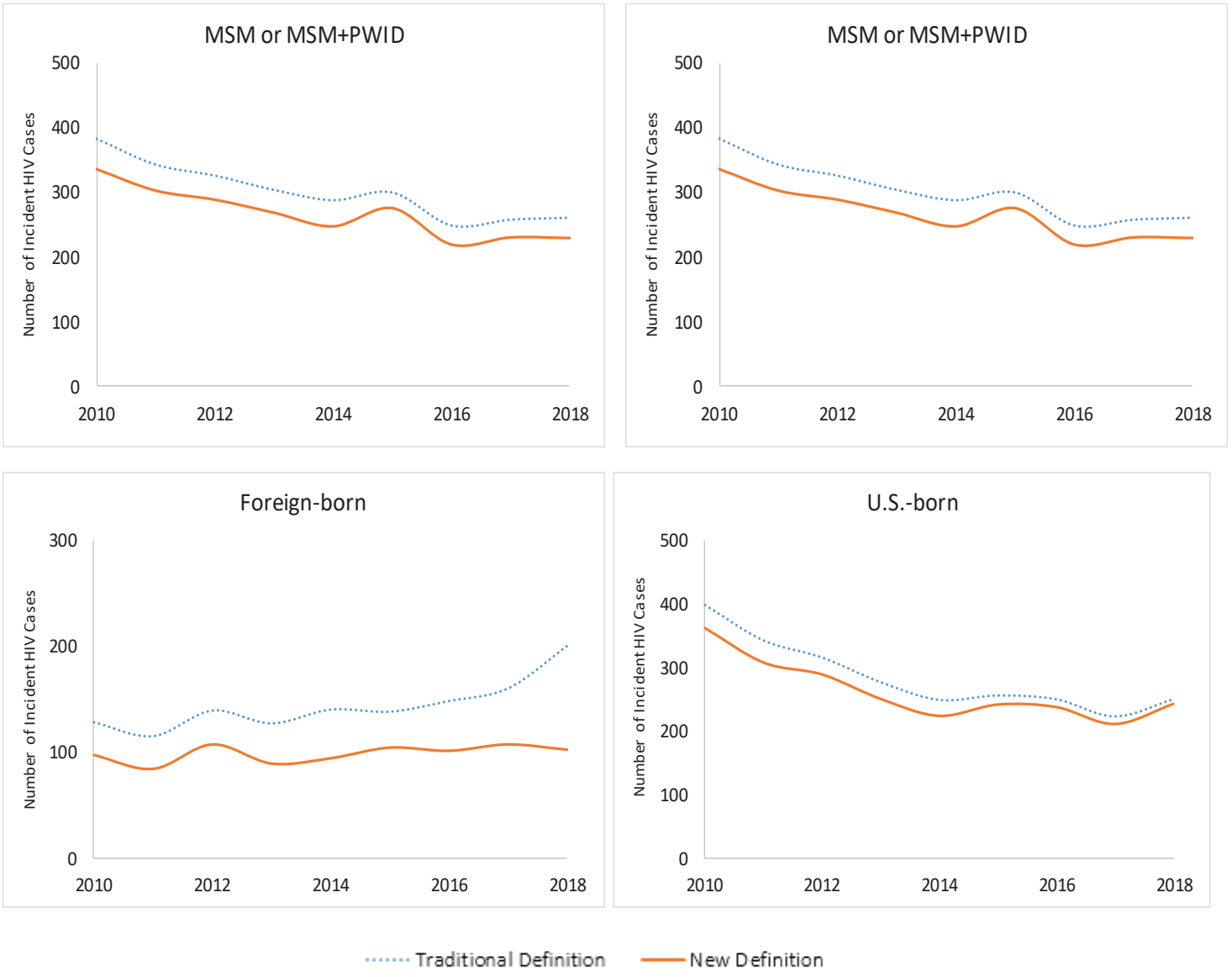


FIGURE 2-2: INCIDENT HIV CASES IN WASHINGTON STATE BY YEAR AND DEMOGRAPHIC CHARACTERISTIC

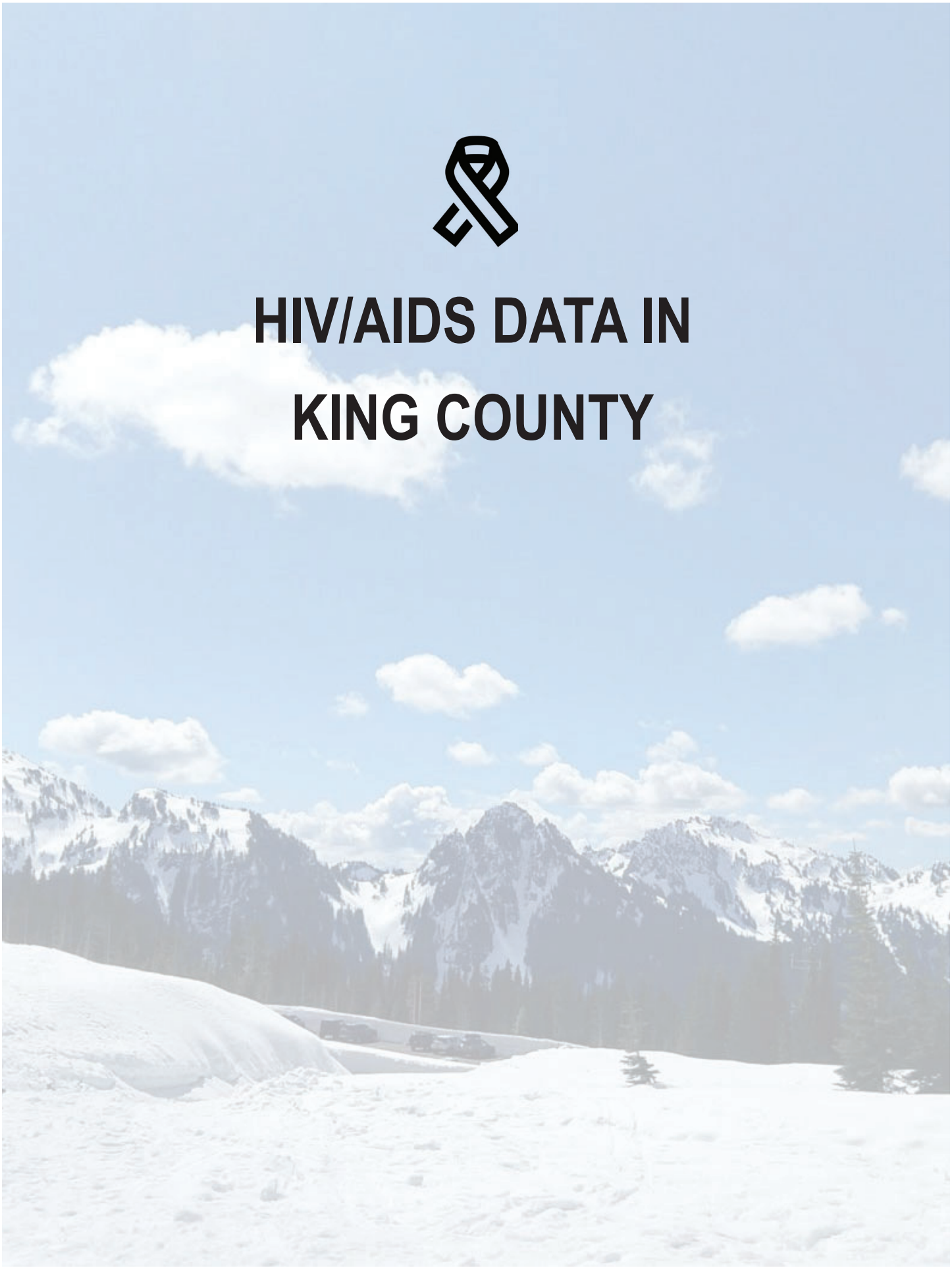



Abbreviations used: MSM = Men who have sex with men; PWID = People who inject drugs.

decreased an average of 15% per year over the period of 2010 to 2018.

The largest annual decrease in HIV diagnoses with this new method was 20% in 2018. Characterization of the decrease can be found in **Figures 2-1 and 2-2. Figure 2-2** shows case counts using both incident definitions for priority populations, which include men who have sex with men (MSM) or MSM and persons who inject drugs (PWID), foreign-born and U.S.-born persons. While this change will cause a discrepancy between DOH and CDC counts of incident cases, we believe that it provides a more accurate description of the epidemic in Washington State and will be yield a more sensitive and responsive measure for prevention efforts.

***Contributed by Steven Erly and Jennifer Reuer***



# HIV/AIDS DATA IN KING COUNTY

TABLE 3-1. PEOPLE LIVING WITH HIV INFECTION AS OF DECEMBER 31, 2018 BY RESIDENCE STATUS, KING COUNTY

| | All Cases of HIV Infection Currently Residing in King County | | | | | | Out-migrants diagnosed in King county but now living out of jurisdiction | |
|---|---|---|---|---|---|---|---|---|
| | Total | | King County resident at time of diagnosis | | OOJ resident at time of diagnosis | | | |
| | No. | % | No. | % | No. | % | No. | % |
| **Total** | 7,023 | 100% | 4,758 | 100% | 2,265 | 100% | 3,242 | 100% |
| **Gender Identity** | | | | | | | | |
| Male | 6,079 | 87% | 4,066 | 85% | 2,013 | 89% | 2,903 | 90% |
| Female | 880 | 13% | 651 | 14% | 229 | 10% | 314 | 10% |
| Transgender male | 6 | 0% | 4 | 0% | 2 | 0% | 2 | 0% |
| Transgender female | 58 | 1% | 37 | 1% | 21 | 1% | 23 | 1% |
| **Current Age** | | | | | | | | |
| < 13 | 10 | 0% | 10 | 0% | 0 | 0% | 1 | 0% |
| 13 - 24 | 125 | 2% | 90 | 2% | 35 | 2% | 40 | 1% |
| 25 - 34 | 952 | 14% | 573 | 12% | 379 | 17% | 286 | 9% |
| 35 - 44 | 1,479 | 21% | 898 | 19% | 581 | 26% | 581 | 18% |
| 45 - 54 | 2,094 | 30% | 1,433 | 30% | 661 | 29% | 1,105 | 34% |
| 55+ | 2,363 | 34% | 1,754 | 37% | 609 | 27% | 1,229 | 38% |
| **Race and Latinx Origin** | | | | | | | | |
| White | 3,843 | 55% | 2,635 | 55% | 1,208 | 53% | 2,056 | 63% |
| Black | 1,414 | 20% | 937 | 20% | 477 | 21% | 487 | 15% |
| - *U.S.-Born Black* [A] | 766 | 11% | *437* | *9%* | *329* | *15%* | *260* | *8%* |
| - *Foreign-Born Black* [A] | 617 | 9% | *478* | *10%* | *139* | *6%* | *214* | *7%* |
| Latinx (all races) | 983 | 14% | 635 | 13% | 348 | 15% | 412 | 13% |
| - *U.S.-Born Latinx* [A] | 451 | 6% | *250* | *5%* | *201* | *9%* | *164* | *5%* |
| - *Foreign-Born Latinx* [A] | 491 | 7% | *359* | *8%* | *132* | *6%* | *220* | *7%* |
| Asian | 297 | 4% | 234 | 5% | 63 | 3% | 99 | 3% |
| Native Hawaiian / Pacific Islander | 26 | 0% | 22 | 0% | 4 | 0% | 3 | 0% |
| American Indian / Alaska Native | 44 | 1% | 32 | 1% | 12 | 1% | 31 | 1% |
| Multiple Race | 416 | 6% | 263 | 6% | 153 | 7% | 154 | 5% |
| **Exposure Category by Sex Assigned at Birth** | | | | | | | | |
| Male only: | | | | | | | | |
| - Male / Male Sex (MSM) | 4,679 | 67% | 3,144 | 66% | 1,535 | 68% | 2,281 | 70% |
| - People Who Inject Drugs (PWID) | 174 | 2% | 113 | 2% | 61 | 3% | 81 | 2% |
| - MSM and PWID | 641 | 9% | 369 | 8% | 272 | 12% | 305 | 9% |
| - Heterosexual Contact | 180 | 3% | 125 | 3% | 55 | 2% | 76 | 2% |
| - Pediatric | 23 | 0% | 14 | 0% | 9 | 0% | 4 | 0% |
| - Transfusion / Hemophiliac | 14 | 0% | 10 | 0% | 4 | 0% | 5 | 0% |
| - No Identified Risk | 426 | 6% | 328 | 7% | 98 | 4% | 174 | 5% |
| Female only: | | | | | | | | |
| - PWID | 103 | 1% | 74 | 2% | 29 | 1% | 50 | 2% |
| - Heterosexual Contact | 535 | 8% | 403 | 8% | 132 | 6% | 197 | 6% |
| - Pediatric | 32 | 0% | 21 | 0% | 11 | 0% | 6 | 0% |
| - Transfusion / Hemophiliac | 10 | 0% | 8 | 0% | 2 | 0% | 4 | 0% |
| - No Identified Risk | 206 | 3% | 149 | 3% | 57 | 3% | 59 | 2% |

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2019.

[A] Country of origin data are missing for approximately 4% of cases living in King County.

TABLE 3-2. NEWLY DIAGNOSED CASES OF HIV INFECTION, KING COUNTY

| | Newly Diagnosed Cases of HIV Disease | | | | | | | | Annual Rate | Late HIV Diagnoses |
|---|---|---|---|---|---|---|---|---|---|---|
| Year of HIV diagnosis: | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2017-2018 | | 2017-2018 | 2016-2017[A] |
| | No. | No. | No. | No. | No. | No. | No. | % | | % |
| **Total** | 215 | 222 | 205 | 178 | 162 | 218 | 380 | 100% | 10.1 | 25% |
| **Gender Identity** | | | | | | | | | | |
| Male | 189 | 196 | 181 | 149 | 134 | 172 | 306 | 81% | 16.0 | 23% |
| Female | 24 | 22 | 22 | 27 | 25 | 46 | 71 | 19% | 4.2 | 33% |
| Transgender male | 0 | 1 | 0 | 0 | 1 | 0 | 1 | <1% | --- | 0% |
| Transgender female | 2 | 3 | 2 | 2 | 2 | 0 | 2 | 1% | --- | 50% |
| **Age at HIV Diagnosis** | | | | | | | | | | |
| < 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | <1.0 | 0% |
| 13 - 24 | 31 | 39 | 29 | 34 | 24 | 26 | 50 | 13% | 8.2 | 12% |
| 25 - 34 | 62 | 73 | 72 | 64 | 64 | 81 | 145 | 38% | 20.5 | 16% |
| 35 - 44 | 65 | 50 | 48 | 38 | 24 | 52 | 76 | 20% | 16.6 | 27% |
| 45 - 54 | 43 | 38 | 37 | 20 | 33 | 31 | 64 | 17% | 11.0 | 40% |
| 55+ | 14 | 22 | 19 | 22 | 17 | 28 | 45 | 12% | 5.3 | 49% |
| **Race and Latinx Origin** | | | | | | | | | | |
| White | 119 | 114 | 105 | 76 | 72 | 108 | 180 | 47% | 8.3 | 18% |
| Black | 35 | 45 | 43 | 33 | 35 | 49 | 84 | 22% | 35.6 | 40% |
| - *U.S.-Born Black* [B] | *19* | *25* | *27* | *19* | *18* | *21* | 39 | *10%* | 20.3 | *24%* |
| - *Foreign-Born Black* [B] | *15* | *20* | *13* | *14* | *14* | *27* | 41 | *11%* | 79.0 | *57%* |
| Latinx (all races) | 35 | 28 | 35 | 39 | 34 | 39 | 73 | 19% | 18.2 | 22% |
| - *U.S.-Born Latinx* [B] | *13* | *8* | *12* | *22* | *13* | *22* | 35 | *9%* | 16.2 | *14%* |
| - *Foreign-Born Latinx* [B] | *22* | *20* | *20* | *16* | *21* | *15* | 36 | *9%* | 18.0 | *30%* |
| Asian | 11 | 20 | 18 | 17 | 11 | 10 | 21 | 6% | 2.7 | 43% |
| Native Hawaiian / Pacific Islander | 3 | 2 | 1 | 0 | 3 | 3 | 6 | 2% | 16.3 | 0% |
| American Indian / Alaska Native | 2 | 4 | 0 | 3 | 2 | 1 | 3 | 1% | 7.4 | 20% |
| Multiple Race | 10 | 9 | 3 | 10 | 5 | 8 | 13 | 3% | 7.9 | 20% |
| **Exposure Category by Sex Assigned at Birth** | | | | | | | | | | |
| Male only: | | | | | | | | | | |
| - Male / Male Sex (MSM) | 149 | 156 | 146 | 112 | 103 | 106 | 209 | 55% | --- | 20% |
| - People Who Inject Drugs (PWID) | 3 | 3 | 5 | 8 | 4 | 15 | 19 | 5% | --- | 17% |
| - MSM and PWID | 19 | 16 | 10 | 14 | 10 | 21 | 31 | 8% | --- | 29% |
| - Heterosexual Contact | 3 | 2 | 2 | 5 | 1 | 3 | 4 | 1% | --- | 17% |
| - Pediatric | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | --- | --- |
| - Transfusion / Hemophiliac | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | --- | --- |
| - No Identified Risk | 17 | 22 | 20 | 12 | 18 | 27 | 45 | 12% | --- | 53% |
| Female only: | | | | | | | | | | |
| - PWID | 1 | 5 | 2 | 3 | 3 | 16 | 19 | 5% | --- | 17% |
| - Heterosexual Contact | 11 | 11 | 15 | 17 | 14 | 21 | 35 | 9% | --- | 35% |
| - Pediatric | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | --- | --- |
| - Transfusion / Hemophiliac | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0% | --- | 0% |
| - No Identified Risk | 12 | 7 | 5 | 6 | 9 | 9 | 18 | 5% | --- | 33% |

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2019.

[A] Late HIV diagnoses based on new HIV cases diagnosed between 2016 and 2017.

[B] Country of origin data are missing for approximately 7% of cases recently diagnosed in King County.

Rates are per 100,000 residents. Rates assume 25% of Black and 38% of Latinx residents are foreign-born.

## Table 3-3. AIDS Cases and Cumulative Deaths, 1981-2018, King County

| | Recent AIDS Cases 2017-2018 | | | Current AIDS Cases living in King County 2018 | | | Cumulative AIDS Cases 1981-2018 | | Cumulative Deaths [A] 1981-2018 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | Rate | No. | % | Rate | No. | % | No. | % |
| **Total** | 188 | 100% | 4.3 | 3,521 | 100% | 160.8 | 9,137 | 100% | 5463 | 100% |
| **Gender Identity** | | | | | | | | | | |
| Male | 154 | 82% | 7.1 | 3,043 | 86% | 277.9 | 8,353 | 91% | 5143 | 94% |
| Female | 31 | 16% | 1.4 | 447 | 13% | 40.8 | 742 | 8% | 308 | 6% |
| Transgender male | 1 | 1% | --- | 1 | <1% | --- | 1 | 0% | 1 | 0% |
| Transgender female | 2 | 1% | --- | 30 | 1% | --- | 41 | 0% | 11 | 0% |
| **Age at AIDS Diagnosis** | | | | **Current Age** | | | | | **Age at Death** | |
| < 13 | 0 | 0% | --- | 0 | 0% | --- | 14 | 0% | 7 | 0% |
| 13 - 24 | 13 | 7% | 2.1 | 20 | 1% | 6.3 | 303 | 3% | 39 | 1% |
| 25 - 34 | 51 | 27% | 6.4 | 236 | 7% | 58.5 | 3,098 | 34% | 1157 | 21% |
| 35 - 44 | 41 | 22% | 6.4 | 566 | 16% | 173.3 | 3,576 | 39% | 2113 | 39% |
| 45 - 54 | 44 | 23% | 7.8 | 1,157 | 33% | 410.8 | 1,589 | 17% | 1284 | 24% |
| 55+ | 39 | 21% | 3.7 | 1,542 | 44% | 290.4 | 557 | 6% | 863 | 16% |
| **Race and Latinx Origin** | | | | | | | | | | |
| White | 67 | 36% | 2.6 | 1,868 | 53% | 142.3 | 6,270 | 69% | 4244 | 78% |
| Black | 58 | 31% | 20.8 | 722 | 21% | 511.8 | 1,296 | 14% | 603 | 11% |
| Latinx (all races) | 35 | 19% | 7.9 | 501 | 14% | 223.9 | 840 | 9% | 322 | 6% |
| Asian | 10 | 5% | 1.4 | 145 | 4% | 38.4 | 215 | 2% | 73 | 1% |
| Native Hawaiian / Pacific Islander | 2 | 1% | 5.4 | 15 | <1% | 80.1 | 24 | 0% | 10 | 0% |
| American Indian / Alaska Native | 2 | 1% | 7.4 | 29 | 1% | 213.1 | 103 | 1% | 66 | 1% |
| Multiple Race | 14 | 7% | 6.9 | 241 | 7% | 234.6 | 389 | 4% | 145 | 3% |
| **Exposure Category by Sex Assigned at Birth** | | | | | | | | | | |
| Male only: | | | | | | | | | | |
| - Male / Male Sex (MSM) | 95 | 51% | --- | 2,218 | 63% | --- | 6,325 | 69% | 3920 | 72% |
| - Injecting Drug Use (IDU) | 4 | 2% | --- | 111 | 3% | --- | 373 | 4% | 279 | 5% |
| - People Who Inject Drugs (PWID) | 21 | 11% | --- | 360 | 10% | --- | 973 | 11% | 629 | 12% |
| - MSM and PWID | 6 | 3% | --- | 123 | 3% | --- | 197 | 2% | 61 | 1% |
| - Pediatric | 1 | 1% | --- | 8 | <1% | --- | 8 | 0% | 4 | 0% |
| - Transfusion / Hemophiliac | 0 | 0% | --- | 10 | <1% | --- | 65 | 1% | 55 | 1% |
| - No Identified Risk | 29 | 15% | --- | 243 | 7% | --- | 453 | 5% | 206 | 4% |
| Female only: | | | | | | | | | | |
| - PWID | 4 | 2% | --- | 62 | 2% | --- | 169 | 2% | 119 | 2% |
| - Heterosexual Contact | 16 | 9% | --- | 289 | 8% | --- | 455 | 5% | 146 | 3% |
| - Pediatric | 0 | 0% | --- | 10 | <1% | --- | 12 | 0% | 5 | 0% |
| - Transfusion / Hemophiliac | 0 | 0% | --- | 7 | <1% | --- | 23 | 0% | 18 | 0% |
| - No Identified Risk | 12 | 6% | --- | 80 | 2% | --- | 84 | 1% | 21 | 0% |

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2019.

[A] Includes 342 cases with an HIV-only Diagnosis and 5,121 AIDS Cases. 3,852/5,463 (70.5%) deaths had HIV listed as an underlying condition.

Rates are per 100,000 residents.

TABLE 3-4. LIVING [A] CASES OF HIV INFECTION BY CURRENT GENDER [B], RACE/ETHNICITY, AND HIV EXPOSURE CATEGORY AS OF DECEMBER 31, 2018, KING COUNTY

| | White | | Black | | Latinx | | Asian | | American Indian / Alaska Native | |
|---|---|---|---|---|---|---|---|---|---|---|
| Exposure Category | No. | % | No. | % | No. | % | No. | % | No. | % |
| **Male:** | | | | | | | | | | |
| Male / Male Sex (MSM) | 2,941 | 81% | 489 | 54% | 700 | 80% | 194 | 75% | 17 | 61% |
| People Who Inject Drugs (PWID) | 90 | 2% | 49 | 5% | 16 | 2% | 5 | 2% | 2 | 7% |
| MSM and PWID | 417 | 12% | 65 | 7% | 74 | 8% | 8 | 3% | 5 | 18% |
| Heterosexual Contact | 37 | 1% | 100 | 11% | 28 | 3% | 7 | 3% | 0 | 0% |
| *- U.S.-Born [C]* | *30* | *1%* | *26* | *3%* | *4* | *0%* | *0* | *0%* | *0* | *0%* |
| *- Foreign-Born [C]* | *6* | *0%* | *74* | *8%* | *24* | *3%* | *7* | *3%* | *0* | *0%* |
| Pediatric | 3 | 1% | 16 | 2% | 1 | 1% | 0 | 0% | 1 | 4% |
| Transfusion / Hemophiliac | 11 | 1% | 2 | 1% | 1 | 1% | 0 | 0% | 0 | 0% |
| No Identified Risk | 115 | 3% | 186 | 21% | 55 | 6% | 45 | 17% | 3 | 11% |
| **Total Males** | **3,614** | 100% | **907** | 100% | **875** | 100% | **259** | 100% | **28** | 100% |
| **Female:** | | | | | | | | | | |
| People Who Inject Drugs (PWID) | 53 | 26% | 24 | 5% | 8 | 9% | 1 | 3% | 6 | 38% |
| Heterosexual Contact | 122 | 60% | 297 | 60% | 60 | 67% | 20 | 56% | 9 | 56% |
| *- U.S.-Born [C]* | *108* | *53%* | *80* | *16%* | *13* | *15%* | *2* | *4%* | *8* | *50%* |
| *- Foreign-Born [C]* | *9* | *4%* | *214* | *43%* | *46* | *52%* | *18* | *32%* | *1* | *6%* |
| Pediatric | 4 | 2% | 23 | 5% | 2 | 2% | 1 | 3% | 0 | 0% |
| Transfusion / Hemophiliac | 2 | 1% | 6 | 1% | 1 | 1% | 0 | 0% | 0 | 0% |
| No Identified Risk | 22 | 11% | 145 | 29% | 18 | 20% | 14 | 39% | 1 | 6% |
| **Total Females** | **203** | 100% | **495** | 100% | **89** | 100% | 36 | 100% | **16** | 100% |
| **Transgender Female:** | | | | | | | | | | |
| Male Sex Partner | 15 | 71% | 10 | 91% | 15 | 79% | 2 | 100% | 0 | 0% |
| Male Sex Partner & PWID | 5 | 24% | 1 | 9% | 4 | 21% | 0 | 0% | 0 | 0% |
| No Identified Risk | 1 | 5% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Total Transgender Females** | **21** | 100% | **11** | 100% | **19** | 100% | **2** | 100% | **0** | 0% |

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2019.

[A] Table excludes 26 Native Hawaiian and Pacific Islander cases due to small numbers. Also excluded are 416 cases reported as belonging to more than one racial or ethnic group.

[B] Due to the small number of transgender male HIV cases, further stratification is not possible.

[C] Country of origin data are missing for approximately 4% of cases living in King County.

## Table 3-5. Cases of HIV Infection Among Transgender People 2009-2018, King County

| | New HIV Diagnoses (2009-2018) | | | | Transgender HIV Cases Presumed Living in King County at the End of 2018 | |
|---|---|---|---|---|---|---|
| | Transgender HIV Cases [A] | | All HIV Cases | | | |
| | No. | % | No. | % | No. | % |
| **Total [B]** | 26 | 100% | 2,674 | 100% | 64 | 100% |
| **Race and Latinx Origin** | | | | | | |
| White | 15 | 58% | 1,324 | 50% | 26 | 41% |
| Black | 1 | 4% | 597 | 22% | 12 | 19% |
| Latinx (all races) | 6 | 23% | 437 | 16% | 19 | 30% |
| Other/Unknown | 4 | 15% | 316 | 12% | 7 | 11% |
| **Injection Drug Use** | | | | | | |
| Yes | 7 | 27% | 315 | 12% | 13 | 20% |
| No | 11 | 42% | 1,642 | 61% | 32 | 50% |
| Unknown | 8 | 31% | 717 | 27% | 19 | 30% |
| **Age at HIV Diagnosis** | | | | | **Age at end of 2018** | |
| < 13 | 0 | 0% | 19 | 1% | 0 | 0% |
| 13 - 24 | 6 | 23% | 381 | 14% | 1 | 2% |
| 25 - 34 | 10 | 38% | 872 | 33% | 16 | 25% |
| 35 - 44 | 5 | 19% | 676 | 25% | 15 | 23% |
| 45 - 54 | 5 | 19% | 473 | 18% | 21 | 33% |
| 55+ | 0 | 0% | 253 | 9% | 11 | 17% |

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2019.

[A] Identification of people that describe themselves as Transgender, relies on review of information in medical records and/or self-disclosure during partner services interviews, gender identity has been collected on the HIV/AIDS Case report in Washington since late 2004. Data presented here are a potential undercount.

[B] For those cases reported that identified as transgender, 88% (n=23) of HIV cases diagnosed 2009-2018 and 91% (n=58) of persons presumed to be living in King County at the end of 2018 were assigned male at birth.

TABLE 3-6. CASES OF HIV INFECTION AMONG MEN WHO HAVE SEX WITH MEN (MSM), 2017-2018, KING COUNTY

| | New HIV Diagnoses (2017-2018) | | | | MSM HIV Cases Presumed Living in King County at the End of 2018 | |
|---|---|---|---|---|---|---|
| | MSM HIV Cases | | All HIV Cases | | | |
| | No. | % | No. | % | No. | % |
| **Total** | 290 | 100% | 516 | 100% | 5,320 | 100% |
| **Race and Latinx Origin** | | | | | | |
| White | 143 | 49% | 201 | 39% | 3,378 | 63% |
| Black | 36 | 12% | 163 | 32% | 565 | 11% |
| Latinx (all races) | 70 | 24% | 96 | 19% | 793 | 15% |
| Asian | 26 | 9% | 32 | 6% | 204 | 4% |
| Native Hawaiian / Pacific Islander | 5 | 2% | 6 | 1% | 22 | 0% |
| American Indian / Alaska Native | 1 | 0% | 3 | 1% | 22 | 0% |
| Other/Unknown | 9 | 3% | 15 | 3% | 336 | 6% |
| **Injection Drug Use** | | | | | | |
| Yes | 34 | 12% | 72 | 14% | 641 | 12% |
| No | 150 | 52% | 229 | 44% | 2,838 | 53% |
| Unknown | 106 | 37% | 215 | 42% | 1,841 | 35% |
| **Age at HIV Diagnosis** | | | | | **Age at end of 2018** | |
| < 13 | 0 | 0% | 3 | 1% | 0 | 0% |
| 13 - 24 | 49 | 17% | 63 | 12% | 80 | 2% |
| 25 - 34 | 128 | 44% | 176 | 34% | 774 | 15% |
| 35 - 44 | 56 | 19% | 114 | 22% | 1,074 | 20% |
| 45 - 54 | 37 | 13% | 90 | 17% | 1,593 | 30% |
| 55+ | 20 | 7% | 70 | 14% | 1,799 | 34% |
| **Foreign-born Status** | | | | | | |
| U.S.-born | 189 | 65% | 264 | 51% | 4,403 | 83% |
| Foreign-born | 81 | 28% | 220 | 43% | 682 | 13% |
| Unknown | 20 | 7% | 32 | 6% | 235 | 4% |

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2019.

# Monitoring the Goals of the National Strategy for HIV/AIDS (NHAS) and Ending the HIV Epidemic (EtHE)

SUMMARY

After many years of declining rates of new HIV diagnoses, in 2018 the number of new HIV diagnoses among King County residents increased 35% relative to 2017 (218 versus 162). This was the largest increase in 16 years (since 2002).

About 2/3 of the 2018 increase occurred among persons who inject drugs (PWID) and the remainder of the increase was largely among heterosexuals. The number of new HIV diagnoses among men who had sex with men (MSM) who were not PWID remained stable.

84% of King County residents with diagnosed with HIV infection were virally suppressed in 2018.

Risk of infection is higher among Black persons than among White King County residents, a disparity observed both among heterosexuals (both U.S.-born and foreign-born) and among MSM. Levels of viral suppression are lower among PWID compared to non-PWID and among U.S.-born Black persons compared to White persons.

## Introduction

The U.S. National HIV/AIDS Strategy (NHAS)[1] has three major goals: 1) reducing new HIV infections; 2) increasing access to care and improving health outcomes; and 3) reducing HIV-related disparities. In 2019, the U.S. launched a new national initiative to end the HIV epidemic (EtHE) with the goal of reducing HIV incidence by 75% by 2024 and by 90% by 2029. In this section we address the goals of both programs and present an updated HIV care continuum. The continuum is an important conceptual and visual framework for identifying aspects of HIV prevention and care that require improvement. HIV care continuums estimate the number and proportion of individuals achieving the sequential steps of HIV diagnosis, linkage to care, engagement in care, and viral suppression.

| KEY HIV GOALS | 2014 | 2018 | 2020 GOAL |
|---|---|---|---|
| Reduce new HIV diagnoses | 11/100,000 | 10/100,000 (↓9%) | ↓25% |
| Linked to care in 1 month | 88% | 89% | 90% |
| Linked to care in 3 months | 92% | 94% | 95% |
| In HIV care | 89% | 90% | 95% |
| Viral suppression | 79% | 84% | 90% |

# The Four Pillars of EtHE Support the Goals of the NHAS:

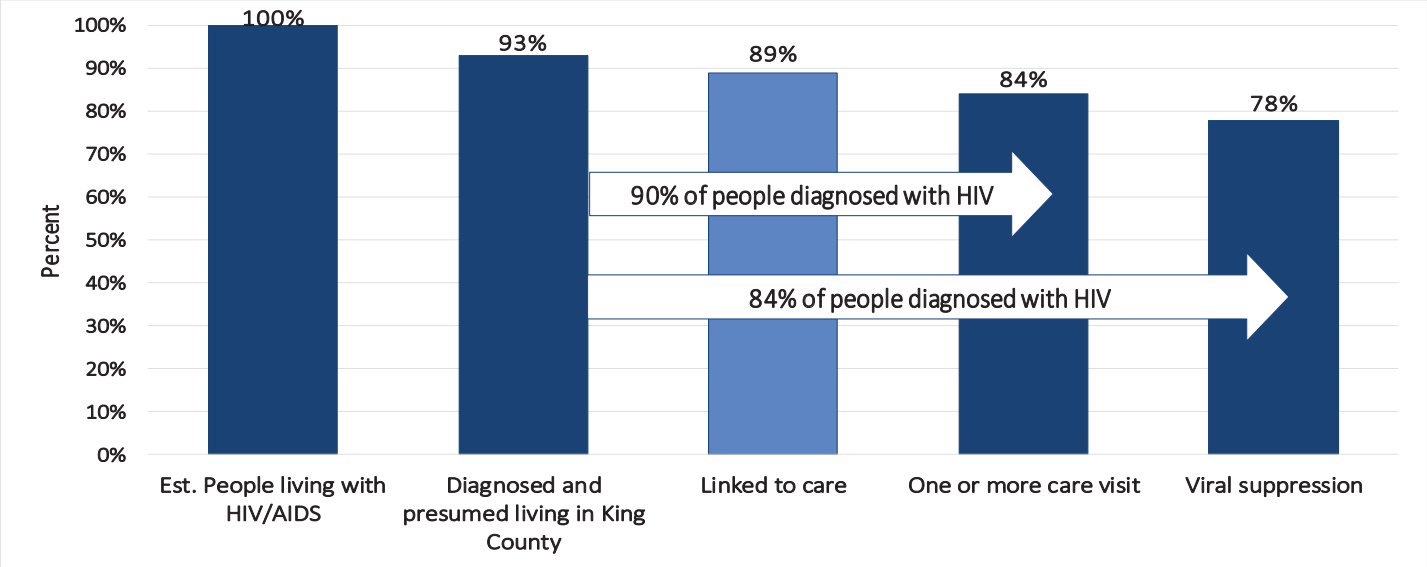
1. **Diagnose:** Diagnosing all HIV-infected individuals as early as possible is important for reducing the number of people living with HIV who don't know they have it. Early detection is critical for preventing HIV disease progression and transmission to others.

2. **Treat:** Universal and sustained use of antiretrovirals starting as soon as possible after diagnosis enables people living with HIV (PWH) to live long, healthy lives without the risk of HIV transmission to a sexual partner. King County's goal is to ensure that 90% of diagnosed PWH are virally suppressed, and that 90% of newly diagnosed persons achieve viral suppression within 4 months of diagnosis.

3. **Prevent:** EtHE emphasizes pre-exposure prophylaxis (PrEP) and syringe services programs (SSPs) as core components of HIV prevention. (King County also regards ensuring widespread access to condoms and promotion of condom use as core aspects of prevention.) King County's goals are to ensure that 50% of higher-risk MSM and transgender persons who have sex with men are on PrEP, and to exchange 365 syringes for every PWID in King County.

4. **Respond**: King County needs rapid interventions to identify and respond to potential HIV outbreaks. When HIV is spreading rapidly in a new population, providing enhanced HIV prevention efforts (including PrEP and SSP) may help prevent new infections.

**Figure 4-1. 2018 King County HIV Care Continuum**




| | Estimated People Living with HIV/AIDS [A] | Diagnosed and Presumed Living in King County [B] | Linked to Care in 2018 [C] | One or More Care Visit [D] | Viral Suppression [E] |
|---|---|---|---|---|---|
| Number of People | 7,468 | 6,977 | 195/218 | 6,312 | 5,855 |

[A] Percent undiagnosed was calculated as 7% for King County[2], based on a publicly available R back calculation package (https://github.com/hivbackcalc/package1.0/wiki). Estimated people living with HIV/AIDS is calculated by dividing "diagnosed and presumed living in King County" residents by .93.

[B] Diagnosed cases are those presumed living in King County at the end of 2018. Individuals with no contact for ten or more years were presumed to have relocated or died (N = 4,018). Others with unconfirmed relocations (e.g., identified by online Internet database searches, but not confirmed by the new jurisdiction or another secondary source) and no laboratory results reported in 18 months were also excluded (N = 47, resulting in 6,977).

[C] Linked to care in 2018 is not a subset of earlier data (hence different color in the graph) and is based on the percent diagnosed in 2018 with a CD4 or viral load test within one month of diagnosis. The percent linked in the figure, 89%, is the percent of diagnosed cases in 2018 who linked within one month of diagnosis: (195/218). Three-month linkage to care occurred for 94% of PLWdH (204/218).

[D] One or more care visit was based on one or more reported laboratory result (CD4, viral load, genotype).

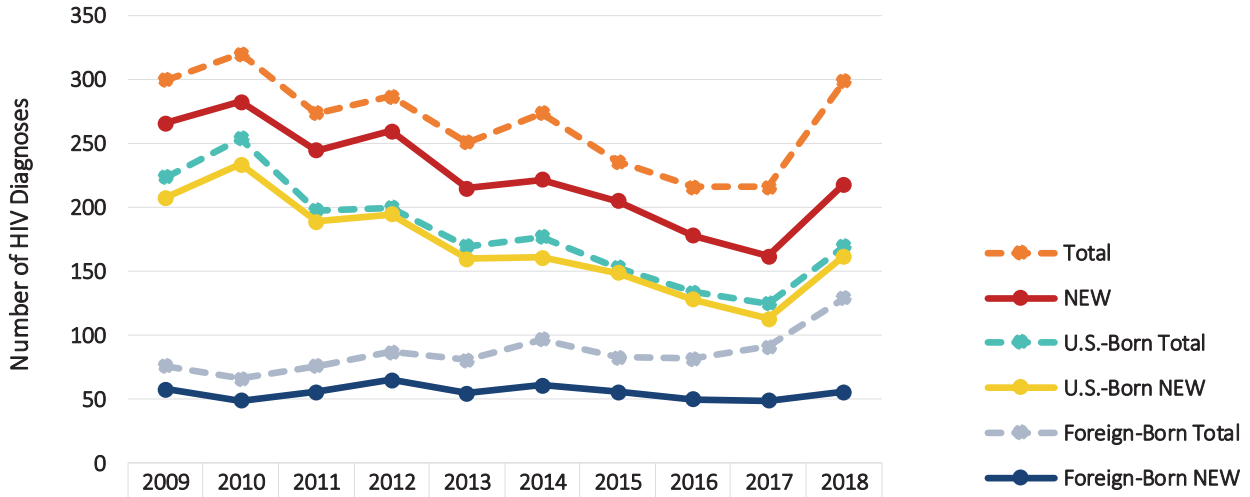
[E] Viral suppression is defined as the most recent viral load test result in 2018 <200 copies. For individuals diagnosed in the last quarter of 2018, a viral suppression in the first quarter of 2018 provided suppression status for N = 30 individuals. If 154 people who had been suppressed in 2017, had no viral load in 2018, and were suppressed again in 2019 were added, 6,009 or 80% would be counted as virally suppressed.

As shown in **Figure 4-1**, an estimated 78% of persons living with HIV (PWH) in King County – and 84% of diagnosed individuals - were virally suppressed in 2018. Viral suppression is defined here as a most recent viral load in 2018 of <200 copies/mL. Each step in the continuum is associated with attrition. We estimate that 7% of PWH are undiagnosed, and an additional 15% are diagnosed but have received no medical care for HIV in the prior year or are receiving care but are not virally suppressed.

# Goal One: Reducing New Infections

**DEFINING NEW HIV DIAGNOSES:** The Public Health – Seattle & King County (PHSKC) HIV surveillance team invests substantial resources to improve the quality of our surveillance data. We investigate each reported case of HIV to try and determine if the person is truly a new HIV diagnosis or if they relocated to King County after being diagnosed with HIV in another area. In this report we exclude newly reported HIV cases from calculations of incident diagnoses if the person told PHSKC investigators (or a medical record states) that they were previously diagnosed with HIV infection over a year earlier, or the person was previously diagnosed out of WA State, even if surveillance staff could not confirm the prior diagnosis.

FIGURE 4-2: NEW HIV DIAGNOSES AND TOTAL [A] ANNUAL DIAGNOSES BY NATIVITY, KING COUNTY, 2009-2018



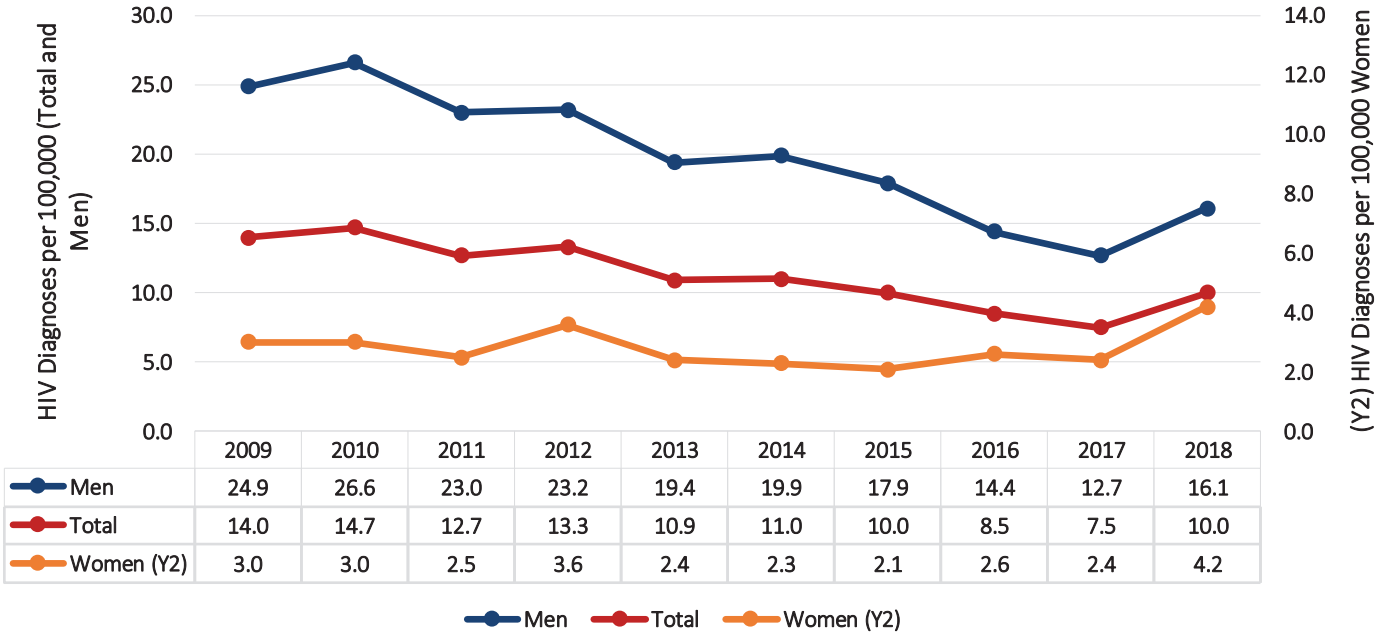

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total | 300 | 320 | 274 | 287 | 251 | 274 | 236 | 216 | 216 | 299 |
| NEW | 266 | 283 | 245 | 260 | 215 | 222 | 205 | 178 | 162 | 218 |
| U.S.-Born Total | 224 | 254 | 198 | 200 | 170 | 177 | 153 | 134 | 125 | 170 |
| U.S.-Born NEW | 208 | 234 | 189 | 195 | 160 | 161 | 149 | 128 | 113 | 162 |
| Foreign-Born Total | 76 | 66 | 76 | 87 | 81 | 97 | 83 | 82 | 91 | 129 |
| Foreign-Born NEW | 58 | 49 | 56 | 65 | 55 | 61 | 56 | 50 | 49 | 56 |

[A] New diagnoses exclude those thought to have been diagnosed with HIV before moving into King County, or people diagnosed more than a year before their first documented HIV diagnosis. Total annual diagnoses include new diagnoses and individuals who report being diagnosed earlier but are without documented evidence of that earlier diagnosis.

In 2018, laboratories and medical providers reported 299 new HIV cases to PHSKC which were then reported to the Centers for Disease Control and Prevention (CDC as new HIV diagnoses. Using the procedures described above, we classified 218 (73%) of these cases as true new HIV diagnoses and 81 (27%) as previously diagnosed cases. We have used this method in our annual epidemiology reports since 2017. Applying this approach to all newly reported HIV cases over the past decade (2009 through 2018) excludes 16% of all cases that were previously classified as new diagnoses (range 9-27% cases per year) (**Figure 4-2**). This adjustment has the greatest effect on foreign-born individuals with HIV who immigrate to the U.S. This group is less likely to have HIV testing records available to document their prior diagnoses relative to persons who moved to King County following an HIV diagnosis in another part of the U.S. Based on traditional CDC criteria, foreign-born persons are often are counted as new diagnoses following their first HIV-related lab test in the U.S., even if they were first diagnosed elsewhere.

**HIV Diagnosis Rates overall and by Gender: Figure 4-3** presents trends in the new HIV diagnosis rate -- or the number of HIV cases per 100,000 King County residents, 2009-2018. From 2009 to 2017, the rate of HIV diagnoses declined 46%. However, between 2017 and 2018 new diagnoses increased 32% ($X^2$ p=0.007). The last time an increase in the diagnosis rate in King County of similar magnitude was seen was in 2002. As seen in the figure, the increase in the diagnosis rate in 2018 reduced, but did not erase the declining rate over the

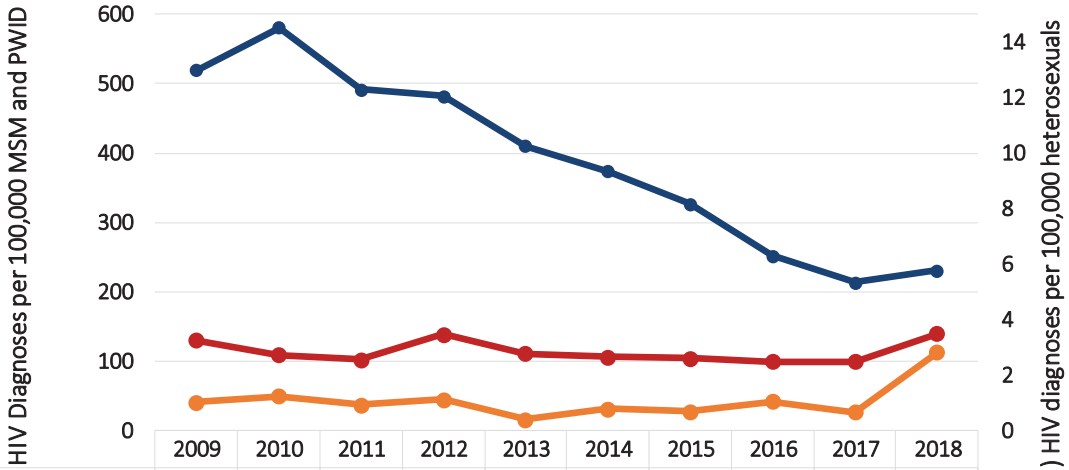
**Figure 4-3: Rate of New HIV Diagnoses, Overall and for Men and Women [A], King County, 2008-2017**




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| Men | 24.9 | 26.6 | 23.0 | 23.2 | 19.4 | 19.9 | 17.9 | 14.4 | 12.7 | 16.1 |
| Total | 14.0 | 14.7 | 12.7 | 13.3 | 10.9 | 11.0 | 10.0 | 8.5 | 7.5 | 10.0 |
| Women (Y2) | 3.0 | 3.0 | 2.5 | 3.6 | 2.4 | 2.3 | 2.1 | 2.6 | 2.4 | 4.2 |

[A] According to sex assigned at birth.

FIGURE 4-4: RATE OF NEW HIV DIAGNOSES FOR MEN WHO HAVE SEX WITH MEN (MSM), PEOPLE WHO INJECT DRUGS (PWID)[A], AND HETEROSEXUALS [B], KING COUNTY, 2009-2018

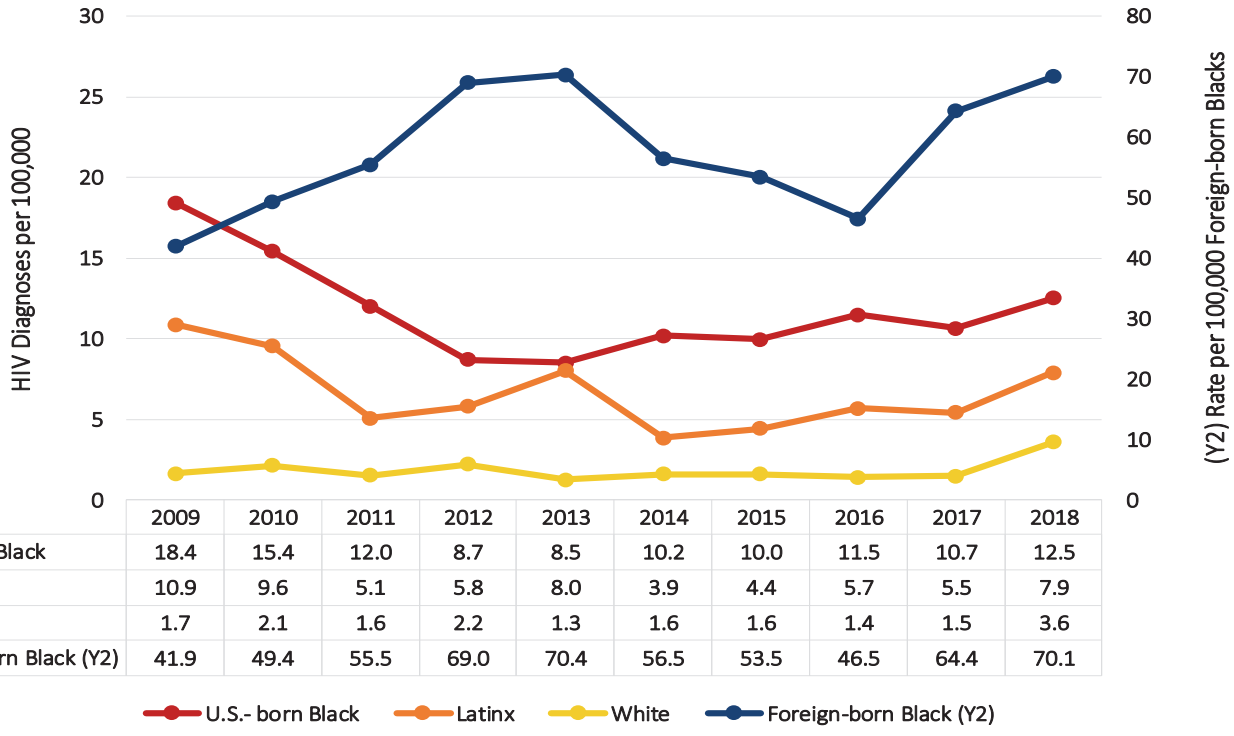



| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| Men who have sex with men | 520.0 | 580.7 | 492.0 | 482.2 | 409.8 | 374.2 | 326.8 | 252.0 | 213.1 | 230.8 |
| People who use injection drugs | 40.8 | 48.7 | 36.3 | 44.0 | 15.8 | 31.4 | 27.0 | 41.4 | 25.9 | 112.2 |
| Heterosexuals (Y2) | 3.2 | 2.7 | 2.6 | 3.5 | 2.8 | 2.7 | 2.6 | 2.5 | 2.5 | 3.5 |

[A] People who use injection drugs exclude men who have sex with men.

[B] Heterosexuals include individuals with unknown HIV risk.

FIGURE 4-5: RATE OF NEW HIV DIAGNOSES FOR HETEROSEXUALS [A] BY RACE/ETHNICITY AND NATIVITY, KING COUNTY, 2009 -2018




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| U.S.- born Black | 18.4 | 15.4 | 12.0 | 8.7 | 8.5 | 10.2 | 10.0 | 11.5 | 10.7 | 12.5 |
| Latinx | 10.9 | 9.6 | 5.1 | 5.8 | 8.0 | 3.9 | 4.4 | 5.7 | 5.5 | 7.9 |
| White | 1.7 | 2.1 | 1.6 | 2.2 | 1.3 | 1.6 | 1.6 | 1.4 | 1.5 | 3.6 |
| Foreign-born Black (Y2) | 41.9 | 49.4 | 55.5 | 69.0 | 70.4 | 56.5 | 53.5 | 46.5 | 64.4 | 70.1 |

[A] Heterosexuals include individuals with unknown HIV risk.

entire decade (29% reduction 2009 to 2018). For men (in these data defined as persons assigned male sex at birth), diagnosis incidence declined 49% between 2009 and 2017 ($X^2_{trend}$ p<0.001). And between 2017 and 2018 the HIV diagnosis rate increased 26% in men ($X^2$ p= 0.04). There was no statistically significant linear increase or decline for women over the past 10 years (in these data defined as persons assigned female sex at birth). Overall, but based mostly on 2018 diagnoses, there was a 38% increase ($X^2_{trend}$ p>0.1). However, there was a 20% decrease in the diagnosis rate for women 2009-2017 and a 74% increase in the rate for women between 2017 and 2018 ($X^2$ p= 0.02). Women comprise an increasing proportion of cases (from 11% in 2009 to 21% in 2018).

### HIV Diagnosis Rates By Transmission Risk Factor

Between 2009 and 2017, HIV diagnosis rates declined in groups defined by the major HIV transmission risk categories; followed by increases between 2017 and 2018 (Figure 4-4). We assumed 6.7% of all men were MSM (see MSM fact sheet). We also assumed 1.8% of King County residents above 14 years of age were PWID. (This proportion was derived starting with 1.2% of population we estimate to have used injection drugs in the past year and increasing this by 50% to account for past injection history.) Between 2009 and 2018, the HIV diagnosis rate declined by 56% among MSM ($X^2_{trend}$ p<0.001) and increased by 75% among PWID (p=0.03 $X^2_{trend}$) and 7% among heterosexuals (including individuals with unknown HIV risk) (p> 0.1 $X^2_{trend}$).

### HIV Diagnosis Rates By Race among Presumed Heterosexuals

Among heterosexuals, (here defined as people not known to be MSM or PWID) Black persons (both foreign-born and U.S. born) had higher rates of HIV diagnoses than other groups (Figure 4-5). HIV diagnosis rates increased between 2017 and 2018 in major categories defined by race/ethnicity and nativity, with the largest percent increases among Latinx persons and White persons. Over the decade, heterosexual rates declined for U.S.-born Blacks and Latinx persons (32% and 28%, respectively), but increased among White and foreign-born Black persons (112% and 67% respectively).

# Goal Two: Increase Access to Care and Improve Health Outcomes for All PWH

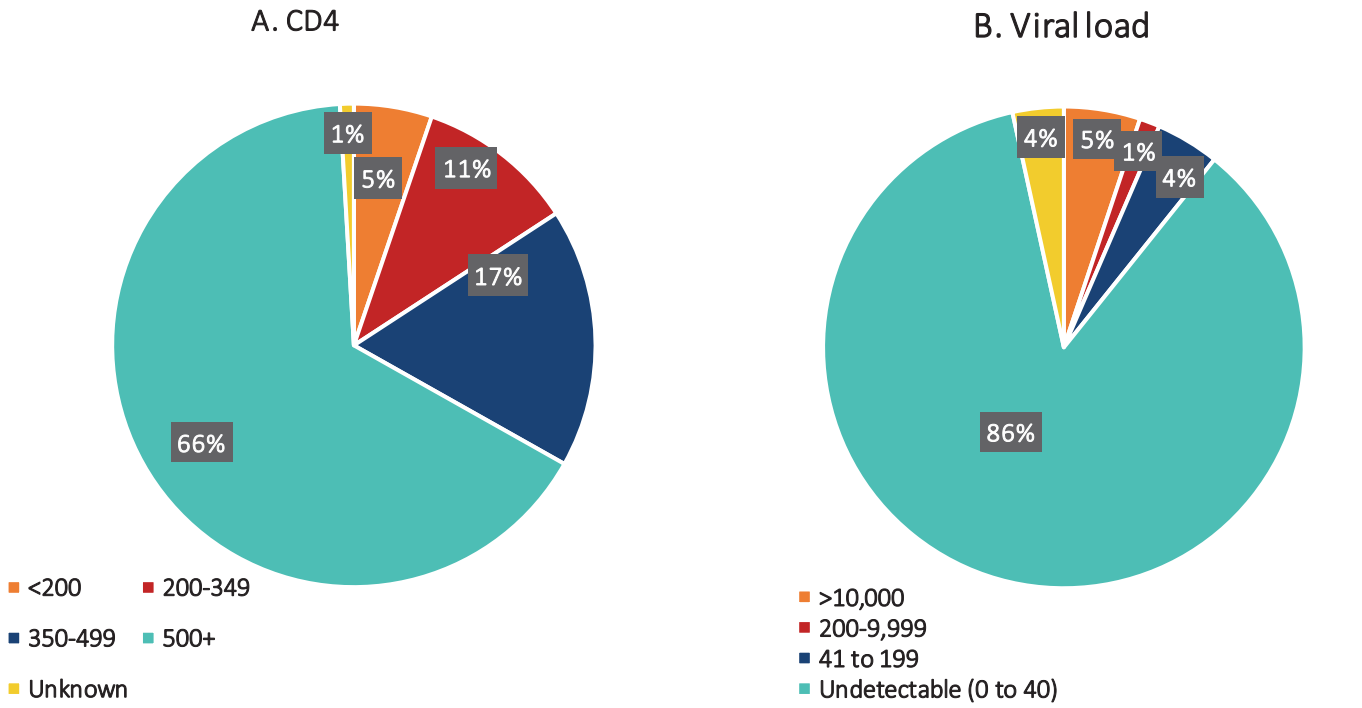
**Initial Linkage to Care:** After an HIV diagnosis, public health outreach staff try to ensure that all newly diagnosed people receive HIV-related medical care. Generally, staff keep cases open until an initial HIV care visit is conducted. The date of this initial care visit is documented in the partner services database for most newly diagnosed individuals. For individuals without a partner services interview, or for whom the linkage date is missing, linkage to care is defined by the specimen collection date from the earliest reported CD4 count, viral load, or other HIV-related laboratory result. In 2018, 89% of newly diagnosed individuals linked to care within one month of diagnosis, and 94% did so within three months.

Table 4-1: Time to Viral Suppression among Persons Newly Diagnosed with HIV, King County, 2009-2018

| Years | People Newly Diagnosed with HIV in King County [A] | Suppressed within 4 Months of Diagnosis | Suppressed at Last VL N (%) | Median Days from HIV Diagnosis to Suppression (IQR) |
|---|---|---|---|---|
| 2009-2010 | 298 | 72 (24%) | 264 (89%) | 286 (142-767) |
| 2011-2012 | 309 | 96 (31%) | 278 (90%) | 212 (119-509) |
| 2013-2014 | 301 | 165 (55%) | 270 (90%) | 121 (77-215) |
| 2015-2016 | 291 | 200 (69%) | 267 (92%) | 85 (58-167) |
| 2017-2018 | 277 | 207 (75%) | 245 (88%) | 76 (51-138) |

[A] And not known to have out-migrated as of June 2018

FIGURE 4-6. MOST RECENT CD4 COUNT AND VIRAL LOADS FOR PEOPLE LIVING WITH HIV IN KING COUNTY, 2018




**TIME TO VIRAL SUPPRESSION:** Over the past decade, the time between HIV diagnosis and antiretroviral treatment initiation and viral suppression has declined considerably. Between 2009 and 2018, the median time from diagnosis to suppression decreased by 73%, from about nine months in 2009-2010 to about 2.5 months in 2017-2018 (**Table 4-1**). Because median times exclude those who have not yet had a suppressed viral load, the percent of people achieving viral suppression within four months are also shown; this increased from 24% to 75%.

**ENGAGEMENT WITH HIV CARE AND MOST RECENT CD4 & VIRAL LOAD:** Among people living with diagnosed HIV infections residing in King County in 2018, 90% were engaged with care as evidenced by at least one laboratory test result reported to the health department in 2018. The HIV-related lab tests received are predominantly CD4 and viral load tests (see Definitions). We evaluated CD4 and viral load values for PWH in King County at the end of 2018 using the most recent test reported. Viral loads were restricted to those done in the past two years. (Because many clinicians infrequently measure CD4 counts, we did not set a date cut-off for these results). CD4 test results were available for 99% of cases, and viral load test values were available for 96% of cases living in King County at the end of 2018. Approximately 83% of PWH in 2018 had a CD4 count over 349 cells/mm$^3$, and only 5% had a CD4 count under 200 cells/mm$^3$ (**Figure 4-6A**). In 2018, 90% of PWH had a suppressed or undetectable viral load (**Figure 4-6B**). This percent is higher than that in our care continuum because viral loads were sought over two-year period.

**FACTORS ASSOCIATED WITH BEING VIREMIC OR NOT IN HIV CARE:** We used a multivariate model to investigate the factors associated with (1) being viremic (HIV viral load greater than 200 copies per mL) or (2) not being in HIV care in 2018. Not being in care was defined by having no viral load, CD4, or other lab test (such as a genotype assay) reported in 2018 among people diagnosed in 2017 or earlier. A total of 6,734 people were eligible (289 individuals were excluded due to documented HIV diagnosis dates in 2018, although 71 were likely diagnosed earlier). Most (5,634; 84%) were in care, 336 (5%) were viremic, and 764 (11%) appeared to not be in care in 2018.

A multivariate model allows one to identify factors (predictors) that are associated with an outcome after accounting for ("adjusting") the impact of the other factors in the model. The results are expressed as relative risks (RR) with 95% confidence intervals (CI). A RR estimates the risk of having the outcome relative to a reference group. RR's less than 1.0 suggest that people with the factor are at lower risk of the outcome. RR's greater than 1.0 suggest that people with the factor are

at higher risk of the outcome. A RR equal to 1.0 suggests there is neither a higher nor a lower risk of the outcome between people with and without the factor. In addition to all other factors listed in **Table 4-2,** we also adjusted for year of HIV diagnosis. Unless otherwise specified, the RR for each category is relative to all other people not in that category. For age, the reference category is people age 50 years and greater. Statistical significance is indicated with bold type and was determined by 95% CI which do not include the value of 1.0, or a $p < 0.05$. Borderline significant comparisons are also bold and include 95% CI which barely include 1.0. As seen in **Table 4-2**, after adjusting for all other factors, MSM and women were less likely than others to be viremic or not in care, while PWID and younger persons were at elevated risk for being viremic or out of care. These findings highlight the disparities that characterize the local HIV epidemic.

**Mortality:** Mortality rates among PWH have declined over the last 10 years. Mortality data is not considered mostly complete for at least one year, so the decade examined was 2008-2017. Data completeness was estimated at ≥98% for 2008-2017. As shown in **Figure 4-7**, age and lag adjusted mortality among PWH in King County declined 40% between 2008 and 2017. Despite the long-term decline in the age-adjustment mortality rate seen in the figure, this rate of decline has slowed since 2012. The absence of further progress on this critical metric in the face of rising levels of viral suppression highlights the need to better understand the causes of death in persons dying with HIV in King County and develop new approaches to improving the health of PWH. (An article later in this report presents results of HIV mortality investigations of persons who died with HIV infection in 2017, including information from medical record reviews and medical provider interviews.)

**Table 4-2: Factors Associated with (1) Not Being in Care in 2018 or (2) Being Viremic (Viral Load > 199 Copies per mL), King County HIV Surveillance Data Reported as of 6/30/2019[A]**

| Factor | Percent Out of Care or Not Suppressed | Crude Relative Risk (95% CI) | Adjusted Relative Risk (95% CI) [B] |
|---|---|---|---|
| **Total (N=6,734)** | 16% | Not applicable | |
| **Exposure Category** | | | |
| People who inject drugs (N=867) | 23% | **1.50 (1.31-1.72)** | **1.43 (1.17-1.75)** |
| Men who have sex with men (N=5,166) | 15% | **0.78 (0.69-0.87)** | **0.78 (0.60 - 1.01)** |
| **Race/Ethnicity** | | | |
| Foreign-born Latinx (N=476) | 16% | 0.96 (0.78-1.19) | 1.15 (0.83-1.59) |
| U.S.-born Latinx (N=449) | 19% | 1.17 (0.96-1.43) | 1.17 (0.85-1.62) |
| Foreign-born Black (N=612) | 17% | 1.01 (0.84-1.22) | 1.06 (0.75-1.50) |
| U.S.-born Black (N=1,009) | 29% | **1.43 (1.25-1.63)** | 1.01 (0.79-1.30) |
| **Sex Assigned at Birth** | | | |
| Female (N=810) | 19% | **1.19 (1.02-1.39)** | **0.71 (0.51-1.00)** |
| Male (N=5,924) | 16% | Reference | Reference category |
| **Age in 2018** | | | |
| Less than 20 years (N=27) | 0% | Undefined | undefined |
| 20 – 29 years (N=402) | 26% | **2.10 (1.74-2.53)** | **1.61 (0.99-2.62)** |
| 30 – 39 years (N=1,230) | 22% | **1.83 (1.59-2.09)** | **1.45 (1.11-1.88)** |
| 40 – 49 years (N=1,638) | 18% | **1.51 (1.32-1.73)** | 1.21 (0.97-1.50) |
| Age 50+ years (N=3,437) | 12% | Reference | Reference category |

[A] Analysis of PWH in King County diagnosed through 2017 and assumed living in King County in 2018 and is comprised of 5,634 persons in care and virally suppressed and 1,100 persons who were not engaged with care (n=764) or who were viremic (n=336) (6,734 total).

[B] Adjusted for all of the other variables in the Table plus year of HIV diagnosis in 3-year groupings.

**Bold type** designates statistically significant — or borderline statistically significant — increased or decreased risk of being out of care or non-suppressed.

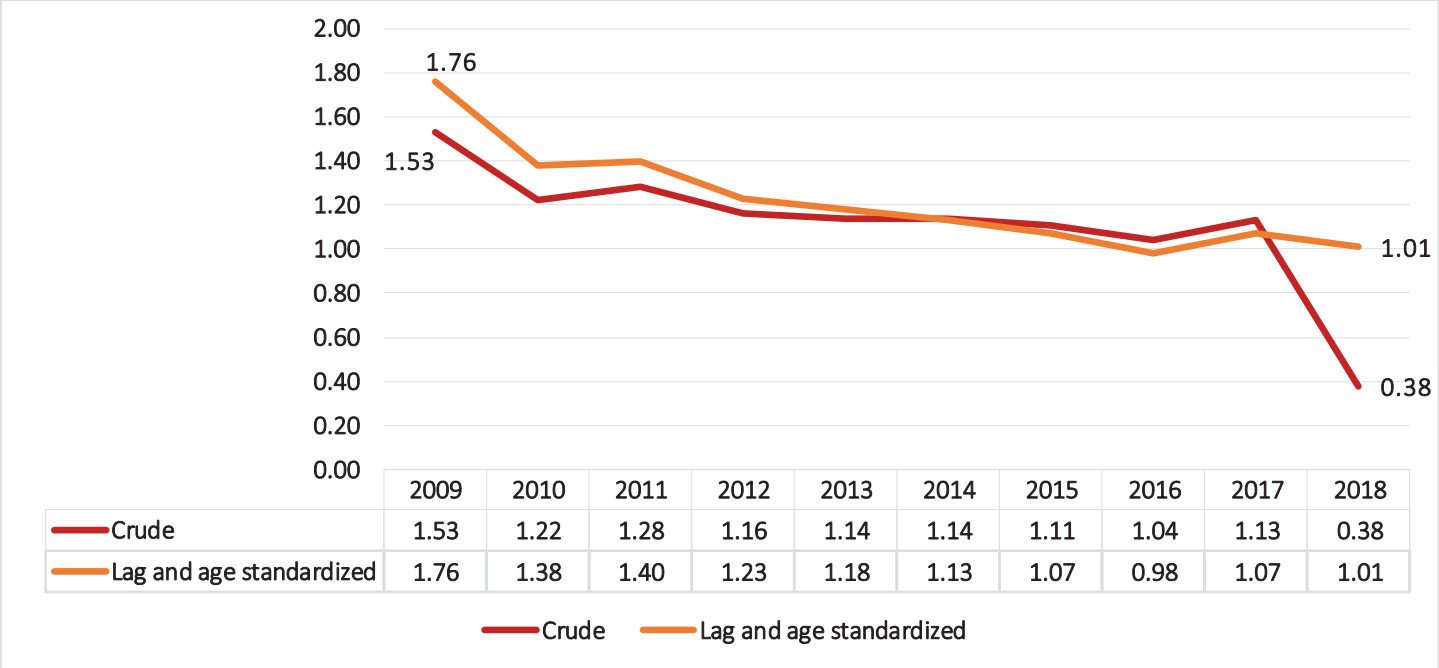
# Goal Three: Reduce Health-Related Disparities

**Disparities in HIV Prevalence by Race/Ethnicity, Nativity, and HIV Risk:** Compared to White MSM, Black MSM were 65% more likely, Latinx MSM were 54% more likely, and Asian and Pacific Islander MSM were 77% less likely to have an HIV diagnosis (**Figure 4-8A**). Note that we estimated that 6.7% of adolescent and adult men age 15 years and higher living in King County were MSM (see MSM fact sheet) and did not vary this proportion across groups of MSM as defined by race/ethnicity. Please also see the MSM fact sheet in this issue for comparisons of incident diagnoses by race/ethnicity among MSM.

HIV infection is relatively rare among persons who are neither MSM nor PWID, with fewer than 3 people diagnosed with HIV per 1,000 in all groups other than foreign-born Black persons (**Figure 4-8B**). However, this prevalence varies markedly by race/ethnicity/nativity. In **Figure 4-8B**, White, Asian, and U.S.-born Latinx persons (excluding MSM & PWID) were the least likely to have an HIV diagnosis. American Consumer Survey data was used to estimate 27% of Black persons and 38% of Latinx people in King County are foreign-born. Black persons and foreign-born Latinx were most likely to have HIV diagnoses. In 2018, 22% of all new HIV diagnoses in King County occurred in persons born outside of the U.S., including 4% of diagnoses among White, 44% of diagnoses among Black persons, 50% of diagnoses among Latinx, and 76% of diagnoses among Asian/Pacific Islander individuals. Excluding cases occurring in MSM and PWID, and assuming that the proportion of people who are PWID or MSM does not vary by race/ethnicity, the prevalence of diagnosed HIV infection was almost 10 times higher among U.S.-born Black persons than among White persons. Among PWID, HIV prevalence varies markedly by MSM status and methamphetamine use (**Figure 4-8C**). MSM-PWID who primarily inject methamphetamine have an HIV prevalence >45%. MSM who primarily inject methamphetamine were approximately 15 times as likely to have HIV infection relative to non-MSM PWID, and seven times as likely to have HIV relatively to MSM-PWID who primarily inject drugs other than methamphetamine.

**Disparities in HIV Care Continuum Measures by Race/Ethnicity, Nativity, and HIV Risk: Table 4-3** presents HIV care continuum data among diagnosed persons stratified by gender, race/ethnicity, nativity and HIV risk (MSM, PWID and heterosexuals). Please note that the percentages below, which are limited to people *diagnosed* with HIV, differ from **Figure 4-1** in this section; **Fig 4-1** includes all persons living with HIV, diagnosed and undiagnosed. Additionally note, as in **Figure 4-1**, **Table 4-3** excludes individuals with unconfirmed relocations as of

**Figure 4-7: Death Rates Among Individuals Diagnosed With HIV: (1) Unadjusted and (2) Adjusted for Changes in Age Distribution**




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| Crude | 1.53 | 1.22 | 1.28 | 1.16 | 1.14 | 1.14 | 1.11 | 1.04 | 1.13 | 0.38 |
| Lag and age standardized | 1.76 | 1.38 | 1.40 | 1.23 | 1.18 | 1.13 | 1.07 | 0.98 | 1.07 | 1.01 |

FIGURE 4-8: HIV DIAGNOSIS PREVALENCE AMONG A. MSM (MEN WHO HAVE SEX WITH MEN), B. NON-MSM/NON-PWID (PRESUMED HETEROSEXUALS), AND C. PEOPLE WHO INJECT DRUGS (PWID), KING COUNTY, 2018

FIGURE 4-8A: PERCENT OF MSM WITH DIAGNOSED HIV INFECTION BY RACE/ETHNICITY,

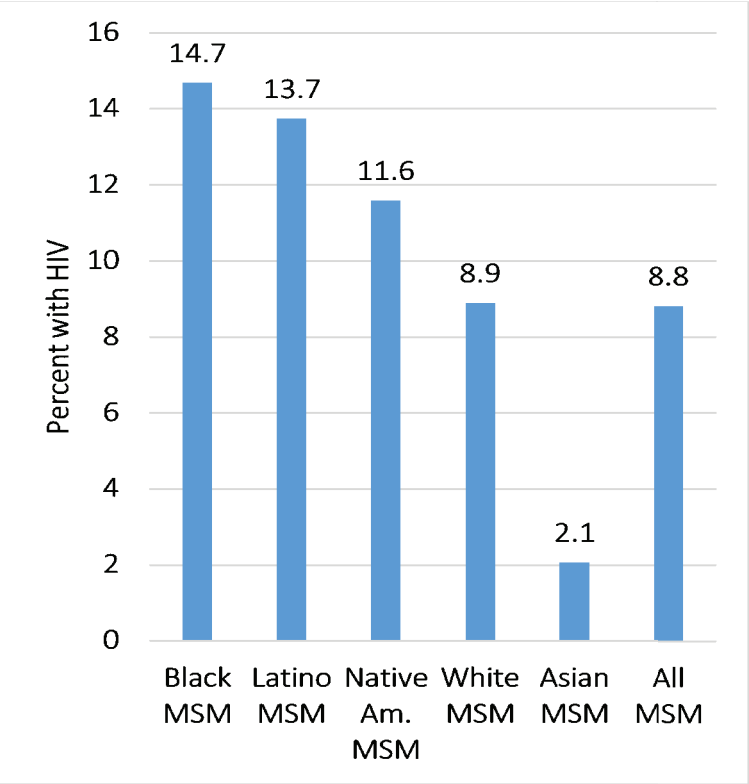



FIGURE 4-8B: PREVALENCE OF DIAGNOSED HIV INFECTION PER 100 PRESUMED HETEROSEXUAL RESIDENTS (EXCLUDES MSM & PWID)

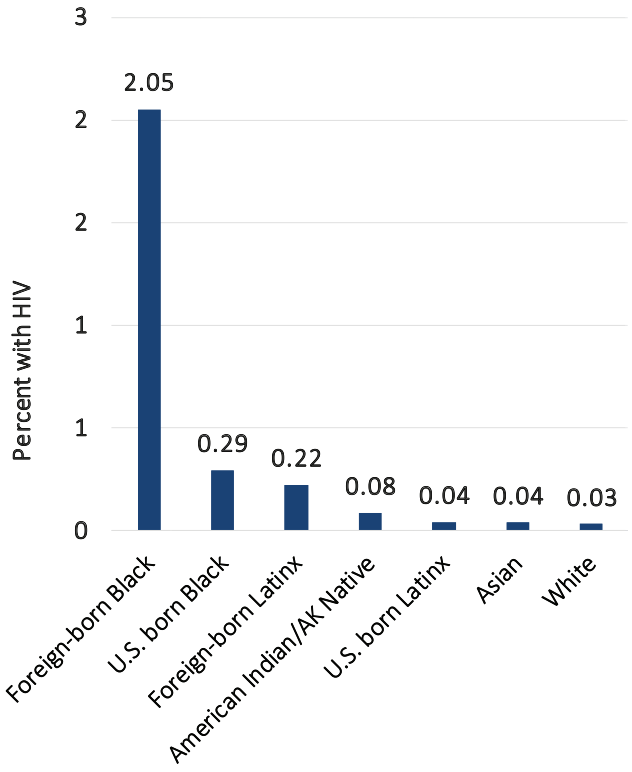
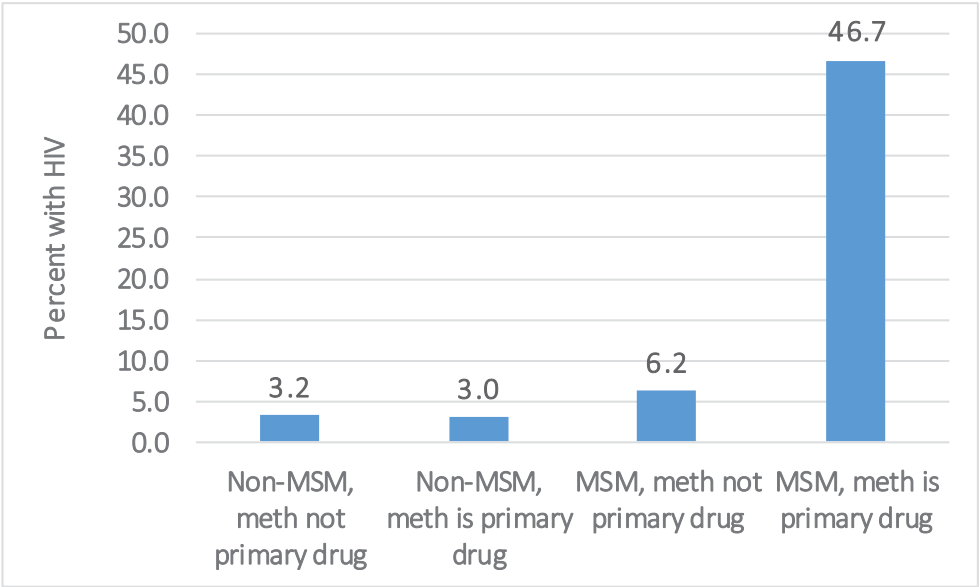



FIGURE 4-8C: PREVALENCE OF HIV AMONG PWID, SEATTLE AREA NATIONAL HIV BEHAVIORAL SURVEILLANCE, 2018




MSM are estimated at 6.7% of King County 2018 male residents age 15 years and greater; PWID are estimated at 1.4% of adults/adolescents.
Foreign-born Black persons are estimated at 27% of all Black/African/African-American residents; foreign-born Latinx persons are 40% of all Latinx residents.
Abbreviations: MSM, men who have sex with men; PWID, people who inject drugs .

TABLE 4-3: HIV CARE METRICS, INCLUDING LATE DIAGNOSES, LINKAGE TO CARE, BEING IN MEDICAL CARE, AND VIRAL SUPPRESSION FOR SELECTED GROUPS LIVING WITH HIV INFECTION, KING COUNTY, 2018

| | | PERCENT OF PEOPLE WITH NEW HIV DIAGNOSES IN KING COUNTY IN 2018[A] WHO: | | | PERCENT OF PEOPLE LIVING WITH DIAGNOSED HIV (PLWDH) IN KING COUNTY IN 2018 WHO: | |
|---|---|---|---|---|---|---|
| | PEOPLE LIVING WITH DIAGNOSED HIV IN 2018 (PLWDH) (N) | NEW DIAGNOSES IN 2018 [A] | LATE HIV DIAGNOSES (AIDS WITHIN ONE YEAR OF HIV) | LINKED [B] TO CARE WITHIN ONE MONTH OF DIAGNOSIS | HAD ONE OR MORE CARE VISIT IN 2018 | HAD SUPPRESSED RECENT VIRAL LOAD (IN 2018) (<200 COPIES) |
| **TOTAL** | 6,976 | 218 | 26% | 89% | 90% | 84% |
| **GENDER** | | | | | | |
| Men (sex assigned at birth) | 6,095 | 173 | 24% | 90% | 91% | 84% |
| Women (sex assigned at birth) | 881 | 45 | 31% | 89% | 90% | 82% |
| Transgender[A,C] | 63 | 11[A] | 18% | 91% | 94% | 83% |
| **RACE, ETHNICITY AND NATIVITY** | | | | | | |
| White | 3,819 | 108 | 16% | 87% | 91% | 85% |
| Black | 1,404 | 49 | 45% | 92% | 90% | 80% |
| *Foreign-born* | *613* | *27* | *59%* | *93%* | *91%* | *84%* |
| *U.S.-born[D]* | *791* | *22* | *27%* | *91%* | *81%* | *77%* |
| Latinx | 974 | 39 | 31% | 95% | 90% | 83% |
| *Foreign-born* | *486* | *15* | *60%* | *100%* | *91%* | *85%* |
| *U.S.-born[D]* | *488* | *24* | *12%* | *92%* | *89%* | *81%* |
| Asian | 295 | 10 | 20% | 90% | 88% | 85% |
| Pacific Islander[A] | 77 | 14[A] | 36% | 93% | 90% | 75% |
| Native American/Alaska Native[A] | 236 | 33[A] | 21% | 82% | 92% | 81% |
| **HIV RISK FACTORS** | | | | | | |
| Men who have sex with men (MSM) | 4,644 | 106 | 19% | 97% | 91% | 86% |
| People who inject drugs (PWID) | 274 | 31 | 10% | 77% | 89% | 74% |
| MSM-PWID | 638 | 21 | 29% | 86% | 89% | 77% |
| Heterosexual | 719 | 24 | 50% | 96% | 90% | 82% |
| *Foreign-born* | *408* | *16* | *69%* | *100%* | *90%* | *85%* |
| *U.S.-born[D]* | *301* | *52[A]* | *54%* | *87%* | *90%* | *77%* |
| **OTHER FACTORS** | | | | | | |
| Foreign-born | 1,538 | 56 | 48% | 96% | 90% | 85% |
| Meth use (collected since 2009) | 381 | 51 | 10% | 88% | 90% | 74% |
| **RACE/ETHNICITY AMONG MSM** | | | | | | |
| White MSM | 3,357 | 69 | 14% | 93% | 91% | 87% |
| Black MSM | 561 | 18 | 22% | 89% | 89% | 79% |
| Latinx MSM | 793 | 27 | 30% | 100% | 90% | 84% |
| *Foreign-born* | 354 | 9 | 56% | 100% | 89% | 84% |
| *U.S.-born[D]* | 439 | 18 | 17% | 100% | 88% | 82% |

[A] Due to small numbers, fewer than 10 in 2018, newly diagnosed Native Am./AK Native, Pacific Islander, U.S.-born heterosexual, and transgender persons were based on 5 years of diagnoses --from 2014 to 2018. Additionally, note that for Native American and Pacific Islander, multiracial and Latinx persons are included if they are also Native American or Pacific Islander.

[B] "Linked" is based on percent of cases diagnosed in 2018 linking to care based on CD4 or viral load tests within one month of diagnosis.

[C] Transgender category, for prevalent cases, includes transgender women (90%) and transgender men (10%); for five-year incident diagnoses, nine were transgender women and two transgender men.

[D] U.S.-born includes unknown country of birth.

the time of analysis (e.g., identified by online Internet database searches, but not confirmed by the new jurisdiction or another secondary source) and no laboratory results reported in 18 months (N = 47, resulting in 6,976 PWH). With the exceptions of PWID and persons with a history of methamphetamine use, viral suppression is 75% or greater for all subgroups defined by HIV risk, race/ethnicity or nativity. However, suppression is approximately 7-8% lower among U.S.-born Black persons than among foreign-born Black and White persons. These disparities merit concerted efforts to ensure that all PWH receive the medical care they need. At the same time, it is worth noting that levels of viral suppression in King County, including among Black persons and PWID, are very much higher than for the U.S. as a whole[1].

Table 4-4 presents information on the characteristics of persons living with HIV in King County who are not known to be virally suppressed. In 2018, an initial exploration found 1,168 King County residents were diagnosed with HIV infection but were not known to be virally suppressed that year. After excluding 47 individuals who had unconfirmed relocations, (as was

TABLE 4-4: NUMBER AND CHARACTERISTICS OF PERSONS LIVING WITH DIAGNOSED HIV WHO ARE NOT VIRALLY SUPPRESSED, KING COUNTY, 2018

| GROUP | LIVING WITH DIAGNOSED HIV IN KING COUNTY | UNSUPPRESSED DUE TO NO VIRAL LOAD REPORTED IN 2018 | UNSUPPRESSED DUE TO VIRAL LOAD IN 2018 >=200 | TOTAL NUMBER WITHOUT A SUPPRESSED VIRAL LOAD IN 2018 | % OF TOTALS AND TOTAL UNSUPPRESSED, COLUMN % |
|---|---|---|---|---|---|
| | N | N (ROW%) | N (ROW%) | NO. (% OF GROUP, ROW %) | |
| TOTAL | 7,023 | 789 (11%) | 379 (5%) | 1,168 (17%) | 100% |
| Excluding people with no labs for 18 months and presumed relocated (N=47) | 6,977 | 743 (11%) | 379 (5%) | 1,122 (16%) | 100% |
| Excluding people with a suppressed viral load in 2019 from the unsuppressed columns (N=368) | 6,977 | 511 (7%) | 243 (3%) | 754 (11%) | 100% |
| | Of 6,977 | | Of 754 | | |
| Men who have sex with men (MSM) | 5284 | 361 (7%) | 166 (3%) | 527 (10%) | 70% |
| *White MSM* | *3357* | *212 (6%)* | *82 (2%)* | *294 (9%)* | *39%* |
| *Latinx MSM* | *785* | *66 (8%)* | *24 (3%)* | *90 (11%)* | *12%* |
| *Black MSM* | *561* | *48 (9%)* | *37 (7%)* | *85 (15%)* | *11%* |
| *Asian/Pac. Isl. MSM* | *224* | *16 (7%)* | *4 (2%)* | *20 (9%)* | *3%* |
| *American Indian MSM* | *22* | *1 (5%)* | *2 (9%)* | *3 (14%)* | *<1%* |
| *Multiracial MSM* | *335* | *18 (5%)* | *17 (5%)* | *35 (10%)* | *5%* |
| People who use injection drugs (PWID, excluding MSM) | 274 | 24 (9%) | 18 (7%) | 42 (15%) | 6% |
| Foreign-born Black persons (FBB excluding MSM & PWID) | 600 | 48 (8%) | 14 (2%) | 62 (10%) | 8% |
| Heterosexual risk excluding FBB | 407 | 33 (8%) | 30 (7%) | 63 (15%) | 8% |
| Others (excluding FBB, PWID, MSM) | 412 | 45 (11%) | 15 (4%) | 58 (14%) | 8% |

Abbreviations: MSM, men who have sex with men; PWID, people who use injection drugs; API, Asian and Pacific Islander; FBB, foreign-born Black persons.

done for the HIV care continuum) 1,122 PWH in King County in 2018 were not known to be suppressed. However, 368, or 33% of the 1,122 had a suppressed viral load in the first half of 2019 reported to surveillance by the end of June 2019. That leaves 754 PWH in 2018 in King County without a suppressed viral load in 2018 or the first half of 2019.

Of the 754, 243 persons (32%) had a viral load reported in 2018 above 199 copies/ml. The remaining 511 persons (68%) had no viral load reported in 2018. To explore when the 511 persons may have last received any medical care, Figure 4-9 presents the year of the last reported laboratory result for these individuals. This last reported laboratory result may have been a CD4 test, genotypic drug resistance test, a viral load test before 2018 or in 2019 and with an unsuppressed result, or an HIV test. Overall, 342 or 67% of persons with no viral load reported to HIV surveillance in 2018 had at least one laboratory result reported to PHSKC between 2017 and mid 2019, suggesting that they had been in the area in the year before or after 2018. Also presented in Figure 4-9 are a subset of the 511, those whose most recent viral load was suppressed (N=346, 68%), by year of their last (and suppressed) viral load.

To summarize, in this section we have described health related disparities with the goal of better understanding PWH who are not receiving optimal HIV care. We plan to create a dynamic document on the PHSKC web site with additional data aimed at helping achieve EtHE goals.

*Contributed by Matthew Golden and Susan Buskin*

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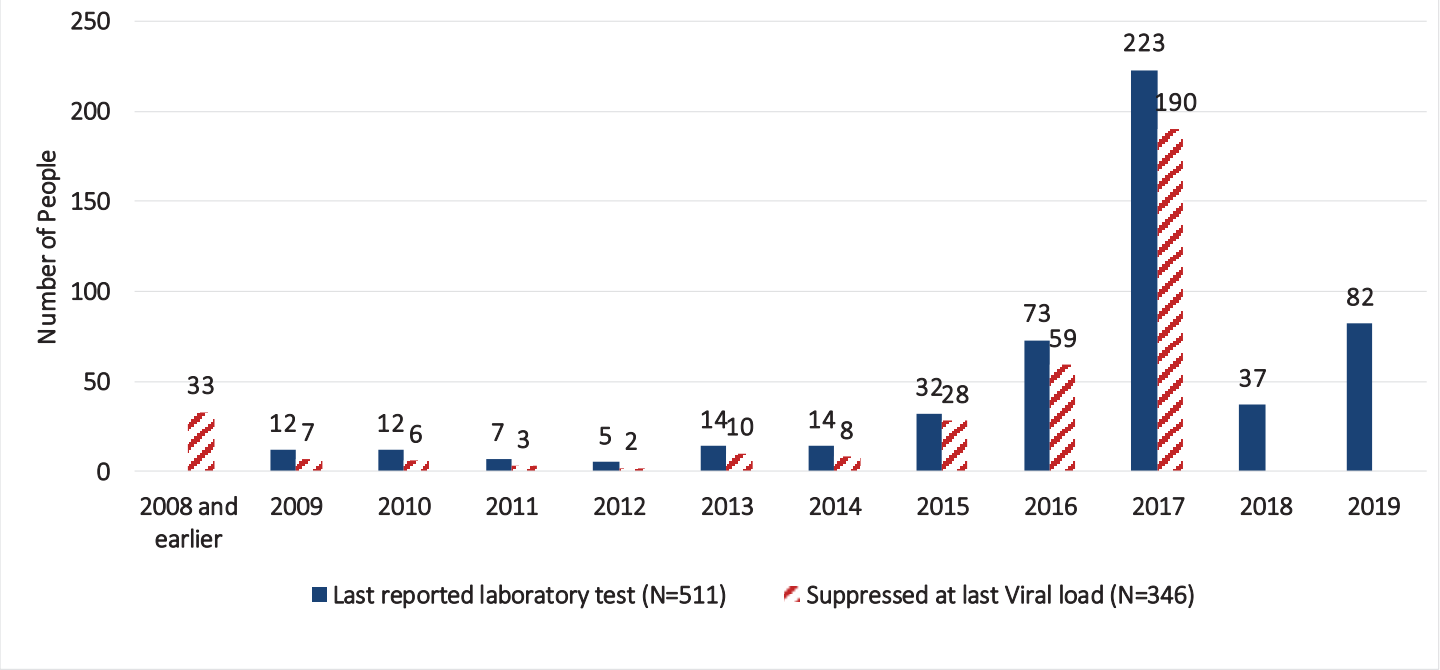
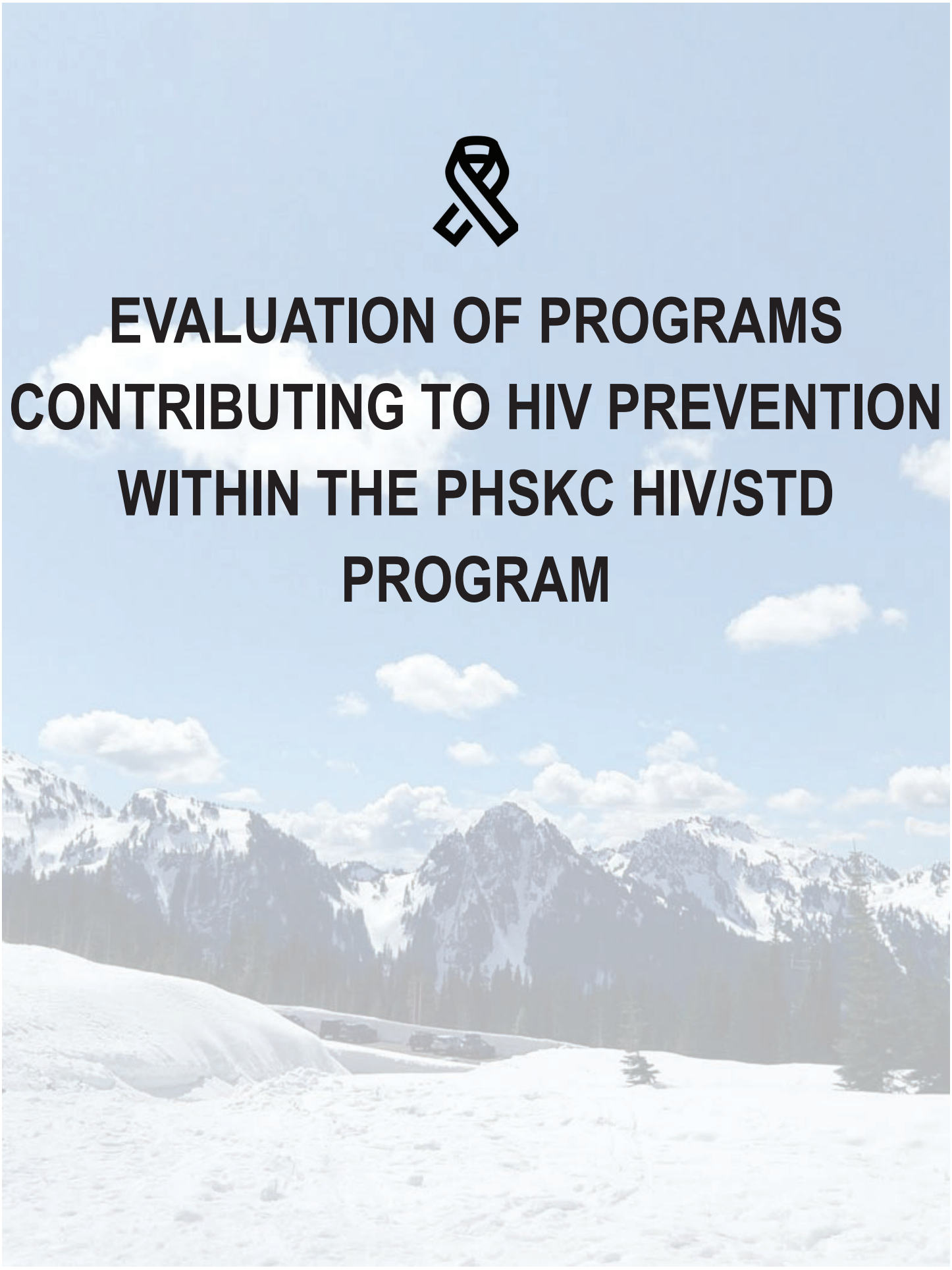
FIGURE 4-9: (1) YEAR OF MOST RECENT LABORATORY RESULT REPORTED FOR 511 INDIVIDUALS LIVING WITH HIV IN KING COUNTY IN 2018 BUT WITH NO VIRAL LOAD TEST REPORTED IN 2018 (EXCLUDING THOSE WITH A SUPPRESSED VIRAL LOAD IN THE FIRST HALF OF 2019) AND (2) YEAR OF LAST SUPPRESSED VIRAL LOAD FOR A SUBSET OF THE 511 (N=346) WHOSE LAST VIRAL LOAD WAS SUPPRESSED.





# EVALUATION OF PROGRAMS CONTRIBUTING TO HIV PREVENTION WITHIN THE PHSKC HIV/STD PROGRAM

# Pre-Exposure Prophylaxis (PrEP)


## SUMMARY

One in four sexually active, local men who have sex with men (MSM) are currently on PrEP.

Nearly half of MSM at high risk of HIV are currently using PrEP.

Washington State Department of Health (WA DOH) helps makes PrEP affordable with a PrEP Drug Assistance Program (PrEP DAP).

Public Health – Seattle & King County (PHSKC) and the WA DOH promote PrEP in several ways, including integrating PrEP referral into partner services, providing PrEP at the STD clinic, maintaining a map of PrEP providers, and supporting PrEP navigation services provided in the STD clinic and through community-based organizations.


| PrEP Goal | 2018 | 2020 Goal |
|---|---|---|
| Current PrEP use, high-risk MSM [A] | ~49% | ≥50% |

[A] In King County, "high-risk MSM" are defined as HIV-uninfected MSM with any: methamphetamine/popper use, 10+ sex partners, non-concordant condomless anal sex, bacterial sexually transmitted infection diagnosis in the past year.

## Background

People who are at risk for HIV can take a daily pill to reduce their risk of acquiring HIV. This prevention strategy is known as pre-exposure prophylaxis, or PrEP. PrEP usually involves taking two medications used to treat HIV, tenofovir and emtricitabine, which are sold as a single pill (Truvada). Multiple clinical trials have shown that PrEP is safe and effective at reducing the risk of acquiring HIV through sexual behavior or injection drug use. When people take PrEP consistently, their risk of HIV is decreased by at least 90%. People who take PrEP should have HIV/sexually transmitted infections (STI) testing every three months.

In 2015, Public Health – Seattle & King County (PHSKC) and the Washington State Department of Health (WA DOH) issued PrEP Implementation Guidelines. These guidelines recommend that medical providers discuss PrEP with all men who have sex with men (MSM) and transgender patients who have sex with men and explicitly recommend PrEP initiation to patients in the following groups:

- MSM or transgender people who have sex with men if the patient has any of the following risks:
    - Diagnosis of rectal gonorrhea or early syphilis in the past 12 months
    - Methamphetamine or popper use in the past 12 months
    - History of providing sex for money or drugs in the past 12 months

- People in ongoing sexual partnerships with an HIV-infected person who is not on antiretroviral therapy (ART), or is on ART but is not virologically suppressed, or who is within 6 months of initiating ART.

The guidelines further recommend that MSM and transgender people who have sex with men who are sexually active outside of long-term (1 year), mutually monogamous relationships with partners of the same HIV status should consider initiating PrEP and discuss it with their medical providers. In 2018, in response to an outbreak of HIV among heterosexuals who inject drugs who were living homeless in north Seattle, PHSKC expanded local guidelines to recommend that medical providers offer PrEP to women who exchange sex, particularly those who inject drugs or who are living homeless.

# Monitoring PrEP Use

PHSKC uses multiple methods to monitor PrEP use among MSM and transgender people who have sex with men in King County. Three surveys monitor current PrEP use in these key populations:

- **Pride Survey**. This is an annual survey of MSM and transgender people attending Seattle area Pride events in June.
- **National HIV Behavioral Surveillance** (NHBS). This survey recruits cisgender MSM every 3 years, including in 2017, from venues across King County.
- **Washington HIV/STI Prevention Project** (WHSPP). Two rounds of this web-based survey recruited MSM in Washington State have been completed. The data presented here are from the second round of the survey, which was conducted from November 2018 to January 2019.

In 2018 PHSKC conducted an additional survey to understand PrEP use Among Black MSM:

- **PrEP Survey: Black Gay & Bi Men**. This web-based survey recruited MSM in King, Pierce, and Snohomish counties from August to December 2018. Survey respondents were included in the analysis if they were Black, HIV-uninfected, and reported having sex with men.

Additional data on PrEP use among higher risk MSM and transgender people come from:

- Individuals with diagnosed STI receiving public health partner services
- Harborview STD Clinic patients

Finally, to further estimate the extent of PrEP use among local MSM, PHSKC conducted a:

- **STI Provider Survey**. In 2018, Public Health conducted a survey of Washington State medical providers who reported one or more case of syphilis or three or more cases of gonorrhea to the health department in 2017.

When possible, PrEP outcomes are presented separately for MSM who do and do not meet criteria for being at "high risk" for HIV. For consistency across surveys, we use criteria that were identified in a local analysis of risk factors associated with HIV seroconversion among MSM patients at the PHSKC STD Clinic; this same analysis was the basis for PHSKC and the WA DOH's PrEP Implementation Guidelines. HIV-negative MSM who report any of the following in the past year are defined as being at high risk for HIV: any bacterial STI diagnosis, methamphetamine or popper use, 10 or more male sex partners, or any condomless anal sex with a man who was HIV-positive or did not know his HIV status.

# PrEP Awareness

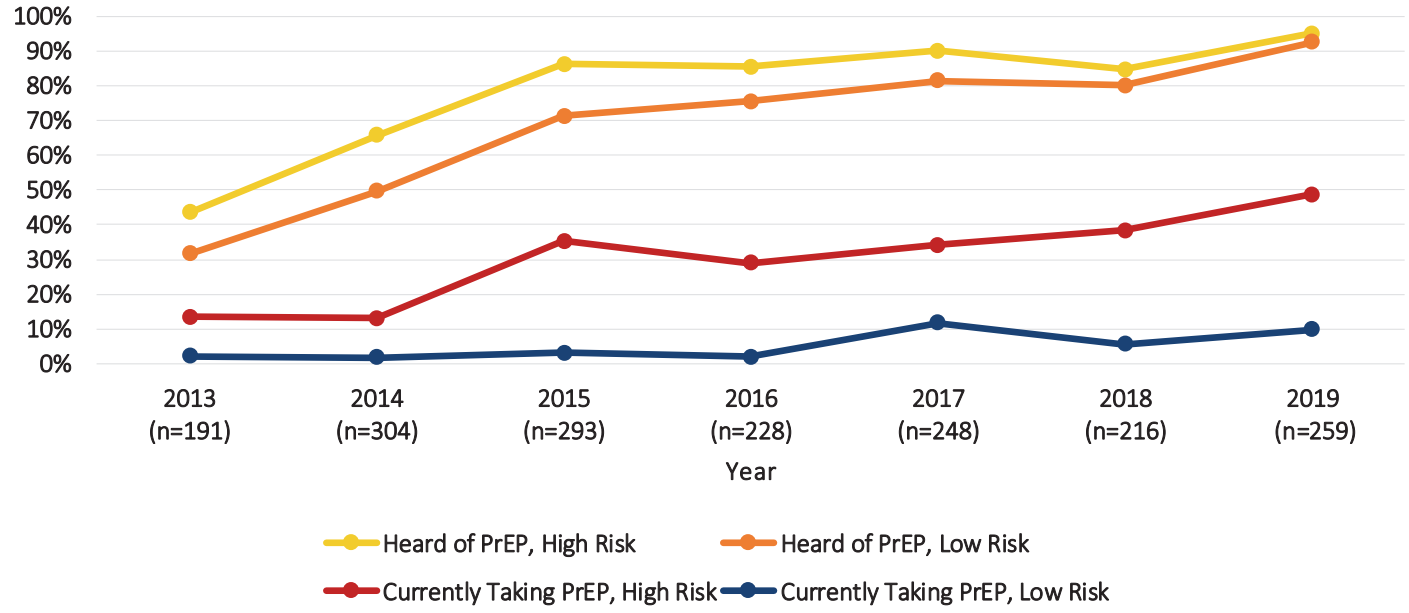
The annual Pride survey has collected data on PrEP awareness among MSM since 2009. **Figure 5-1** illustrates how awareness of PrEP has grown rapidly and is nearly universal among both high and low risk MSM. Although not shown in **Figure 5-1,** 2017 data from NHBS are similar with 92% of low risk and 97% of high risk MSM reporting being aware of PrEP. Respondents to the Black MSM PrEP survey reported a lower awareness of PrEP. Only 84% of the Black MSM in that survey reported they had heard of PrEP before the survey compared to over 90% of the overall Pride survey respondents.

# PrEP Use

### PrEP Uptake among MSM

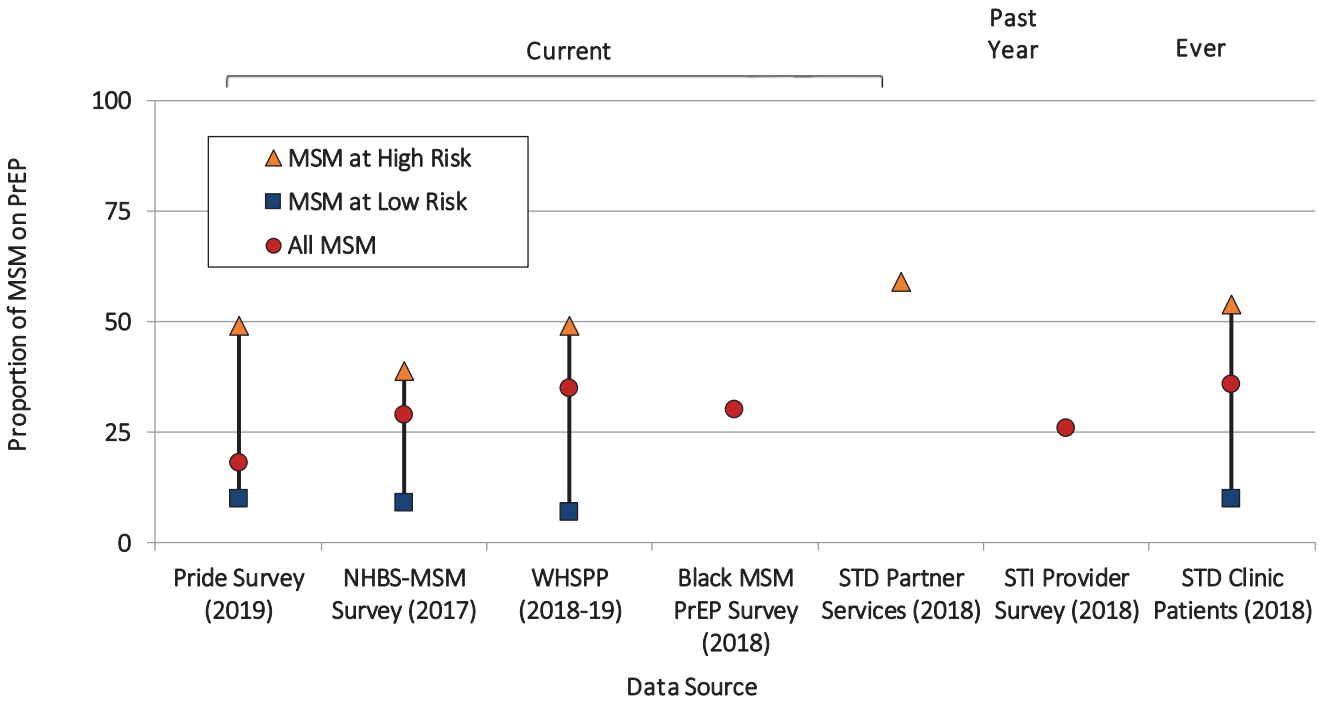
Since the first licensure of antiretroviral therapy for PrEP in 2012, PrEP use has rapidly expanded among King County MSM (**Figure 5-1**). In 2018, approximately 27% (range: 18-35%) of all MSM sexually-active in King County were on PrEP, including approximately 49% (range 39-59%) of high risk MSM (**Figure s 5-1, 5-2**). By contrast, in 2014, just 13% of MSM who met high risk criteria reported ever using PrEP in the Pride survey. As shown in **Figure 5-2**, 2017-2019 estimates of current PrEP use for higher and lower risk MSM were fairly consistent across the three general surveys of MSM (NHBS, Pride, and

FIGURE 5-1. PREP AWARENESS AND USE AMONG MEN WHO HAVE SEX WITH MEN (MSM) IN KING COUNTY, SEATTLE AREA PRIDE SURVEY, 2013-2019




*Prior to 2015, respondents were asked if they had ever used PrEP.

FIGURE 5-2. PREP USE AMONG SEATTLE MEN WHO HAVE SEX WITH MEN (MSM) MSM BY RISK CRITERIA, 2017-2019



WHSPP). In 2018, 30% of the respondents to the PrEP survey among Black MSM reported current PrEP use. Extrapolating data from the 2018 STI Provider Survey with the estimated population size of all HIV-negative MSM, we estimate that 26% of all MSM took PrEP in the past year. Among MSM patients seen in the PHSKC STD clinic in 2018, 54% of high risk MSM, 10% of low/ intermediate risk MSM, and 12% negligible risk MSM reported ever using PrEP. Overall, 36% of all MSM STD Clinic patients had ever used PrEP.

Partner services (PS) are an integral part of public health efforts to control HIV and bacterial STI. PS seek to ensure that people with bacterial STIs and HIV receive appropriate treatment and that their sex and needle sharing partners are notified, tested, and treated. PS staff at the Harborview STD Clinic attempt to provide PS to all individuals with HIV, gonorrhea, and early syphilis diagnosed in King County, as well as a random sample of 5% of chlamydia cases, though the individuals prioritized for PS change over time with changes in program resources and priorities. PS also present an opportunity to monitor PrEP use among a population at high risk for HIV acquisition. Public Health staff who provide partner services for STIs routinely ask MSM patients if they are currently taking PrEP, and data collected through these STD PS interviews can be used to monitor PrEP use among MSM with bacterial STIs.

By definition, all MSM who had been diagnosed with a bacterial STI and completed a partner services interview met the high risk criteria; 59% of these MSM reported currently being on PrEP. This estimate is likely higher than the other estimates due to the overrepresentation of MSM on PrEP who receive quarterly STI screening and consequently have an increased likelihood of being diagnosed with asymptomatic STIs. The percent of HIV uninfected MSM patients diagnosed with an STI 2014-2018 who were using PrEP is shown in Figure 5-3. The percent of cases reporting already taking PrEP increased from 19% in 2014 to 65% in 2018 among MSM with early syphilis and rectal gonorrhea (p<0.0001), from 30% to

TABLE 5-1. CHARACTERISTICS OF MEN WHO HAVE SEX WITH MEN (MSM) BY PREP USE, NATIONAL HIV BEHAVIORAL SURVEILLANCE SURVEY, 2017

| | N | CURRENTLY ON PREP N=118 (ROW PERCENT) | DISCONTINUED PREP IN THE PAST YEAR N=19 (ROW PERCENT) | HAS NOT TAKEN PREP IN THE PAST YEAR N=279 (ROW PERCENT) |
|---|---|---|---|---|
| ALL HIV- MSM | 416 | 28 | 5 | 67 |
| Risk Level [A] | | | | |
| High Risk | 275 | 39 | 6 | 56 |
| Lower Risk | 139 | 9 | 2 | 89 |
| AGE | | | | |
| 18-29 | 138 | 28 | 8 | 65 |
| 30-39 | 150 | 31 | 5 | 65 |
| 40+ | 128 | 27 | <1 | 73 |
| RACE/ETHNICITY [B] | | | | |
| Asian/Pac. Isl. | 46 | 26 | 7 | 67 |
| Black | 50 | 18 | 6 | 76 |
| Latinx | 73 | 34 | 7 | 59 |
| Nat. American | 35 | 20 | 6 | 74 |
| White | 327 | 30 | 5 | 65 |

[A] High risk in past year = 10 or more anal sex partners, or methamphetamine or poppers use, or condomless anal sex with a positive or status unknown partner, or a sexually transmitted infection diagnosis (syphilis, gonorrhea, or chlamydia). Two persons did not provide enough information for classification.

[B] Racial/ethnic groups are not mutually exclusive; people could select more than one race/ethnicity and be represented in more than one row.

66% among other MSM at high risk (p<0.0001), and from 15% to 38% among MSM at lower risk (p<0.0001). Because urethral gonorrhea is usually symptomatic, data from MSM with this diagnosis provide an estimate of PrEP use that is less likely to be influenced by the frequent STI screening undertaken as part of PrEP related medical care. Among MSM with urethral gonorrhea, PrEP use increased from 18% in 2014 to 51% in 2018 (p<0.0001).

### PrEP Uptake among Transgender, Non-binary, and Genderqueer People Who Have Sex with Men

Data on PrEP use among transgender and non-binary/genderqueer populations is available in three data sources. Among 2019 Pride Survey participants who identified as transgender or non-binary/genderqueer and reported cisgender male or transgender women sex partners (n=116), 8% reported currently being on PrEP and 7% reported formerly being on PrEP. Among those who met the HIV/STD Program high risk criteria (n=30), 21% were currently on PrEP and 17% reported that they had previously taken PrEP. At the PHSKC STD Clinic, 29% of all clinic patients who were transgender, non-binary, or genderqueer and reported sex with men had ever used PrEP. In 2017 and 2018, 111 cases of gonorrhea, chlamydia, or early syphilis were diagnosed and reported among King County transgender, non-binary, and genderqueer people who have sex with men. Of these people, 57 were interviewed for partner services, and 52 had PrEP use assessed. Of these 52, 35% reported currently being on PrEP, including 44% of transgender women, 33% of transgender men, and 20% of non-binary/genderqueer people.

### People Who Inject Drugs (PWID) and Women Who Exchange Sex (WES) for Money or Other Items

Preliminary data (N=466) from the 2018 NHBS-IDU survey show that only 25% of HIV-negative PWID were aware of PrEP and 1% (n=5) had used PrEP in the past year. In the 2016 NHBS survey of WES, 16% had heard of PrEP and 1% had used PrEP in the last year. Among the subset of WES from the 2018 NHBS survey of PWID, 21% had heard of PrEP and 2% had used PrEP in the last year.

# Characteristics of People on PrEP

Table 5-1 describes the characteristics of HIV-negative MSM in the 2017 NHBS survey who reported currently being on PrEP (28%), discontinuing PrEP during the past year (5%), or not taking PrEP in the past year (67%). As reported above, PrEP use was concentrated among MSM who met criteria for being at high risk for HIV compared to MSM at lower risk (39% vs. 9%). Current PrEP use was between 27-31% in the three age groups shown; MSM aged 18-29 years more often reported discontinuing PrEP in the past year than older MSM. PrEP use varied by race/ethnicity, with Latinx MSM reporting the highest levels of PrEP use (34%) and Black MSM reporting the lowest level of used (18%).

# Public Health Activities to Promote Access to and Use of PrEP

PHSKC and the WA DOH engage in a wide spectrum of activities to increase PrEP use among people at higher risk for HIV, including direct provision of PrEP to high risk people, outreach efforts and PrEP navigation designed to increase the use of PrEP, dissemination of information, and financial assistance to make PrEP more accessible.

### 1) PrEP Program in the PHSKC STD Clinic

The PHSKC STD clinic at Harborview Medical Center started prescribing and managing patients on PrEP in October 2014. Clinicians and other staff at the clinic routinely discuss PrEP with all MSM and transgender people who have sex with men and recommend that patients initiate PrEP if they meet criteria defined in the 2015 PrEP Implementation Guidelines. The clinic provides ongoing PrEP care to patients meeting these criteria and refers other patients interested in initiating PrEP to community medical providers. Due to local disparities in HIV risk and concern that PrEP might not be equally accessible to all populations, starting in 2017 the STD clinic began to offer PrEP to all Black and Latinx MSM and transgender patients, including those who do not meet the criteria above. From October 2014 to December 2018, 1,036 patients had completed an initial intake for PrEP in the STD clinic. As of December 31, 2018, 552 of these patients were currently receiving PrEP through the STD clinic. A majority of clinic patients on PrEP at the end of 2018 were MSM (94%).

In 2018, 366 patients completed an initial intake for PrEP in the STD clinic, of whom, 90% were MSM (N=331). Compared to MSM diagnosed with HIV in King County in 2018 (N=128), MSM evaluated for PrEP in the STD clinic in 2018 were similarly like to be Latinx (26% of PrEP patients vs. 21% of MSM diagnosed with HIV in King County; *P*=0.25), but were slightly more likely to be aged

15-24 (24% of PrEP patients vs 15% of MSM diagnosed with HIV in King County; *P*<0.05) and slightly less likely to be Black, non-Latinx (8% of PrEP patients vs. 14% of MSM diagnosed with HIV in King County; *P*=0.06). As of July 31, 2019, 26 (8%) of 331 MSM patients evaluated for PrEP in 2018 never filled a PrEP prescription, 29 (9%) have moved or transferred care, and 95 (29%) were lost to follow-up or stopped PrEP for other reasons. The remaining 181 (55%) patients have been on PrEP for a median 13 months (interquartile range 10 to 16 months).

### 2) Promoting PrEP via STI Partner Services

PS present an opportunity to provide population-based HIV prevention, including PrEP referrals, to people at high risk for HIV and other STIs. Since October 2014, PS staff have assessed whether HIV-uninfected MSM and transgender people are currently on PrEP as part of STI PS interviews. If patients are not on PrEP, PS staff offer to help them arrange to initiate PrEP at the PHSKC STD Clinic or with community medical providers.

### PrEP Referrals among MSM

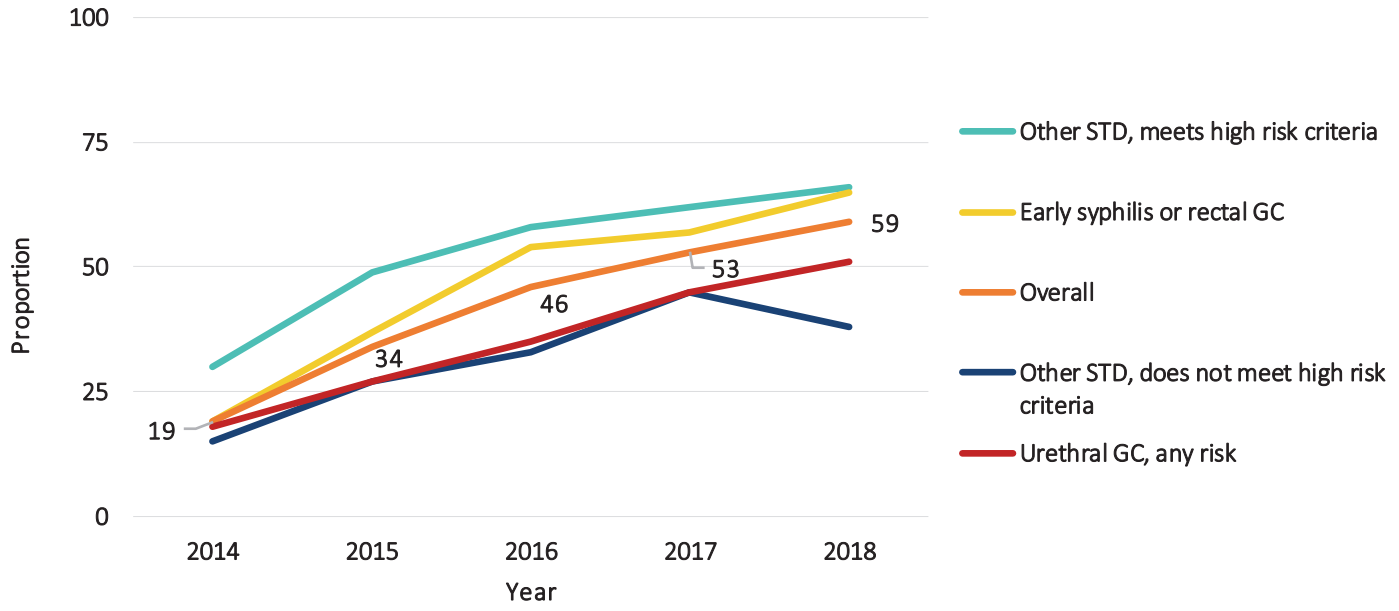
In 2018, medical providers reported 3,346 cases of early syphilis, gonorrhea, or chlamydial infection among HIV-uninfected MSM in King County, 1,288 of whom received PS. Of these persons, 976 (76%) were eligible to receive PrEP at the STD Clinic; 609 (62%) of these 976 persons were already using PrEP at the time of their PS interview. Among 367 MSM not currently on PrEP, 316 (86%) were offered a referral, of whom 187 (59%) accepted. Among PS recipients not eligible to receive ongoing PrEP care at the STD Clinic (n=312), 159 (51%) were already using PrEP, public health outreach staff offered 66 PS recipients assistance linking to PrEP, of whom 53 (80%) accepted referrals to community providers.

### 3) PrEP Discontinuation

Increases in PrEP awareness and PrEP uptake are signs of a successful intervention, however failure to retain people on PrEP who are still at risk for HIV remains a challenge. Understanding reasons for PrEP discontinuation is necessary to address low PrEP retention rates.

Of the 1,036 patients who enrolled in the STD Clinic PrEP program from October 2014 to December 2018, 390 (38%) patients were retained on PrEP at the clinic from initial start date until July 31, 2019, 135 (13%) patients did not fill their first prescription, 130 (13%) moved or transferred care, three (<1%) tested positive for HIV at their initial visit and the remaining 378 (36%) patients discontinued PrEP at the STD clinic at least once between their initial start date until July 31, 2019. The reason for PrEP discontinuation was available for 104 (28%) of the patients as the majority were lost to follow-up or the reason was unknown (274, 72%). Discontinuation reasons for those with a documented reason included patient reporting being in a monogamous relationship

**Figure 5-3. Current PrEP Usage among Men who have Sex with Men (MSM) Diagnosed with a Bacterial Sexually Transmitted Infection (STD) in King County Completing a Partner Services Interview, 2014-2018**




Abbreviations: STD=sexually transmitted disease; GC = gonorrhea

(40%), patient reported they were no longer at risk for HIV (27%), side effects (22%), or another reason (11%). The WHSPP survey also assessed the reasons for discontinuing PrEP among respondents who had taken PrEP in the past. Among the respondents, the most common reasons for discontinuation were perception of no longer being at high risk for getting HIV (43%), concern about long-term health effects of PrEP (27%), inability to continue paying for PrEP (20%), and doctor recommendation for discontinued use (18%). Data collected from MSM receiving HIV PS in King County, WA 2014 to June 2019 included similar common discontinuation reasons: changing insurance (19%), side-effects (19%), moving (14%), homelessness (14%), and perception of low risk (9%).

The median time from PrEP initiation to PrEP discontinuation was similar among STD Clinic PrEP patients, WHSPP survey respondents, and MSM receiving HIV PS. The median time to first PrEP discontinuation for STD Clinic patients was seven months (interquartile range [IQR]: 4-13 months), for survey respondents the median time since most recently starting PrEP was seven months (IQR: 2.5-18), and for MSM receiving HIV PS the median duration of PrEP use was 212 days (IQR: 52-569 days), which is approximately seven months (IQR: 1.7-19 months). PrEP discontinuation differed by race/ethnicity among STD Clinic PrEP patients. Black patients had higher rates of discontinuation at 12 months (51%) compared to White (36%), Latinx (34%), and Asian/Pacific Islander (33%) patients.

### 4) Community-Based PrEP Programs

The WA DOH supports several community-based programs to promote PrEP use and make PrEP more accessible in King County. The primary intervention is PrEP Navigation which connects current and prospective PrEP clients with PrEP Navigators in their community. PrEP Navigators support clients in navigating healthcare systems—such as obtaining health insurance, reducing barriers to PrEP access—including obtaining funding for PrEP and the associated medical screenings needed, and increasing client persistence on PrEP and in PrEP-related services.

PrEP Navigators currently operate at four agencies in King County: Center for Multicultural Health, Entre Hermanos, Harborview Madison Clinic, and Lifelong. In 2018, these agencies provided PrEP Navigation services to 289 persons, 156 of whom subsequently initiated PrEP. Gay City also operates a weekly PrEP Clinic that provides integrated PrEP Navigation and clinical services. In 2018, they supported 66 persons in initiating PrEP through their PrEP Clinic.

### 5) PrEP Resources on the Public Health Web Site

PHSKC maintains a web page with PrEP information and resources, available here: www.kingcounty.gov/prep. The website includes facts about PrEP, a link to the "We are 1" quiz to help people decide if PrEP is right for them, information about paying for PrEP, and clinical guidelines for providers. The web page also includes a list of medical providers who are willing to prescribe and manage patients on PrEP, and a searchable map of these medical providers. The 2017 Choose Your Safer Sex Plan campaign included PrEP resources and can be found here: https://www.we-are-1.com/safersex.

### 6) Paying for PrEP

The WA DOH has operated a PrEP Drug Assistance Program (PrEP DAP) since 2014. Initially, the program paid for enrollees' costs for tenofovir/emtricitabine, regardless of their insurance status, but was subsequently shifted to a payer of last resort model. Under this model, PrEP DAP helped patients enroll in insurance and pharmaceutical drug assistance programs and covered the costs of PrEP for patients who had exhausted benefits provided through those programs.

Beginning November 1st, 2017, PrEP DAP expanded services and began offering patients assistance with medical and lab costs by contracting with medical providers across the state and opening enrollment to uninsured people to access those services. PrEP DAP is still the payer of last resort, and some enrollees may be required to use another drug assistance program prior to using PrEP DAP. Expanding PrEP DAP to include medical and laboratory services reduces the barriers of medical cost to enrollees and supports engagement in care. The expansion allows an enrollee to see a contracted provider and have out-of-pocket costs for allowed services paid by PrEP DAP.

A total of 2,846 persons enrolled in Prep DAP between 2014 and July 31, 2019, of whom 2,191 were King County residents; 78% of these enrollees had medical insurance. Since expanding in November 2017, PrEP DAP has processed 14,964 medical and lab claims and has contracts with 536 medical providers and 286 laboratory locations across the state. In July 2019, 79 enrollees received any services paid for through PrEP DAP, including 53 persons in King County. Statewide, this

included 54 enrollees with and 25 without insurance who filled their tenofovir/emtricitabine prescription through PrEP DAP. The extent to which persons who were previously enrolled in PrEP DAP remain on PrEP is unknown.

# Successes

Washington State and King County have robust systems for promoting PrEP use and access, including the state-funded PrEP drug assistance program and the integration of PrEP into STI medical care and partner services. In 2018, approximately 27% of all MSM in King County were on PrEP, including an estimated 49% of high risk MSM. This is an increase from the estimated 37-39% of high risk MSM on PrEP in 2017. Notably, nearly 60% of MSM who received partner services for a bacterial STI – perhaps the population at highest risk for HIV – reported being on PrEP. Recent NHBS data also showed high levels of PrEP use among Latinx MSM, a population that has experienced high rates of HIV and STIs.

# Challenges

King County has made substantial progress using PrEP to prevent HIV infection, but the county has not yet achieved the goal of having 50% of MSM at high risk for HIV on PrEP by 2020. Although 2018-2019 data suggest that this goal is within reach, challenges remain in improving PrEP awareness, PrEP uptake, and PrEP retention. Some data suggest that PrEP use is disparate, with lower levels of use among Black MSM, a population at particularly high risk for HIV infection. Although current PrEP use was similar to other surveys, Black MSM PrEP survey respondents reported lower PrEP awareness than Pride survey respondents. Black STD Clinic PrEP patients have lower rates of PrEP retention with over half of those initiating PrEP at the clinic discontinuing use within 12 months. Another challenge is that data on PrEP use among transgender populations, PWID populations, and women remain inadequate. Finally, efforts to promote PrEP among PWID and women remain very limited, a problem of particular importance given increases in HIV observed in non-MSM PWID in 2018.

To address these ongoing challenges, PHSKC, the WA DOH, and local community-based organizations are expanding PrEP navigation, working with local medical providers and pharmacies to increase access to PrEP in diverse populations, and promoting PrEP adherence. In 2020, PHSKC will undertake new community engagement activities aimed at increasing PrEP use among Black MSM. The 2019 NHBS survey conducted by PHSKC includes transgender women and will provide additional information on PrEP use and needs in that population. In 2019, a question about current PrEP was added to the STD clinic intake form which will provide a better method of monitoring PrEP use among clinic patients.

*Contributed by Anna Berzkalns, Sara Glick, Susan Buskin, Jsani Henry, Julia Hood, Christine Khosropour, Darcy Rao, Steven Erly*

# Condom Use


## SUMMARY

Condoms are widely available, inexpensive, and prevent HIV, most sexually transmitted infections (STIs), and unwanted pregnancies. Public Health – Seattle & King County (PHSKC) markets and distributes condoms to prevent STIs and unintended pregnancy.

In 2018, PHSKC, along with community-based organizations (CBOs), marketed and distributed 423,067 male (external) condoms and 121,457 packets of lube throughout King County.

Condom use continues to be very common among diverse populations in King County, including MSM and adolescent heterosexuals.

Pre-exposure prophylaxis (PrEP) users report decreased condom use, which may be associated with increases in STIs other than HIV.


## Introduction

When used correctly and consistently, condoms are a highly effective method of HIV prevention, with the added benefit of preventing most sexually transmitted infections (STI) and unwanted pregnancies.[1-4] Although many persons at risk for HIV and other STIs do not use condoms every time they have sex, condom use remains very widespread. Condoms are a central component of Public Health –Seattle & King County (PHSKC) and the WA State Department of Health (WA DOH)'s HIV/STI prevention strategy.

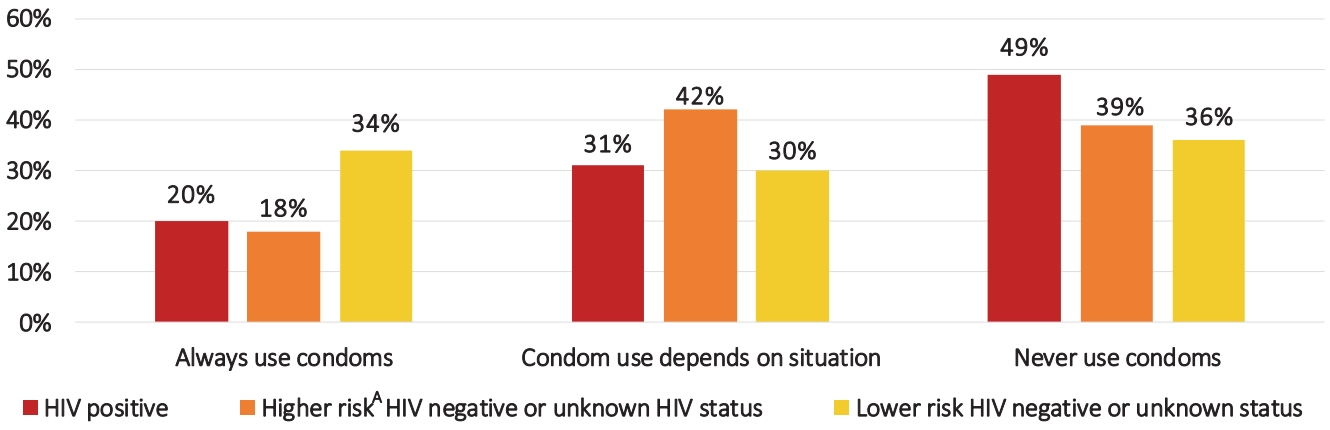
### Condom Use among Men Who Have Sex with Men (MSM)

MSM are the population most impacted by HIV in King County and Washington State. Local data from the Pride survey from June 2019 provide some insight into condom use among MSM. The survey was administered anonymously to 437 Washington residents who identified as MSM at the annual Seattle Pride Parade. Overall, 28% of sexually active respondents reported always using condoms, 34% sometimes used condoms, and 38% never used condoms. HIV negative and unknown status MSM were more likely to report always using condoms relative to HIV-infected participants (28% versus 20%; $X^2$p value =0.39). Among higher risk HIV negative/unknown status MSM (e.g. men who reported in the past year: serodiscordant condomless anal sex, 10 or more anal sex partners, methamphetamine or popper use, or an STI diagnosis), most (60%) used condoms at least some of the

time, though only 18% reported using them all of the time (Figure 6-1). MSM who sometimes used condoms most commonly reported using them with non-primary partners (66% of sometimes-users) and partners they did not know well (53% of sometimes-users). About half (53%) of Pride survey respondents reported that they had received free condoms in the past 3 months. Among condom users, about half (46%) reported that they had paid for the last condom they used.

In the 2019 Pride survey referenced above, 79 MSM PrEP users answered questions about behavioral changes since initiating PrEP. Of these, 33% reported they were more likely to have condomless sex after starting PrEP. These data suggest that PrEP has likely contributed to a decrease in condom use. Data on condom use among sexually active MSM stratified by HIV risk and HIV status are presented in Figure 6-1.

FIGURE 6-1. CONDOM USE AMONG MEN WHO HAVE SEX WITH MEN, 2019 SEATTLE PRIDE SURVEY




[A] Higher risk was defined as men who reported in the past year: serodiscordant condomless anal sex, 10 or more anal sex partners, methamphetamine or popper use, or an STI diagnosis

In 2017, 491 MSM Pride survey respondents answered questions about things they might be willing to do to reduce their chance of getting an STI other than HIV. (These questions were not asked in 2018 or 2019.) Overall, 78% reported they would be willing to use condoms more often. Of note, 56% of MSM reported they would use condoms more often if free condoms were more easily available. This was highest (66%) among the youngest MSM (age 14-29 years).

### IMPACT OF PREP ON CONDOM USE

In February 2017, Washington State Department of Health (DOH) staff mailed a survey to 1,006 current and former PrEP Drug Assistance Program (PrEP DAP) participants with valid addresses. This was an effort to collect a variety of information about participants and their experiences with PrEP DAP, including changes in sexual behavior after initiating PrEP. Overall, 26% responded to the survey. Eighty-five percent of men reported currently taking PrEP. After starting PrEP, 54% of participants decreased their condom use for anal sex; 42% did not change their condom use, and the remaining 4% increased their condom use.

### CONDOM USE AMONG ADOLESCENTS

Adolescents and young adults are among the populations most affected by bacterial STI. The Healthy Youth survey (HYS) is a school-based survey administered every other year in Washington State. HYS asks 8th, 10th, and 12th graders about sexual debut and condom use the last time participants had sex. In King County in 2018, 7% of 8th graders, 19% of 10th graders, and 32% of 12th graders had ever had sex. Among sexually experienced respondents, 46% of 8th graders, 54% of 10th graders, and 53% of 12th graders used a condom the last time they had sex. For Washington State, 9% of 8th graders, 26% of 10th graders, and 47% of 12th graders were sexually experienced and 51%, 55%, and 51% respectively used a condom the last time they had sex.

Data from King County from the WA DOH's Behavioral Risk Factor Surveillance System(BRFSS[5]) were also available in the first half of 2019 to estimate the percent of youth (ages 18 to 24) -- excluding those who identified only as gay or lesbian — who used condoms the last time they had sexual intercourse. A total of 48% of 60 sexually active youth had used a condom the last time they had

sex. This percent is unweighted and based on small numbers, and thus subject to changing.

# Distribution

In 2018, PHSKC distributed 177,270 external (or male) condoms and 64,050 packets of lube in King County. DOH provided an additional 245,797 condoms to agencies and organizations in King County and 57,407 packets of lube. And more than 1.3 million male condoms have been distributed statewide by public health. About 57% of condoms are distributed in King County through prevention contractors (with Lifelong distributing the greatest number) directly funded by the state DOH. Included in the 177,270 condoms distributed in 2018 are 5,000 condoms distributed by the Harborview STD clinic. In addition to the 423,067 condoms distributed through mechanisms described above, Public Health distributed 30,000 additional condoms with lube packets as part of the We Are 1 consortium's Syphilis is Rising Pride campaign in 2018. The 2018 sum (453,067 condoms) reflects a small increase from 2017, when 433,067 external condoms were distributed.

# Marketing

In an effort to improve condom usage, the PHSKC HIV/STD Program is piloting several condom access and distribution projects. One is a mobile-friendly and interactive web page that allows residents to use a map to identify places to get free condoms in King County and throughout Washington State. (See https://www.freecondomswa.com.) Users can tap on map locations to display the name of the location, its address, hours of operation, and if the location is only for people who are 21 or older. The map also features 2 widgets that allow it be embedded on other webpages. Once embedded, the widgets allow people to enter a zip code and find the nearest available free condom site without needing to first navigate to the map. The map is updated regularly to ensure that it remains accurate.

A second pilot project is the distribution of condom and lube variety packs – known as "the Tool Kit" - to patients at the PHSKC STD Clinic. The packs include 17 varieties of condoms, 3 types of lube, information on the purpose of the kit, guidelines on how to use the kit, instructions on how to correctly use a condom, and information on how to get more free condoms. The kit encourages folks to find the condom that fits them the best and maximizes their pleasure, and through that effort increase condom use. To date in 2019, the STD Clinic has given out 603 Tool Kits (10,251 condoms and 1,809 packets of lube).

Finally, in 2019-2020 PHSKC will increase the availability and accessibility of free condoms throughout the county, starting in zip codes with high rates of bacterial STI and HIV and where there were no known sites making free condoms available. This Condom Distribution Project is a structural-level intervention that places Condom Cubes, which are custom acrylic open-top boxes that hold 500 free condoms (20 different types) in an variety of public venues that are easily accesible, particularly for youth. To date in 2019, 40,000 condoms have been distributed among 50 Cubes in 5 South King County zip codes.

# Conclusions

Although some evidence suggests that condom use among MSM is declining – a trend that is likely partially, but not completely, attributable to PrEP - most sexually active MSM (68-70%) continue to use condoms at least some of the time, and many MSM indicate they are willing to use condoms more. Meanwhile, among heterosexual youth, a population at high risk for bacterial STIs, condom use remains suboptimal. In both populations, inadequate access to free condoms appears to be a barrier to condom use. PHSKC and the WA DOH remain committed to condoms as part of a balanced, broad-based prevention program to control HIV and other STIs. New public health initiatives will promote condom use by expanding access to free condoms with methods that are acceptable to the populations affected by HIV/STI.

***Contributed by Susan Buskin, Kaitlin Zinsli, Julia Hood, Jesse Chipps, and Jsani Henry***

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# Syringe Services


## SUMMARY

In 2018, the Public Health – Seattle & King County (PHSKC) syringe services program (SSP) sites exchanged approximately 8 million syringes, its highest volume ever.

HIV testing in the past year among people who inject drugs (PWID) increased from 57% in 2017 to 66% in 2019, likely at least in part in response to PHSKC HIV testing outreach efforts.

Reported syringe sharing decreased from 22% in 2017 to 15% in 2019 among SSP clients.

Naloxone distribution at PHSKC SSP sites doubled in the past year and increased five-fold over the past two years.

The majority of PWID report wanting to reduce or stop their use of opioids and stimulants. The PHSKC downtown SSP works closely with a low-barrier buprenorphine program co-located in the same building. The lack of widely available, evidence-based treatment for methamphetamine remains a serious concern.


## Background

Syringe service programs (SSPs) are public health programs for people who inject drugs (PWID). An important component of the Public Health – Seattle & King County (PHSKC) SSP is needle exchange, which is designed to reduce the spread of HIV and other blood-borne infections among PWID and their communities. The PHSKC SSP provides new, sterile syringes and clean injection equipment in exchange for used syringes. SSPs also provide other harm reduction services to PWID, including helping interested drug users find drug treatment and health care. Other services provided at the PHSKC SSP include testing for HIV, hepatitis, tuberculosis, and other infections to which drug users are prone; vein care and medical care for skin and soft tissue infections; education and training on overdose prevention, including Naloxone training and distribution; treatment readiness counseling; case management services and referral for medication for opioid use disorder; education about harms associated with drug use and how to minimize them; and safe disposal of equipment. PHSKC's program began operating in 1989.

| KEY GOALS | 2018 | 2021 |
|---|---|---|
| Syringe Coverage | 300/PWID | 365/PWID |
| Naloxone Possession | 76% | 85% |

Currently, PHSKC operates four exchange programs: fixed sites in downtown Seattle and Capitol Hill, an established mobile program in South Seattle/South King County, and a pilot mobile program in North Seattle. The People's Harm Reduction Alliance (PHRA) provides exchange services in other parts of the city.

In 2018, there was a notable increase in the number of new HIV infections identified among PWID. (See Increases in HIV among PWID article elsewhere in this report.) The increase in new HIV cases occurred among both PWID who are men who have sex with men (MSM), as well as other, largely heterosexual PWID. PHSKC investigations identified that several of the heterosexual HIV cases – all among people living homeless – were connected and living in a concentrated area of north Seattle. In response, the PHSKC HIV/STD Program – including the SSP – expanded HIV testing, treatment, and prevention services. The SSP has also expanded its syringe exchange services into North Seattle. These efforts are described in more detail below.

### Number of Syringes Exchanged and Syringe Coverage

In 2018, across all affiliated SSPs within Seattle and King County, the program exchanged 7,951,735 syringes, a 11.8% increase from 2018. This included 3,531,643 syringes at one of four PHSKC SSP sites and 4,420,092 syringes through partnership with PHRA. These syringes were distributed during 38,005 exchange encounters: 23,704 at a PHSKC SSP site and 14,301 at PHRA. As shown in Figure 7-1, syringe exchange volume has increased substantially over the past 10 years, including the increase between 2017 and 2018 largely in response to the HIV outbreak response among PWID.

The PHSKC South Seattle/South King County SSP – known as SCORE (South County Outreach Referral and Exchange) – operates three days a week using a mobile unit. Clients can call the SSP to arrange exchange services, including same-day appointments. SCORE exchanged 1,284,790 syringes during 2,529 encounters in 2018, largely due to secondary exchange (i.e., obtaining syringes for others). Because of the increase in HIV cases among PWID, in 2018 PHSKC launched the North Seattle Outreach Referral and Exchange (NOR) pilot program. NOR is a mobile SSP that visits homeless encampments and other locations frequented by PWID to provide syringe services, including sterile injection equipment, HIV testing, and vaccinations. PHSKC secured funding to purchase a dedicated van for NOR, which is expected to be available in late 2019. In the pilot program (September 2018 – June 2019), NOR exchanged 40,650 syringes during 598 encounters, completed 941 HIV tests (which identified 4 new cases of HIV), and distributed 271 naloxone kits.

Syringe coverage is a measure used across jurisdictions to monitor if SSPs provide enough injection equipment to PWID. Coverage is defined as the number of sterile syringes provided per PWID per year. The World Health Organization recommends that SSPs provide at least 200 sterile syringes per PWID per year to control HIV infection in the population. Based on a CDC analysis of 2015 data from 20 urban areas, Seattle is the only city to have achieved this goal (209 syringes per PWID in 2015).[1] San Francisco had the second highest ratio (122 syringes per PWID), Chicago had the third (111 syringes per PWID), and all other cities distributed <35 syringes per PWID. Using 2018 estimates of distributed syringes (7,951,735) and the updated PWID population size estimate for King County (26,500), syringe coverage in King County in 2018 was 300 syringes per PWID, which continues to exceed the WHO recommendation. The PHSKC HIV/STD has a goal to distribute 365 syringes per PWID by 2021.

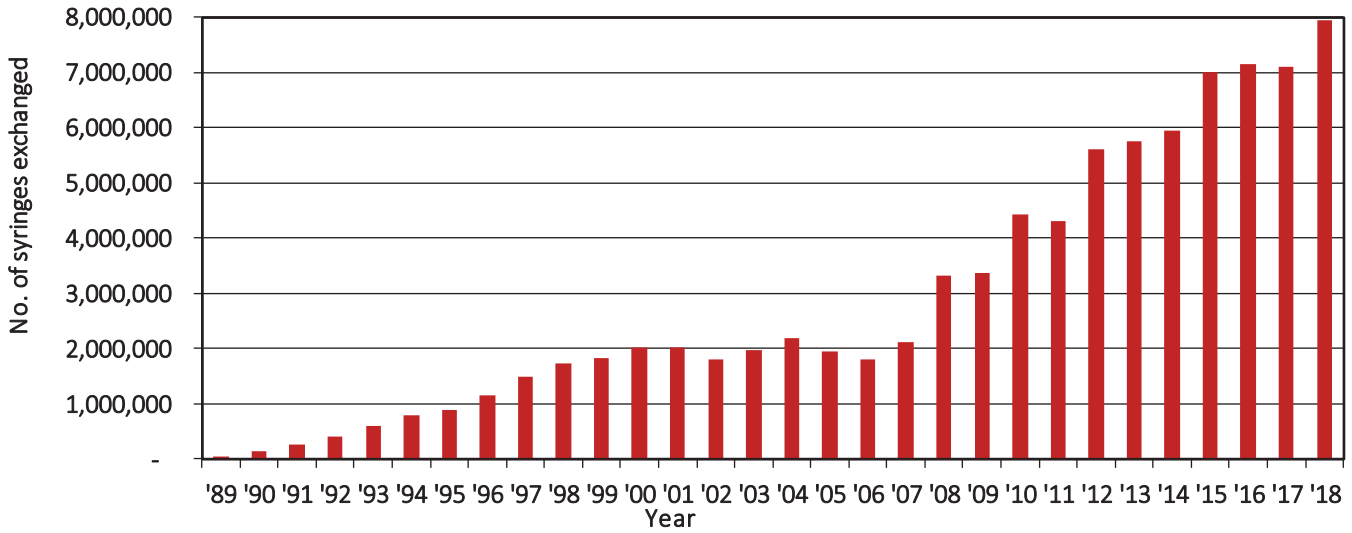
## Naloxone Distribution

Naloxone is an opioid-antagonist medication used to reverse the effects of an opioid overdose. PHSKC SSP sites have been offering naloxone kits and training to clients since February 29, 2012. In 2018, 4,447 naloxone kits were distributed at PHSKC SSP sites (vs. 2,254 in 2017 and 811 in 2016), and 692 clients self-reported using a kit to reverse an opioid overdose. Data from the 2019 SSP survey of 401 clients found that 76% of clients reported having a naloxone kit in the past 3 months, an increase from 62% in 2015. In 2019, 41% of all surveyed clients reported using naloxone in the past 3 months to reverse an overdose. The PHSKC HIV/STD Program has a goal for 85% of clients to report having a naloxone kit in 2021.

## Social Work Services

Social workers at the Downtown and Capitol Hill needle exchange sites provide referrals to treatment for substance use disorder (medication for opioid use disorder, intensive outpatient, and detox), as well as primary and mental health care. They also help people sign up for health insurance, provide resource information, and talk with people who are in crisis and

FIGURE 7-1. PUBLIC HEALTH – SEATTLE & KING COUNTY (PHSKC) SYRINGE DISTRIBUTION VOLUMES, 1989-2018




offer support and encouragement. In 2018, social workers provided services to 428 unique clients, averaging 1.9 contacts per client (range=1-21 contacts).

### ON-SITE BUPRENORPHINE TREATMENT AND REFERRALS TO MEDICATION FOR OPIOID USE DISORDER

Bupe Pathways was launched in January 2017 and provides low barrier access to buprenorphine, a type of medication for opioid use disorder. Bupe Pathways is in the same building as the Downtown PHSKC SSP and is staffed by an interdisciplinary team, including a board-certified addictions medicine specialist (physician), a nurse practitioner, a nurse care manager, a social worker, and a community health worker. Interested clients meet with program staff for their initial clinical assessment and to develop a buprenorphine induction and care plan tailored to the client. Buprenorphine prescriptions can be dispensed at the on-site pharmacy. Although patients have the option of transitioning their maintenance care to other community providers, many continue to see the Bupe Pathways providers for ongoing care due to the trusting relationships that develop with the staff. In the next year, Bupe Pathways will expand into a larger, dedicated space (within the same building) and add additional staff.

Through the end of 2018, 269 people had enrolled in Bupe Pathways. During an average month in 2018, there were 190 clinic visits and 66 unique clients had at least one clinic visit. In December 2018, buprenorphine prescriptions disbursed by the program covered 1,817 patient-days (i.e., 23 days per patient seen that month). An evaluation of the first year of the program demonstrated a significant decrease in the percentage of toxicology tests positive for opioids (other than buprenorphine) between samples collected at the first and sixth visit.[2]

In addition to Bupe Pathways, SSP social workers provided referrals to 328 clients for other medications for opioid use disorder, including methadone, buprenorphine, and naltrexone. (This estimate only reflects referral encounters that were recorded, the actual count is likely greater than 328.)

## Other Medical Services, including HIV and HCV Testing

The downtown SSP partners with the Pioneer Square Medical Clinic to provide additional medical services to clients. In 2018, 733 clients at the downtown needle exchange were seen for medical care, with most being seen for wound care services and follow-up. During the year, female reproductive health services were introduced and piloted, including gynecological exams and birth control options. In 2018, PHSKC non-SSP staff provided HIV and hepatitis C virus (HCV) testing, including 65 HIV tests and 55 HCV tests. There were no positive HIV tests. Among the HCV tests, 26 were HCV antibody positive and 20 had a positive confirmatory test. In response to the 2018 HIV cluster among PWID, all SSP staff were subsequently trained to do HIV testing and expect to provide daily HIV testing in the near future.

Data from other local surveys have shown that the

TABLE 7-1. RESULTS FROM THE 2019 PUBLIC HEALTH -- SEATTLE & KING COUNTY SYRINGE SERVICES PROGRAM (SSP) CLIENT SURVEY

| CHARACTERISTIC | N=401 % |
|---|---|
| **DEMOGRAPHICS** | |
| Age, mean | 38 years |
| Women (cis or trans) | 34% |
| Race/ethnicity [A] | |
| American Indian / Alaska Native | 12% |
| Asian / South Asian | 5% |
| Black / African American | 6% |
| Latinx | 8% |
| Native Hawaiian / Pacific Islander | 2% |
| White | 77% |
| Person of Color | 33% |
| Homeless | 47% |
| Unstably housed | 24% |
| Jail or prison, past year | 37% |
| Exchange sex, past year | 10% |
| **SSP USE** | |
| Number of SSP visits in past 30 days, mean | 3.6 |
| Percent of syringes returned to SSP | |
| 0% | 6% |
| 25% | 14% |
| 50% | 12% |
| 75% | 29% |
| 100% | 40% |
| Getting syringes for someone else | 53% |
| Use a syringe once, on average | 64% |
| **INJECTION BEHAVIORS, PAST 3 MONTHS** | |
| Number of injections per day, mean | 3.8 |
| Primary drug | |
| Heroin, by itself | 52% |
| Methamphetamine, by itself | 17% |
| Goofballs | 20% |

| CHARACTERISTIC | N=401 % |
|---|---|
| **INJECTION BEHAVIORS, PAST 3 MONTHS (CONTINUED)** | |
| Any heroin use | 85% |
| Any methamphetamine use | 79% |
| Any goofball use | 56% |
| Any fentanyl use | 17% |
| Any syringe sharing | 15% |
| Any equipment sharing | 46% |
| Femoral injection | 13% |
| Neck injection | 32% |
| Ever inject in public | 64% |
| Ever inject alone | 80% |
| **HEALTH CONDITIONS, PAST 12 MONTHS** | |
| Abscess or skin or soft tissue infection | 51% |
| Infected blood clot or blood infection | 10% |
| Endocarditis | 2% |
| STI (not HIV or HCV) | 5% |
| HCV, ever (self-reported) | 45% |
| Interested in HCV treatment [B] | 68% |
| HIV test, last year | 66% |
| HIV (self-reported) | 6% |
| Ever heard of PrEP (if HIV-) | 51% |
| Ever used PrEP (if HIV-) | <1% |
| **OVERDOSE, PAST 12 MONTHS** | |
| Opioid overdose (self-reported) | 22% |
| Had naloxone | 76% |
| Used naloxone | 41% |
| Emergency dept. due to meth use (if used meth) | 15% |
| **SUBSTANCE USE TREATMENT** | |
| Currently in treatment | 33% |
| Interest in reducing/stopping opioid use | 77% |
| Interest in reducing/stopping stimulant use | 63% |

[A] Participants could select more than one race / ethnicity. Rows do not sum to 100%.

[B] Among participants who self-reported a prior HCV diagnosis and no treatment.

prevalence of hepatitis C virus (HCV) remains very high (approximately 70%) among PWID in King County, and relatively few local PWID have benefitted from current, highly effective HCV treatments.[3]

### Summary of Results from the 2019 SSP Client Survey

PHSKC conducts a survey of SSP clients every other year to monitor demographics, health, and behavior trends among PWID. In July 2019, PHSKC SSP staff surveyed 432 SSP clients, 401 of whom reported injection drug use in the past 3 months and are included in this analysis. Results related to client demographics, injection related behaviors, health conditions, overdose, and substance use treatment are in Table 7-1.

Since the last survey in 2017, the most notable trends were:

- Continued high levels of polysubstance use, including heroin (85% ever used), methamphetamine (79%), and goofballs (56%)
- Increase in goofball as primary drug (10% in 2017 vs. 20% in 2019)
- Decrease in any reported syringe sharing (22% in 2017 vs. 15% in 2019)
- Increase in HIV testing in past year (57% in 2017 vs. 66% in 2019)
- Increase in naloxone possession (62% in 2017 vs. 76% in 2019)
- Slight increase in current treatment engagement (28% in 2017 vs. 33% in 2019)

Data from the survey also highlighted areas for the expansion of syringe services and other harm reduction interventions:

- On average, PWID visited a SSP between 3-4 times per month
- One-half (53%) of SSP clients were also getting syringes and other equipment for another person
- 40% of SSP clients report returning all of their syringes at a SSP and 64% use a syringe only once, on average
- Approximately one half (45%) of SSP clients report a prior HCV diagnosis, which is lower than the HCV prevalence among PWID in other local surveys that include HCV screening (~70%). Among those with a prior HCV diagnosis, 68% were interested in treatment.
- 6% of SSP clients reported a prior HIV diagnosis, which is similar to the 2017 estimate.
- Among clients who were HIV-negative, 51% had ever heard of PrEP and <1% had ever used PrEP.
- 15% of SSP clients who use meth had at least one visit to an emergency department in the past year due to their meth use.

## Successes

In an era of a national opioid crisis, local shifts in drug use patterns, and a recent increase in HIV among PWID in King County, the PHSKC SSP continues to expand and innovate in order to meet the unique needs of local PWID. To our knowledge, the PHSKC SSP is the only SSP in the country to have met the World Health Organization's benchmark for syringe coverage (200+ syringes per PWID per year). In 2018, the program reported its highest ever volumes of syringe exchange and naloxone distribution, with nearly one million more syringes exchanged in 2018 than 2017. This includes high levels of syringe exchange through mobile programs in North Seattle and South King County. By late 2019, the North Seattle mobile SSP will have a dedicated van and expanded hours. HIV testing and case finding at the SSP were low over the past few years, but all SSP staff are now trained and available to provide HIV testing to clients and the HIV/STD program has substantially increased outreach HIV testing as part of its response to rising numbers of HIV diagnoses among PWID. Given the clear demand for expanded treatment services, the PHSKC SSP continues to collaborate with a low-barrier buprenorphine program located within the same building as its downtown site and provide referrals to other treatment programs throughout the county.

## Challenges

The increase in HIV cases among PWID, including both MSM and non-MSM, in King County remains a tremendous concern. This increase in HIV cases has occurred in the context of overall high levels of viral suppression among people living with HIV in King County (including PWID) as well as the highest level of syringe coverage in the U.S. However, many of the new HIV cases – namely a connected cluster of cases – were situated in an area with significantly fewer local services, including no regular SSP access. In response, the PHSKC SSP has expanded its services to North Seattle. Although data from the 2019 SSP survey show that while many SSP clients use their syringes only once and return all their syringes to the SSP, many do not. This highlights the need to continue to develop strategies to ensure that SSP clients have access to enough syringes and the means to safely dispose of their equipment. HCV incidence and

prevalence remain high among PWID and many are interested in treatment. Local partners should continue to explore options for HCV treatment in collaboration with SSPs. Similarly, PrEP use remains very low among PWID. PrEP could be a useful HIV prevention tool for some PWID (e.g., MSM and/or people who exchange sex for money or drugs), but PrEP knowledge and adherence remain significant challenges. Finally, methamphetamine use among PWID remains very high and the 2019 SSP survey highlighted its profound health consequences. Moreover, the majority of PWID who use stimulants want to reduce or stop their use. Unfortunately, there are very few widely available evidence-based treatment options for people who use methamphetamine, and those that do exist (e.g., cognitive behavioral therapy and contingency management) are resource intensive. New data on the efficacy of medications to treat stimulant use disorder are expected in the following year. In the absence of current treatment options, SSPs are the organizations in the best position to provide harm reduction interventions to reduce risks associated with methamphetamine use. This should include the provision of smoking equipment to reduce the frequency of injection.

*Contributed by Sara Glick and Joe Tinsley*

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3. Tsui, J, et al. Hepatitis C continuum of care and utilization of healthcare and harm reduction services among persons who inject drugs in Seattle. Drug Alchol Depend 2019 Feb 1;195:114-120. doi: 10.1016/j.drugalcdep.2018.11.026. Epub 2018 Dec 26

# HIV Testing and Case Finding


## SUMMARY

An estimated 93% of people living with HIV (PWH) in King County have been diagnosed.

More than half (55%) of men who have sex with men in King County newly diagnosed with HIV reported a negative test in the prior year, and 69% reported a negative test in the prior 2 years.

Public Health provided 15,255 tests in 2018, and 28% of all newly identified cases in King County were diagnosed through publicly funded HIV testing.

14% of persons with newly diagnosed HIV infection were diagnosed with AIDS within a year of their HIV diagnosis (excluding those with a negative HIV test in the prior 2 years), suggesting that they likely had longstanding infections. This was particularly common among HIV-infected heterosexuals born outside of the U.S.


## Background

HIV testing is a cornerstone of HIV prevention and plays a critical role in advancing both of Public Health's primary HIV-related objectives: preventing HIV transmission and averting the morbidity and mortality associated with HIV infection. Testing prevents HIV-related morbidity and mortality by identifying infected persons, the first step in their accessing life-saving medical care. It also prevents HIV transmission as most persons who learn they are HIV positive change their behavior to prevent transmission to partners and initiate antiretroviral therapy which renders

| Key HIV Case-Finding Goals | 2018 | 2020 Goal |
|---|---|---|
| Know HIV status | 93% | ≥95% |
| Late HIV diagnosis (AIDS diagnosis within 1 year of HIV diagnosis) | 20% | ≤20% |
| Recent HIV testing in men who have sex with men (MSM) (an HIV test within 2 years among those with new HIV diagnosis[A]) | 69% | ≥75% tested in prior 2 years |
| Eliminate disparities by race/ethnicity. (Percent of White, Black, and Latinx MSM who tested for HIV in the 24 months preceding their HIV diagnosis[A]) | White: 69%<br>Black: 71%<br>Latinx: 68% | No Disparities |

[A] HIV diagnoses in 2017 or 2018

them noninfectious.[1-4] The goal of testing is to ensure that persons who acquire HIV infection are diagnosed as soon as possible following infection. Testing also plays an important role in linking persons at high risk for HIV to PrEP. Working in collaboration with medical providers and community-based organizations, Public Health Seattle & King County (PHSKC) and the WA State Department of Health (WA DOH) seek to promote widespread HIV testing as part of routine medical care, and directly fund HIV testing for persons at high-risk for infection. WA State HIV Testing Guidelines are shown in Table 8-1. Men who have sex with men (MSM) can also determine their recommended HIV testing frequency using a calculator at http://www.findyourfrequency.com/.

**TABLE 8-1: PHSKC & WA DOH HIV SCREENING GUIDELINES**

**ALL WA STATE RESIDENTS**

- Test at least once between the ages of 18 and 64[5]
- Test concurrent with any diagnosis of gonorrhea or syphilis
- Pregnant women should test in the first trimester and women who use methamphetamine, opioids, or exchange sex should test again (including syphilis testing) in the 3rd

**MEN WHO HAVE SEX WITH MEN (MSM) AND TRANSGENDER PERSONS WHO HAVE SEX WITH MEN***

Indications for testing every 3 months (any of below risks in the prior year)*:

- Diagnosis of a bacterial sexually transmitted infection (STI) (e.g. early syphilis, gonorrhea, chlamydia)
- Use of methamphetamine or poppers (amyl nitrate)
- >10 sex partners (anal or oral)
- Condomless anal intercourse with an HIV+ partner or partner of unknown status
- Ongoing use of HIV pre-exposure prophylaxis (PrEP)

MSM and transgender persons who have sex with men without the above risks should HIV test annually+

**PERSONS WHO INJECT DRUGS***

- Annual HIV testing all PWID
- Every 3 months in PWID who exchange sex for money or drugs or who are pregnant

* Persons should also be tested for syphilis and for gonorrhea and chlamydia at all exposed anatomical sites

+ Persons who have not had sex in the prior year or who are in long-term mutually monogamous relationships do not require annual HIV/STI testing.

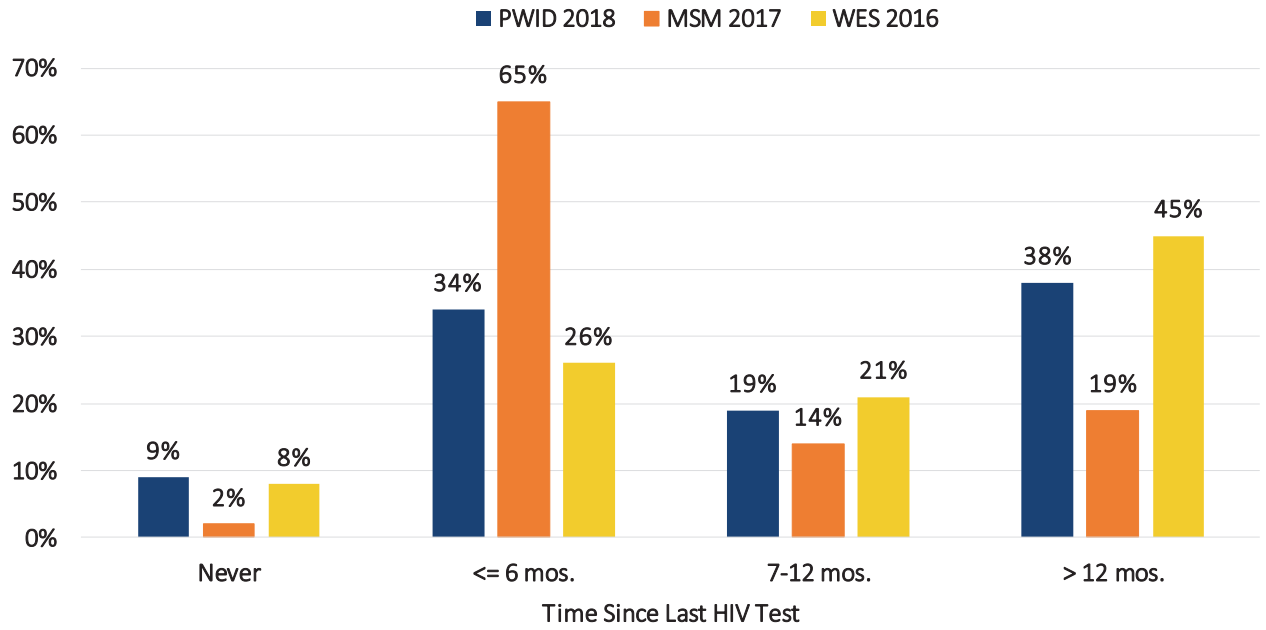
# Monitoring the Success of HIV Case-Finding at the Population-Level

Public Health monitors the success of HIV case-finding at the population level, primarily using data collected as part of investigations of persons with newly diagnosed HIV infection. Key metrics for monitoring case-finding programs relate to the goal of ensuring that HIV-infected persons are diagnosed as soon as possible following infection. With that in mind, Public Health monitors the percentage of people living with HIV (PWH) who know their HIV status (or the inverse, the undiagnosed fraction of infections), the proportion of persons diagnosed with HIV who have never previously HIV tested, the HIV inter-test interval (time from last HIV negative test to HIV diagnosis), the proportion of persons with newly diagnosed HIV-infection who are concurrently diagnosed with HIV and AIDS (or who develop AIDS within six months or one year), and the measures of CD4+ lymphocyte counts at time of HIV diagnosis. AIDS is a clinical and laboratory diagnosis related to advanced immunosuppression typically observed in persons with long-standing HIV infection. However, some people progress more rapidly and approximately 9% of individuals progress to AIDS within one year of diagnosis. Because the CD4+ lymphocyte count declines over time in persons with untreated HIV, a lower CD4 count is another measure of longer standing infection.

**UNDIAGNOSED FRACTION ESTIMATION:** PHSKC collaborated with researchers at the University of Washington (UW) to develop a method that uses data on cases' HIV testing history to estimate the proportion of HIV-infected persons who are unaware of their status (i.e., the undiagnosed fraction). Between 2015 and 2017, an estimated 7-8% of King County PWH were undiagnosed. PHSKC estimates that 4% of HIV infected MSM were undiagnosed in 2018. From 2006-2012, an estimated 6% were undiagnosed (ranging from 6 to 11%).[6]

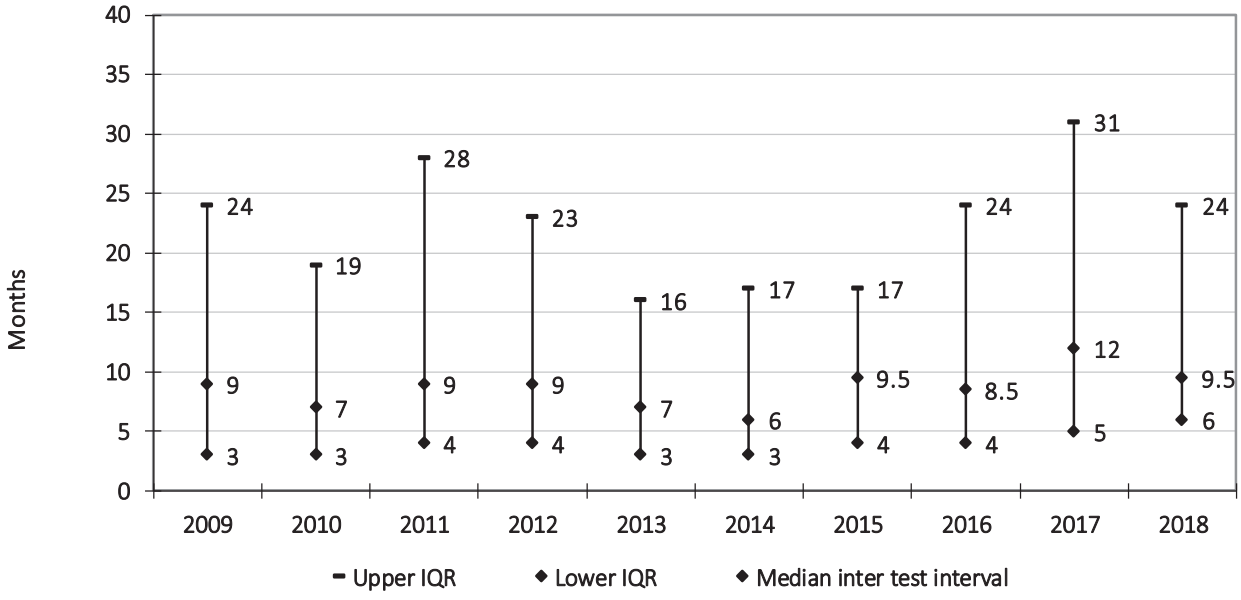
**HIV TESTING IN POPULATIONS AT ELEVATED RISK FOR HIV:** Figure 8-1 presents HIV testing summaries from the three most recent years of National HIV Behavioral Surveillance (NHBS), including MSM, people who inject drugs (PWID), and women who exchange sex. NHBS is a national, Centers for Disease Control and Prevention (CDC) funded surveillance project that includes King County, WA. Survey participants include diverse samples of persons at -risk for HIV. Of the three populations, MSM were the most likely to have had a recent HIV test, and least likely to have never had an HIV test.

FIGURE 8-1. HIV TESTING HISTORY (TIME SINCE LAST HIV TEST) AMONG MEN WHO HAVE SEX WITH MEN (MSM), WOMEN WHO EXCHANGE SEX FOR DRUGS OR MONEY (WES), AND PEOPLE WHO INJECT DRUGS (PWID), SEATTLE AREA NATIONAL HIV BEHAVIORAL SURVEILLANCE SYSTEM, 2016-2018




*MSM and PWID are not mutually exclusive; PWID and WES are not mutually exclusive

FIGURE 8-2: MEDIAN AND INTER-QUARTILE RANGE (IQR) OF INTER-TEST INTERVALS (MONTHS BETWEEN LAST NEGATIVE AND FIRST POSITIVE TEST) OF NEWLY HIV DIAGNOSED MSM, KING COUNTY, 2009-2018

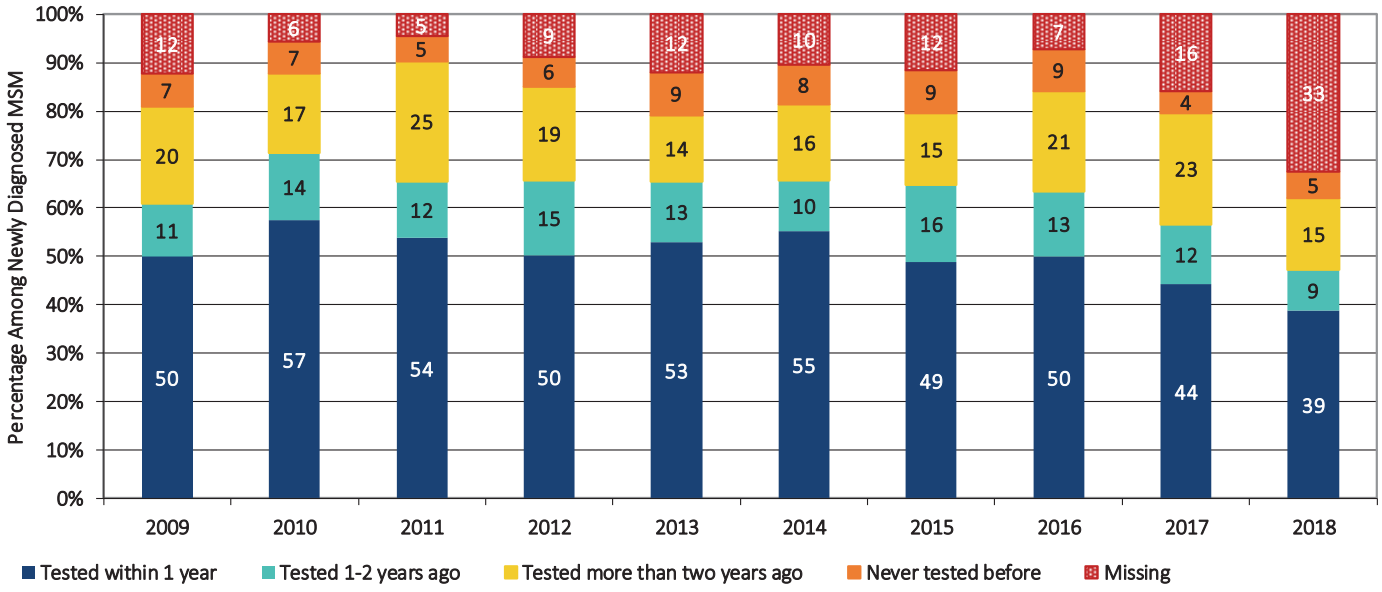


**HIV Testing History in Persons with Newly Diagnosed HIV:** The HIV interest interval (ITI) is the time between a person's last HIV negative test and first HIV positive test. Decreasing the ITI among persons with newly diagnosed HIV infection minimizes the amount of time infected persons go without treatment and may be unknowingly exposing others to HIV.

Because recommendations for frequent testing primarily affect MSM, monitoring focuses primarily on that group. Since 2009, 89% of MSM diagnosed with HIV have had a known testing history (either reporting a date of a last negative test, or they stated their initial diagnostic test was their first HIV test). The median ITI remained relatively stable between 6 and 12 months for MSM diagnosed with HIV between 2009 and 2018 (**Figure 8-2**).

substantially different from those observed in MSM (**Table 8-2**). (To allow for more robust sample sizes, new diagnoses for transgender individuals are described over the past 10 years while two years of data are included for other groups.) Among 38 non-MSM PWID diagnosed 2017-18, 87% had ever HIV tested, though only 57% had tested in the prior two years. Despite this, relatively few (13%) were diagnosed with AIDS within 12 months of HIV diagnosis (note that for those diagnosed in the latter half of 2018, a full year of follow-up had not yet occurred as of time of analysis) and the median CD4 count at time of diagnosis was high relative to other groups, suggesting that most PWIDs diagnosed with HIV in 2017-18 did not have long-standing, undiagnosed infections. In contrast, among the 101 non-MSM, non-PWID diagnosed with HIV infection in 2017-2018 - a population presumed to have

**Figure 8-3: HIV Testing History among Men Who Have Sex with Men (MSM) with Newly Diagnosed HIV, King County, 2009-2018**




Throughout this period, 7.4% (ranging from 4% to 9%) of MSM reported never testing negative for HIV prior to an initial HIV diagnosis (**Figure 8-3**). In 2018, 5% of MSM diagnosed with HIV have never HIV tested, and 48% had tested HIV negative within 24 months. Of note, Black MSM were more likely than White MSM to have never HIV tested (12% versus 5%).

**AIDS at Time of HIV Diagnosis and Other Testing Metrics:** Frequent testing for HIV among persons at risk is essential for optimal HIV prevention and AIDS within a short time of HIV is a proxy, albeit an imperfect one, for a late HIV diagnosis. Testing histories in non-MSM were

acquired HIV through heterosexual sex - 49% had never previously HIV tested, fewer than one quarter (22%) had HIV tested in the past two years, and 43% developed AIDS within 12 months of HIV. Over half (52%) of non-MSM, non-PWID diagnosed with HIV were foreign-born. Overall, although 26% were diagnosed with AIDS within a year of their HIV diagnosis, this is reduced to 22% if limited to those with a known HIV testing history. And among those with a known HIV testing history if we exclude persons reporting a negative HIV test within two years of their HIV diagnosis, then 14% have a late HIV diagnosis (AIDS within a year of HIV and without a recent negative HIV test).

As shown in Figure 8-4, the percentage of individuals with newly diagnosed HIV infection who were diagnosed with AIDS concurrent with, within six months of, or within one year of first testing HIV positive declined between 2009 and 2015 and has been relatively stable since 2012. In 2017 (the most recent year with a full year of follow-up available), 22% of all persons diagnosed with HIV, including 22% of MSM, 35% of PWID and 27% of non-PWID heterosexuals were diagnosed with AIDS within 1 year of HIV diagnosis. Again, although AIDS in the year following HIV diagnosis is a proxy for a late diagnoses there are inaccuracies in this measure. Some people progress to AIDS as part of a seroconversion syndrome or within one year of HIV infection. Over the past 5 years, there were 125 persons with concurrent HIV and AIDS diagnoses, of these 94 (75%) had a known HIV testing history (either a last negative HIV date or indication the HIV diagnosis was their first HIV test ever), and of these 34 (36%) had a negative HIV test in the two years prior to their HIV diagnosis, indicating that one third or more of concurrent HIV/AIDS diagnoses may not be true late HIV diagnoses, but have had AIDS diagnosed due to transient immunosuppression with HIV seroconversion or due to rapid HIV progression.

### CD4 Count at HIV Diagnosis

The median CD4 count at the time of HIV diagnosis has been roughly stable since 2008, between 351 and 414 (Figure 8-5) among individuals with a CD4 count within half a year of their HIV diagnosis. CD4 data demonstrate the converse of late HIV diagnosis, with roughly three-quarters of individuals being diagnosed with HIV before experiencing severe immunosuppression (CD4+ T lymphocyte less than 200 /microL).

## Where and Why People are Diagnosed with HIV Infection, and Public Health Efforts to Promote Testing

### Place of HIV Diagnosis and Reason for HIV Testing

Figure 8-6 presents information on the facilities where persons with newly diagnosed HIV infection were diagnosed. Inclusion is limited to individuals diagnosed with HIV in 2018 (n = 218). Sources of HIV diagnoses were diverse, with 38% of all new diagnoses occurring in 56 different outpatient settings (excluding health department, community clinic, and specialty HIV or MSM medical practices), none of which diagnosed more than 6 cases. The PHSKC STD clinic (including outreach testing) was the largest single diagnosing site for HIV infection, diagnosing 14% (n=30) of all new infections in 2018. The second largest diagnosing facility was Gay City with 6% of 2018 King County diagnoses (n=13). (Gay City is included with the 10% of diagnoses occurring at MSM and HIV specialty sites, a category that also includes medical practices known to primarily serve MSM). Of note, 6 cases of HIV infection were diagnosed in correctional settings, largely as a consequence of new efforts designed to addressing the increase in HIV among PWID (see Article on PWID Outbreak in this issue). Overall 28% of new diagnoses were diagnosed at facilities receiving public health funding for HIV testing in 2018. Inpatient and emergency department/urgent care facilities made 13% and 8% of the HIV diagnoses, respectively, in King County in 2018.

Figure 8-4: Late HIV Diagnoses, as Defined by an AIDS Diagnosis Concurrently, Within Six Months, or Within One Year of HIV Diagnosis: King County 2009-2018

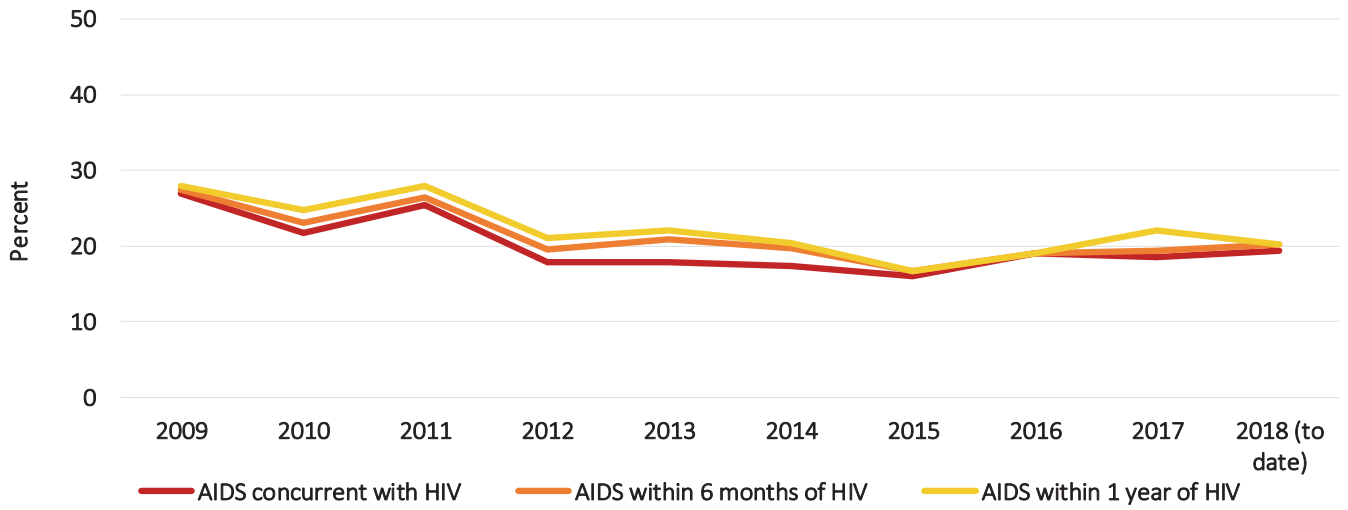


Table 8-2. Key HIV Testing Metrics among Individuals Newly Diagnosed with HIV Infection in 2017 and 2018, King County

| | Never Previously HIV Tested [A] | Median ITI (IQR) A | Percent Tested in the Prior Year [A] | Percent Tested in the Prior 2 Years[A] | Median CD4 Count at Diagnosis (IQR)[B] | AIDS within 12 months of HIV Diagnosis |
|---|---|---|---|---|---|---|
| All (N=380) | 16% | 12 (5, 40) | 46% | 58% | 388 (207, 559) | 26% |
| MSM (N=241) | 7% | 10.5 (5, 27) | 55% | 69% | 420 (256, 562) | 21% |
| White MSM (N=164) | 5% | 12 (5, 27) | 54% | 69% | 445 (267, 594) | 18% |
| Black MSM (N=38) | 12% | 8 (4, 13) | 38% | 71% | 403 (246, 683) | 28% |
| Latinx MSM (N=53) | 7% | 8 (5, 27) | 52% | 68% | 375 (205.5, 505) | 26% |
| Other MSM (N=31) | 14% | 8 (5, 20) | 50% | 68% | 365 (280, 502) | 18% |
| Transgender persons (N=24) [C] | 12% | 6.5 (4, 18) | 62% | 81% | 456 (256, 582) | 25% |
| PWID non-MSM (N=38) | 13% | 14 (5.5, 42) | 43% | 57% | 485 (244, 635.5) | 13% |
| All non-MSM, non-PWID (N=101) | 49% | 48.5 (6, 83) | 16% | 22% | 246 (44, 442) | 43% |
| U.S.-born non-MSM non-PWID (N=48) | 44% | 47 (3, 74) | 22% | 22% | 383 (211, 550) | 23% |
| Foreign-born non-MSM non-PWID (N=53) | 54% | 55 (13, 138) | 8% | 21% | 179 (27, 305) | 60% |

[A] Among those with a known HIV test history.

[B] CD4 at diagnosis are limited to those within a 6 month window.

[C] Due to small numbers 2017-2018, the time interval was expanded to 2009 – 2018 for transgender persons; most of the 24 transgender persons diagnosed in the 10-year period were transgender women (22 of 24, 92%).

Figure 8-5: Median and Inter-Quartile Range (IQR) of First CD4 Counts among People Newly Diagnosed with HIV, King County, 2009-2018

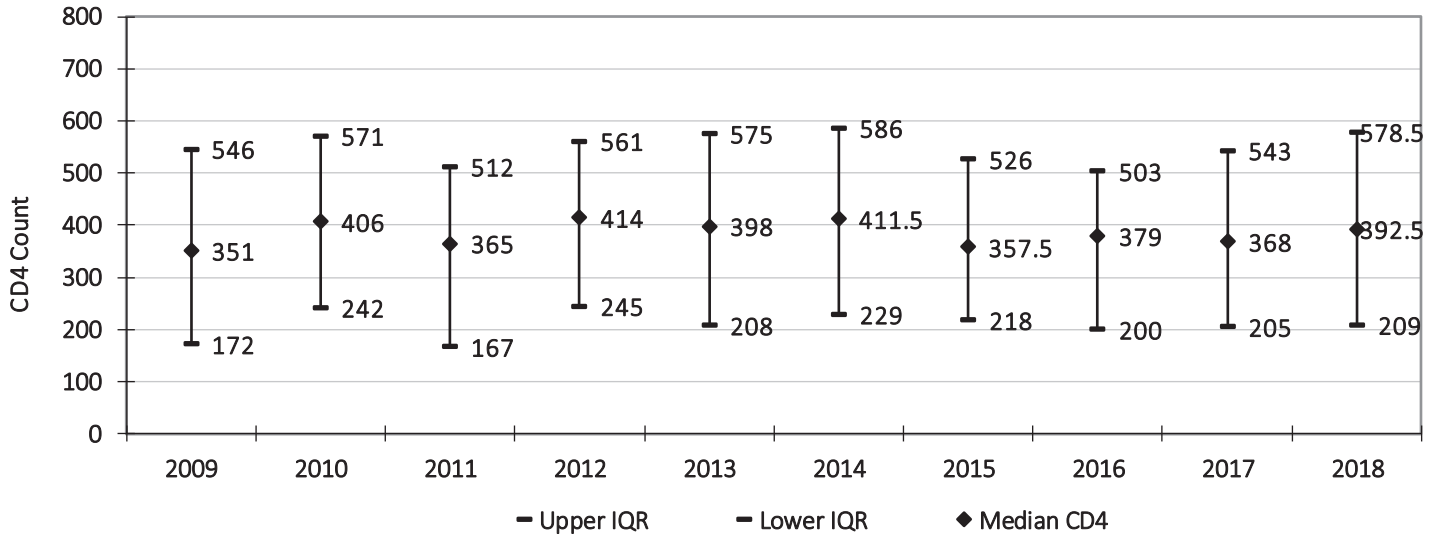


FIGURE 8-6: HIV DIAGNOSIS FACILITY, KING COUNTY, 2018 (N = 218)

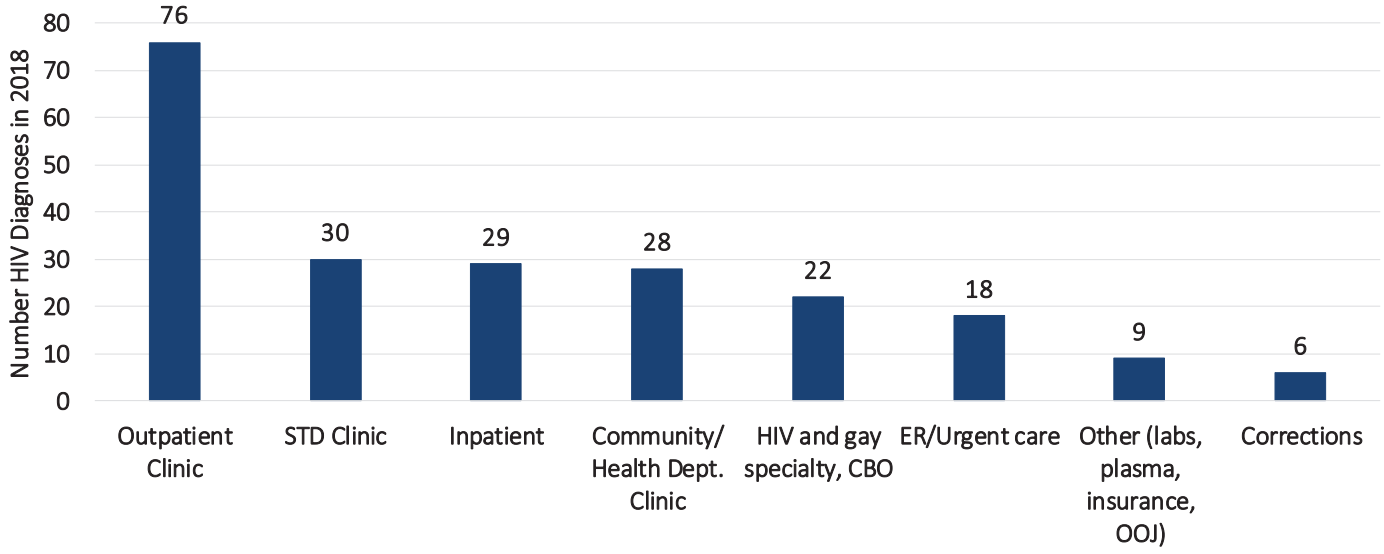



FIGURE 8-7: PUBLICLY FUNDED HIV TESTS IN KING COUNTY OVERALL AND AMONG MEN WHO HAVE SEX WITH MEN (MSM), 2009-2018

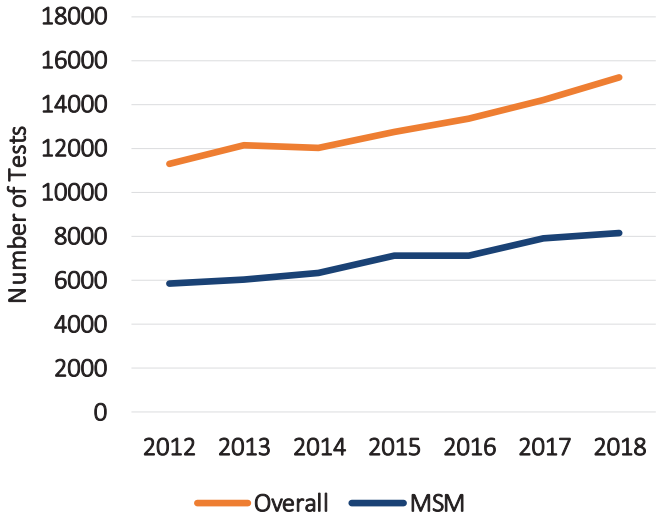



FIGURE 8-8. POSITIVITY RATE OF MEN WHO HAVE SEX WITH MEN (MSM) AND NON-MSM AT PUBLICLY FUNDED TESTING SITES, KING COUNTY, 2009-2018

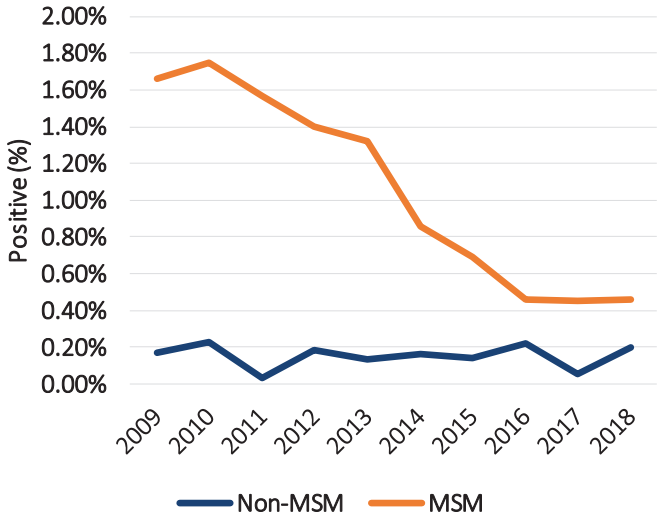



Table 8-3 presents data on why patients were tested when they were diagnosed with HIV. Ideally, persons with HIV would be diagnosed because of a regular pattern of testing they initiate themselves, as part of routine medical care, because of symptoms of acute HIV (very early infection) or through partner notification. Persons diagnosed because of symptoms of HIV/AIDS represent a failure of the medical system to diagnose persons with HIV before they become ill. Among 147 persons diagnosed with HIV infection in 2018 for which reason for testing was known, about one in seven (14%) presented with symptoms related to HIV or AIDS, excluding symptoms of acute HIV. Most were tested because of testing they initiated themselves (24%) or testing recommended by a medical provider (14%), symptoms of acute HIV (15%) or symptoms of a sexually transmitted infection (STI), or through partner notification for HIV or STIs (15%). (Partner notification includes both persons notified by their partners and persons notified by public health staff as a result of partner notification interventions.)

HIV testing locations are prominently posted on the PHSKC web site (http://www.kingcounty.gov/depts/health/communicable-diseases/hiv-std/patients/testing.aspx) and include the STD Clinic at Harborview which is a walk-in clinic open 5 days a week (and until 7:30pm one day per week). The STD clinic provides care on sliding fee scale and no one is turned away due to an inability to pay.

TABLE 8-3: REASON FOR HIV TESTING AMONG PERSONS DIAGNOSED WITH HIV, KING COUNTY PARTNER SERVICES DATA, 2018

| | N | (%) |
|---|---|---|
| Patient initiated regular or risk-based testing | 36 | 24% |
| Symptoms of HIV/AIDS | 20 | 14% |
| Symptoms of sexually transmitted infection (STI) or STI partner notification [A] | 13 | 9% |
| Medical provider initiated testing (routine testing or testing occurring in the absence of symptoms attributable to HIV) | 20 | 14% |
| Symptoms of acute HIV infection | 22 | 15% |
| HIV partner notification [A] | 9 | 6% |
| PrEP screening or prenatal testing | 9 | 6% |
| Other | 9 | 12% |
| TOTAL | 147 | 100 |

[A] Partner notification includes both partners notified by Public Health – Seattle & King County staff and persons who tested after a partner notified them that they had tested positive for HIV or an STI.

**PUBLICLY FUNDED HIV TESTING:** The WSDOH and PHSKC fund HIV testing, primarily for persons at higher risk for HIV infection, at the PHSKC STD clinic, through several community-based organizations, and in the King County Jail. Figure 8-7 shows trends in the number of HIV tests performed overall and for MSM using public health funds between 2009 and 2018. Over that decade, the total number of tests performed increased by 34%, while the number of tests performed among MSM increased by 63%. This change reflects a concerted effort to focus HIV testing resources on the populations at greatest risk for HIV infection. That group has traditionally been MSM, though recent changes in the HIV epidemic in King County has prompted Public Health to expand efforts to test PWID, particularly those who are living homeless or exchanging sex. (Please see article on 2018-2019 outbreak among PWID for increases in HIV testing in that population.)

Between 2009 and 2018, the percentage of MSM testing HIV positive at publicly funded testing sites declined from 1.7% to 0.5% (Figure 8-8), a 71% reduction, while non-MSM test positivity remained relatively more stable at 0.2% or less. The decline occurred concurrent with a drop in the rate of new HIV diagnoses from 2009 through 2017 and supports the conclusion that HIV incidence among MSM in King County declined (see Figure 6-4 in this report) from 2009 to 2017. However, this trend did not continue in 2018, with the rate of new HIV diagnoses increasing as a result of increasing diagnoses among PWID, including both MSM and non MSM-PWID.

# Conclusions

HIV testing in King County has been extremely successful, reflecting the combined efforts of medical providers, community-based organizations, communities affected by HIV, and PHSKC, and an estimated 93% of HIV infected persons have been diagnosed. Among MSM diagnosed with HIV in 2018, over two-thirds, 69%, had tested HIV negative in the prior 2 years and only 8% reported never having tested for HIV previously. Despite these successes, 14% of persons diagnosed with HIV in 2017 and 2018 denied testing in the prior two years and had an AIDS diagnosis within a year of their HIV diagnosis , with the greatest risk of late diagnosis seen among foreign-born individuals who are neither MSM nor PWID. Our findings highlight the need for sustained, focused efforts to test persons at high risk, while expanding HIV testing as part of routine medical care, particularly among PWID and persons from countries where HIV is highly prevalent.

*Contributed by Matthew Golden, Richard Lechtenberg, and Susan Buskin*

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2. Steward WT, *et al*. Behavior change following diagnosis with acute/early HIV infection-a move to serosorting with other HIV-infected individuals. The NIMH Multisite Acute HIV Infection Study: III. AIDS Behav. 2009 Dec;13 (6):1054-60.

# Increase in HIV among People who Inject Drugs (PWID) in 2018 and 2019: Cluster Identification and Response

SUMMARY

In 2018, there was a sharp increase in the number of new HIV cases among people who inject drugs (PWID), including clusters of linked cases.

Public Health, community-based organizations, King County jails, and local healthcare organizations increased HIV testing, the distribution of condoms, and the provision of syringe services in response to the outbreak.

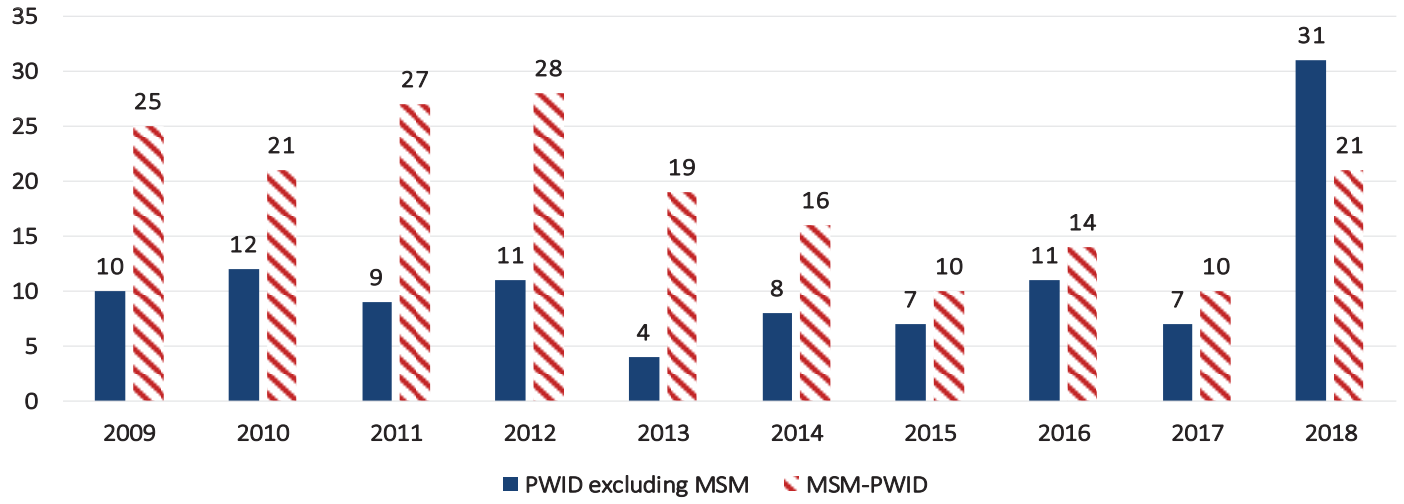
As part of the national End the HIV Epidemic initiative, we are planning to expand the availability of comprehensive medical, preventive and social services to PWID and persons living homeless in King County.

## Background

Over the last 30 years, the HIV epidemic in King County has primarily affected men who have sex with men (MSM). HIV infections due to heterosexual exposure have largely occurred among individuals migrating from countries where HIV transmission is more common, while infections among heterosexuals who inject drugs have been relatively rare. Between 2009 and 2017, the rate of HIV diagnosis among persons who inject drugs (PWID) in King County declined 46%, from 61 to 33 per 100,000.

In 2018, that trend abruptly changed. Between 2017 and 2018, King County experienced a four-fold one-year increase in the number of HIV diagnoses among PWID, and the diagnosis rate climbed to 141 per 100,000. While Public Health — Seattle & King County (PHSKC) first identified the increase in HIV diagnoses among PWID heterosexuals living in north Seattle, that increase has affected PWID in other parts of King County and is ongoing among both MSM and heterosexual PWID (Figure 9-1). This increase in HIV among PWID in King County has occurred in the context of ongoing local and national epidemics of homelessness and drug use, both of which Public Health believes have played an import role in fostering HIV transmission.

FIGURE 9-1: HIV DIAGNOSIS AMONG PWID BY MSM STATUS, KING COUNTY, 2009-2018




Abbreviations: PWID = People who inject drugs; MSM = men who have sex with men.

# Methods

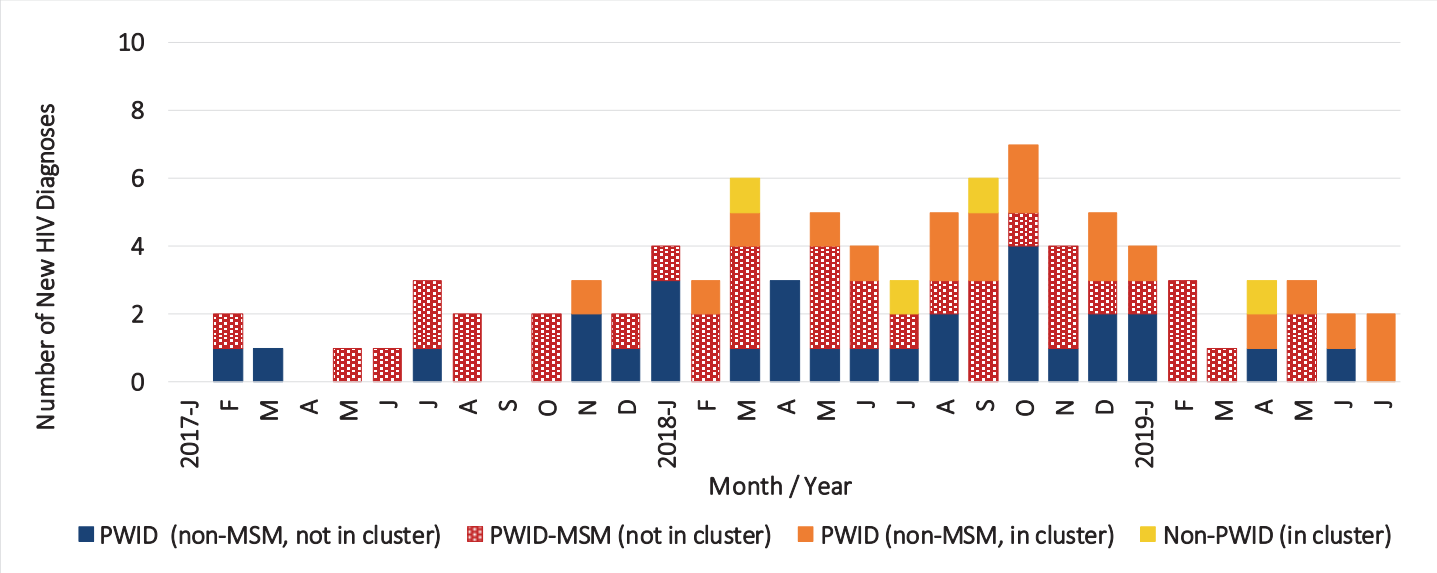
**Partner Services Cluster Identification:** When people are newly diagnosed with HIV or with other sexually transmitted infections, health department staff contact them to offer them assistance notifying their sex and needle sharing partners, and to help them to link to medical care. This activity is called partner services. Partner services investigations also allow PHSKC staff to collect information about people with newly diagnosed HIV infection and their partners (e.g., geography, HIV risk, substance use, reason for HIV testing), which in some instances allows the health department to identify outbreaks of HIV.

**Molecular Cluster Identification:** PHSKC also uses data reported by laboratories to identify outbreaks of HIV. Health care providers typically order drug resistance tests on patients with newly diagnosed HIV infection prior to initiating antiretroviral treatment (ART) or if a patient's treatment is ineffective in suppressing their HIV. These tests define selected parts of the genetic sequence of the virus to look for mutations known to be associated with resistance to ART. This genotypic testing guides the choice of ART and bolsters the chances of successfully achieving and maintaining viral suppression. Laboratories report the viral sequences obtained through genotypic testing to the health department. These data have historically have been used to monitor the prevalence of resistance to ART. Note: The reported sequences are not the *patient's* genetic sequence but that *of the virus.* Over time, as the virus replicates within a person's body, changes (i.e., mutations) accumulate in the virus' genetic sequence. These changes allow one to infer that infections with highly similar viral sequences are likely to be related to one another, though genetic data cannot be used to determine if one person transmitted HIV to another person, or even if two people have any direct connection through sex or drug use. When PHSKC observes a cluster of new HIV diagnoses caused by related viruses, it suggests that HIV may be rapidly spreading in a defined sexual and/or injection drug-using network, that an outbreak may be ongoing. In such instances, the health department seeks to respond to contain the outbreak and ensure that affected persons receive medical and preventive services.[1]

# Cluster Identification

**North Seattle Cluster:** In early August 2018, while conducting an HIV partner services investigation, a disease investigator from PHSKC spoke to a heterosexual male with an atypical HIV risk profile. This male was not a PWID and denied having sex with men, but he did have sex with a woman who was a PWID who had recently been diagnosed with HIV. Their geographical location (north Seattle) and risks (PWID or sex with a PWID) led to additional partner services and molecular investigations which eventually resulted in finding 22 cluster cases diagnosed with HIV between February 2018 and July 2019 (**Figure 9-2**). (Investigations remain ongoing and additional cluster members may be confirmed.) An additional 9 cases diagnosed between 2008 and 2017 were infected with similar viruses based on molecular analyses and are considered part of a larger cluster of related cases. (Only one of these cases was diagnosed in

FIGURE 9-2: HIV DIAGNOSIS AMONG PEOPLE WHO INJECT DRUGS (PWID) OR WHOM ARE IN THE NORTH SEATTLE CLUSTER BY HIV RISK STATUS, JANUARY 2017 – JULY 2019




*"Cluster" cases only include HIV cases identified from the north Seattle cluster. Abbreviations: PWID = People who inject drugs; MSM = men who have sex with men.

2017 and included in **Figure 9-2.**) The cluster of HIV cases involved persons living homeless, most of whom lived in north Seattle, and all but four had a history of injecting drugs. As of November 26, 2019, there are a total of 31 cluster members plus one possible (unconfirmed) cluster member. Of the 32, three have died, one has moved out of state, and four have not yet linked to HIV care. Also of the 32, 22 were known to have started antiretrovirals and 15 (54%) were virally suppressed (defined as a most recent plasma viral load < 200 copies).

**Figures 9-1 and 9-2** display the number of HIV diagnoses among PWID by MSM status over the past decade and cluster status over the past 2.5 years, respectively. In 2018, the number of HIV diagnoses among MSM-PWID was the highest since 2012. The number of HIV diagnoses in PWID who are not MSM was the highest ever recorded, going back to 1982 when the first HIV/AIDS diagnosis in King County was made. The next highest number of non-MSM PWID HIV diagnoses was in 2002 with 25 diagnoses.

**Characteristics of PWID HIV Cases: Table 9-1** includes characteristics of PWID newly diagnosed with HIV stratified by (1) time period (2013-2017 versus 2018 through mid-2019); and (2) MSM status. The more recent non-MSM PWID HIV cases are more likely to be cisgender women (50% versus 38%), White (79% versus 65%), and report using both meth and heroin (39% versus 11%). Non-MSM PWID HIV cases are also more likely to be homeless, though some of the increase in homelessness may be a consequence of more complete identification of cases' housing status resulting from intensified case investigations.

# Cluster Response

The identification of the outbreak of HIV among PWID in August of 2018 prompted a vigorous, ongoing public health response designed to control and outbreak and ensure that persons affected by the outbreak receive the medical and social services they need. This response includes:

**Alerts to the Public and Health Care Providers:** Numerous public health alerts and blogs have been released to the medical community and public, and an article describing the first 14 cases in the north Seattle cluster was published in the MMWR.[2] Public health officials have encouraged medical providers in north Seattle to increase HIV screening among homeless patients and PWID.

**Rapid Assessment:** PHSKC interviewed PWID in north Seattle as part of a rapid assessment designed to assess the population's needs and identify prevention opportunities. That assessment identified a population reporting limited access to services, including syringe services, general health care, PWID-specific health care

TABLE 9-1: CHARACTERISTICS OF CASES OF NEWLY DIAGNOSED HIV AMONG KING COUNTY PWID BY TIME PERIOD AND MSM STATUS; 2013-2019

| | ALL PWID | | NON-MSM PWID | |
|---|---|---|---|---|
| | 2013-2017 N=106 N (%) | 1/2018-6/2019 N=66 N (%) | 2013-2017 N=37 N (%) | 1/2018-6/2019 N = 38 N (%) |
| Cis-women | 14 (13) | 19 (29) | 14 (38) | 19 (50) |
| Median age [range] | 37 [15-67] | 34 [20-62] | 39 [26-66] | 39 [22-62] |
| Race/Ethnicity | | | | |
| White | 74 (70) | 47 (71) | 24 (65) | 30 (79) |
| Latinx | 8 (8) | 6 (9) | 3 (8) | 1 (3) |
| Black | 10 (9) | 7 (11) | 6 (16) | 2 (5) |
| Other | 14 (13) | 6 (9) | 4 (11) | 4 (11) |
| AIDS within 1 year of HIV diagnosis | 22 (21) | 10 (15) | 10 (27) | 4 (11) |
| Living homeless at diagnosis | 19 (18) | 30 (45) | 12 (32) | 27 (71) |
| Exchange sex | 21 (20) | 7 (11) | 8 (22) | 4 (11) |
| Linked to HIV Care in 30 days | 83 (78) | 50 (76) | 30 (81) | 27 (71) |
| Virally suppressed (7/15/19) | 78 (73) | 40 (61) | 24 (65) | 20 (53) |
| Drugs used | | | | |
| Meth alone | 35 (33) | 13 (20) | 10 (27) | 3 (8) |
| Meth & heroin | 15 (14) | 20 (30) | 4 (11) | 15 (39) |
| Heroin alone | 6 (6) | 1 (2) | 4 (11) | 1 (3) |
| Unknown | 50 (47) | 32 (48) | 19 (51) | 19 (50) |

(e.g. wound care), HIV prevention services (e.g., HIV testing, PrEP), and social services. Barriers to accessing services include limited local availability, perceived stigma toward PWID at existing facilities, the population's immobility and unwillingness to travel to central Seattle for services, and a lack of information about HIV and the importance of testing and treatment. PWID also noted the increase in street-based exchange sex as a result of the passage of several federal laws (SESTA/FOSTA) which restricted online-based sex work. The assessment highlighted the need to expand medical and prevention services for PWID in north Seattle, and the population's strong desire to see those services linked to other social services.

**Direct Outreach to Homeless Encampments, HIV Screening, and Other Services:** PHSKC, together with several community based organizations (Aurora Commons, the Hepatitis Education Project, Youthcare, and REACH), increased direct outreach to PWID and homeless persons in city sanctioned and unsanctioned encampments. This included providing HIV testing (**Figure 9-3A**) and other services, such as condom distribution and hepatitis C screening. Through June 2019, Public Health staff diagnosed four persons with HIV through outreach HIV testing, and expanded testing in King County jails. **Figure 9-3B** illustrates the increase in screening at jail intake. Additionally, in the first 11 months of 2019, jail health staff conducted 1,283 rapid HIV screening tests at a 14-day health assessment. We also increased access to mobile syringe services in north Seattle, including syringe exchange and naloxone provision and overdose prevention training (**Figure 9-3C**).

**SHE (Safe, Healthy, Empowered) Clinic:** The SHE clinic is a partnership between the University of Washington's Harborview Medical Center, Puget Sound Christian Medical Clinic, and Aurora Commons, a community center serving women of north Seattle who are experiencing homelessness, substance use disorders,

and/or exchange sex. Since July 2018, the SHE Clinic has operated out of a mobile medical van, providing medical care to women residing in north Seattle one afternoon per week. Services include screening for HIV and other sexually transmitted infections, HIV care, PrEP, and buprenorphine treatment for opioid use disorder.

**Emergency Department (ED) HIV Screening:** In response to the outbreak, several EDs were asked to increase - or voluntarily increased - their screening of HIV among PWID and homeless persons. One ED (Northwest Hospital), is close to the epicenter of the outbreak, and increased screening 46% (based on the average number of HIV screening tests per month from the first half of 2018 to the most recent 4 months of 2019). The other two University of Washington EDs also increased their HIV screening by 75% and 104%, with the higher increase at Harborview Medical Center, located close to downtown Seattle where many PWID and persons living homeless reside.

**PrEP:** Existing data suggested that PrEP knowledge and use among PWID (who are not MSM) in Seattle is low. In mid-2019, PHSKC launched a PrEP campaign in north Seattle which included posters and billboards. In collaboration with staff at the University of Washington, PHSKC conducted an assessment of community perspectives related to PrEP among PWID in spring 2019. Staff conducted in-depth interviews and focus groups with community stakeholders, including PWID, to describe what PrEP services exist, the facilitators and barriers to engaging PWID in PrEP services, and ideas for how to structure a PWID PrEP program. The primary findings were that PrEP programs for PWID should use a no/low-barrier approach, be offered among a range of comprehensive services for PWID, provide simplified processes including medication management, and be developed using strategies to build trust within the community.

# Next Steps

In response to the increase in HIV cases among PWID in the Seattle area in 2018, PHSKC increased its HIV prevention and treatment services for PWID and homeless persons. However, with the exception of the SHE Clinic, there remains a dearth of medical care options with dedicated expertise working with the complex comprehensive medical and social needs of PWID, especially in north Seattle. The MAX Clinic at Harborview Medical Center is an example of a successful walk-in clinic serving people living with HIV – many of whom have substance use disorders - who have had difficulty accessing traditional medical care. (See article elsewhere in this issue.) Starting in 2019, PHSKC will operate a new van to provide syringe services in north Seattle. With increased HIV prevention and treatment funds from the End the HIV Epidemic initiative, PHSKC hopes to partner with community-based organizations and health care organizations to increase the availability of low barrier medical services - including HIV/STI testing, PrEP, substance use treatment, mental health services, and primary medical care - for PWID and homeless individuals in both north and south King County. King County government is also working to expand access to low income housing to decrease homelessness.[3]

*Contributed by Susan Buskin, Richard Lechtenberg, Matthew Golden, and Sara Glick*

## References

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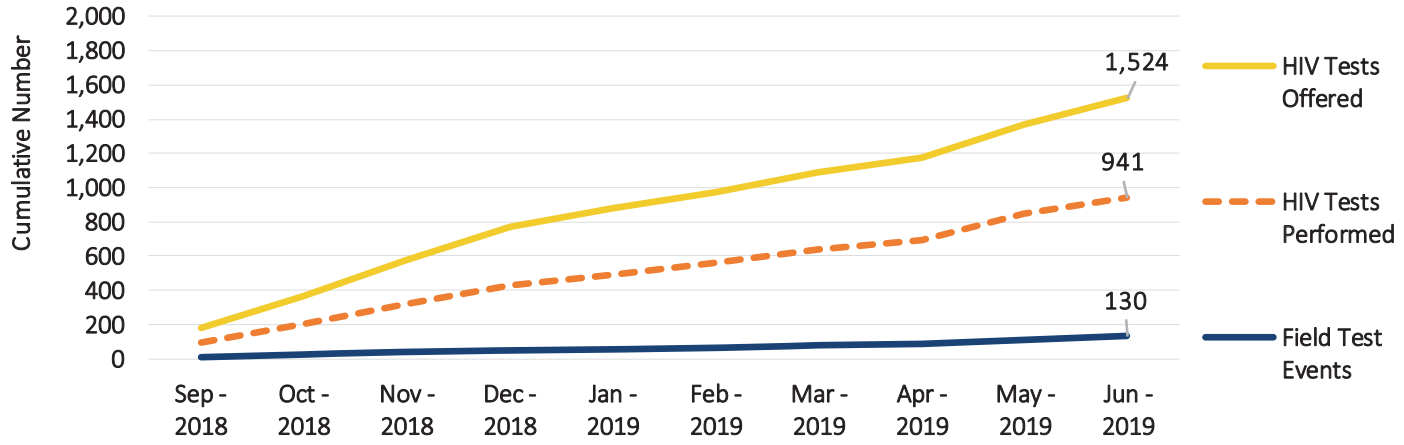
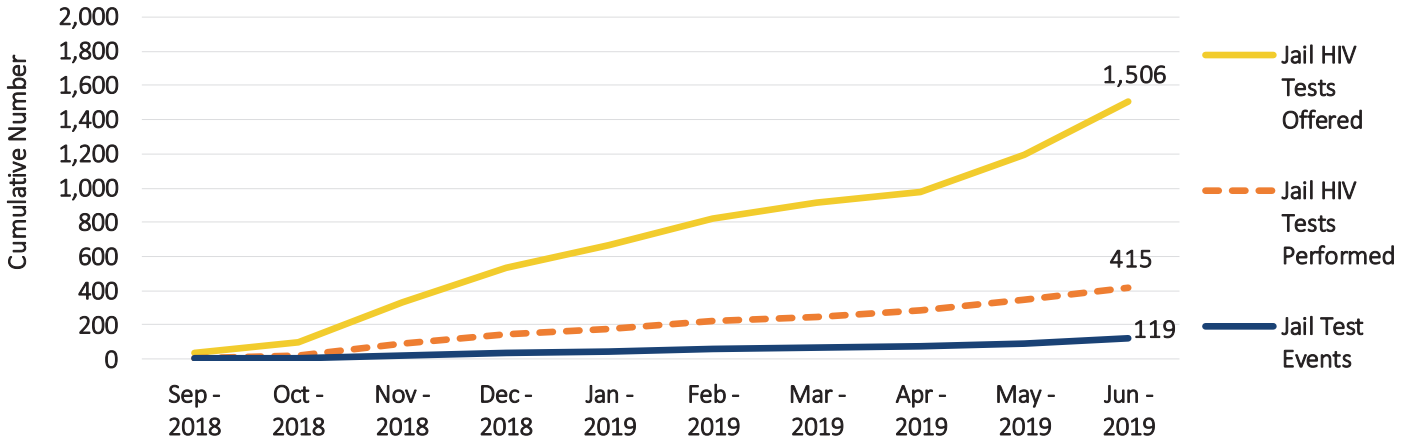
3. https://kingcounty.gov/~/media/initiatives/affordablehousing/documents/report/RAH-Report-Summary-7-17-19.ashx?la=en

FIGURE 9-3 A: HIV FIELD TESTING AMONG PERSONS LIVING HOMELESS, KING COUNTY, 2018-JUNE, 2019



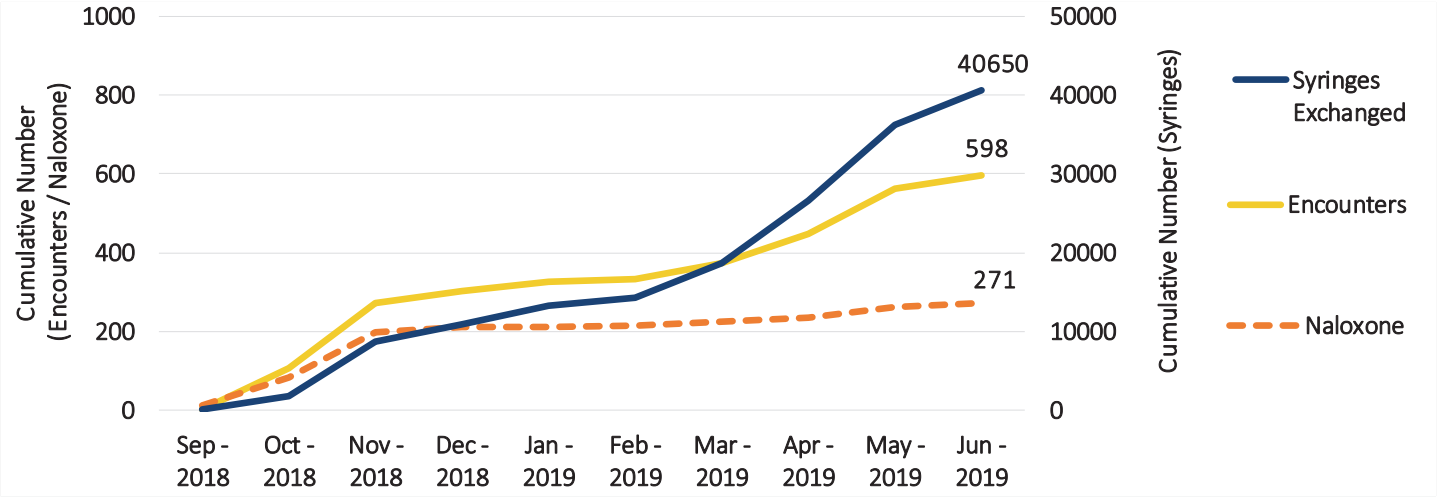

[A] To date, 4 confirmed cases found.

FIGURE9-3 B: JAIL INTAKE HIV TESTING, KING COUNTY, 2018-JUNE, 2019




[A] To date, 3 confirmed cases found.

FIGURE 9-3 C: SYRINGE SERVICES INITIATED DUE TO N SEATTLE, 2018-JUNE, 2019



# Data to Care

SUMMARY

Public Health Seattle & King County (PHSKC) estimated that 1,046 people living with HIV were presumed out-of-care or virally unsuppressed in the county at the end of 2017. Updated information indicates that 14% of those persons had moved out of King County, 43% remained presumptively out-of-care/virally unsuppressed in 2018, 41% were virally suppressed at the end of 2018, and 3% died in 2018-19.

Current Public Health efforts to identify PWH who are virally unsuppressed and re-engage them in HIV treatment are focused on "real-time" identification of individuals in one hospital system, including its emergency departments, or in jail — and delivery of differentiated services that match the level of individual need. Over the course of a year, such efforts identify approximately one quarter of all unsuppressed persons.

## Background

Data to Care (D2C) is a public health strategy that uses HIV surveillance data to identify people with HIV (PWH) who are out of care or virally unsuppressed in order to re-engage them in care and treatment. PHSKC began a D2C program in 2007 and our approach has evolved substantially since that time. Here we describe our current approach, what we've learned since last year's surveillance report about PWH who appear to be out of care and virally unsuppressed, and our D2C program outcomes.

## Program Description

As shown in **Figure 10-1**, the PHSKC D2C team receives information from several different sources to guide re-engagement activities. After case investigation and, if appropriate and successful, contact with individual clients, Disease Research and Intervention Specialists (DRIS) assess each individual's level of need and provide services ranging from appointment scheduling assistance (low intensity) to recruitment into the Max Clinic (high intensity). For patients in the medium intensity group, the DRIS assist with care re-engagement using a combination of health systems navigation, brief counseling, and referral to support services. This approach incorporates the activities conducted in an earlier D2C program in King County, originally called the Care and ART Promotion Program (CAPP).

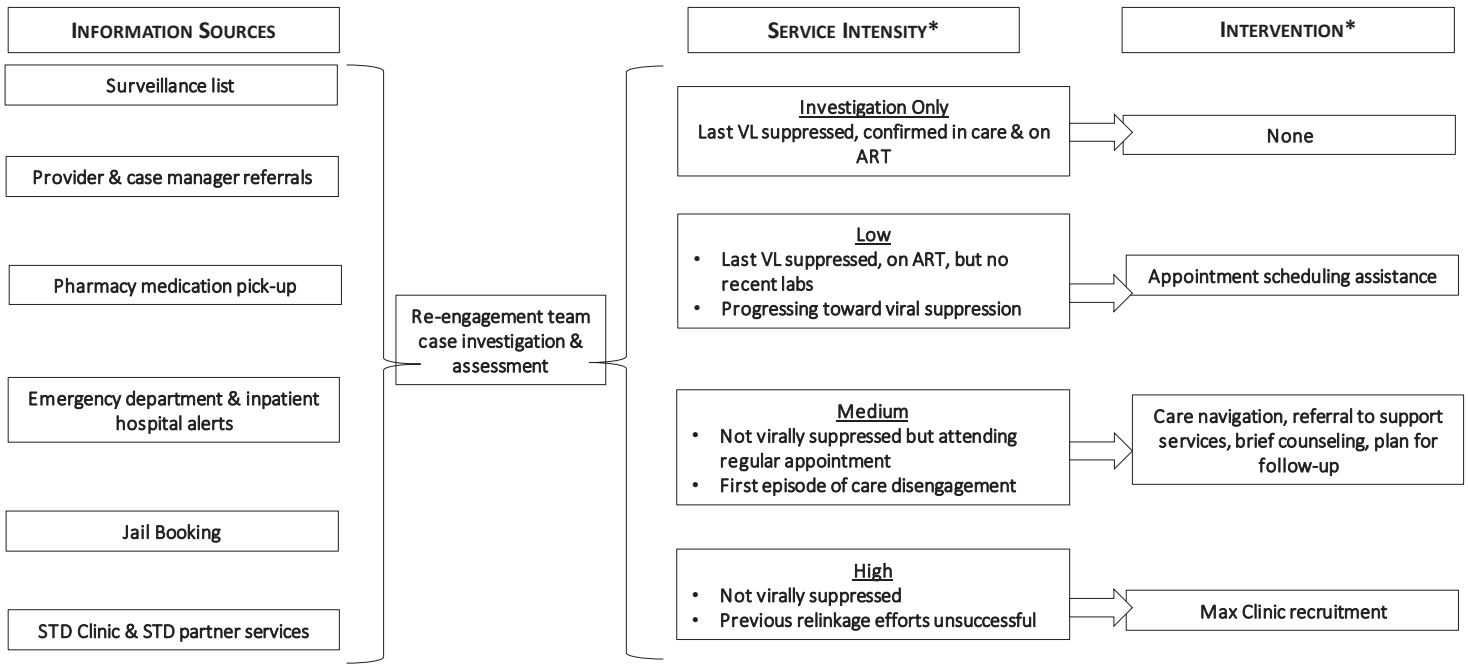
# Findings

**Status of Virally Unsuppressed PWH in Last Year's Surveillance Report: What We Know Now:** In the 2018 surveillance report, we reported the HIV care continuum outcomes of 6,800 persons living with diagnosed HIV in King County at the end of 2017. An estimated 1,046 persons were presumed to be virally unsuppressed or "out of care" on the basis of having no laboratory result reported to surveillance during 2017. **Figure 10-2** shows the status of those individuals as of mid-2019. Of the 1,064 142 persons (14%) were found to have relocated.

Of the 909 persons presumed to have been in King County and virally unsuppressed at the end of 2017, 33 (4%) died in either 2018 (N=28) or 2019 (N=5). Of the remaining 876 persons, approximately half (N=427; 49%) were virally suppressed at the end of 2018 and half (N=449; 51%) were not known to be virally suppressed. Based on past investigations, many of the individuals who had no labs reported in either 2017 or 2018 (N=288) have likely moved away, but Public Health has been unable to confirm relocation. Others may be intermittently out of care (pending a new job or insurance enrollment) or receiving medical care in a research setting not reporting HIV-related laboratory results to public health. In summary, of the 1,046 out of care/virally unsuppressed persons at the end of 2017, 14% are confirmed to have moved away, 43% remained presumptively out of care/virally unsuppressed in 2018, 41% were virally suppressed at the end of 2018, and 3% died in 2018 to mid-2019. These findings suggest that approximately one in 6 persons presumed to out of care have left the area or died, and that among the remaining presumptively out-of-care or unsuppressed persons, roughly half will resume care and achieve viral suppression over time, typically in the absence of public health interventions, while the other half remain unsuppressed or out of care.

**Emergency Department (ED) and Inpatient Hospital Data Exchange:** Our outreach team's experience suggests that using surveillance data alone to identify persons who are out of care or unsuppressed and then attempting to find those patients is inefficient, with many investigations initiated for persons who have left the area or who are really already in care and on treatment. This conclusion prompted the HIV/STD program focus more on real-time D2C, efforts to link patients to care when we identify them in places like EDs and jail. The PHSKC – UW Medicine data exchange, facilitates identification of out-of-care PWH at the time they register in an ED or are admitted to a hospital as an inpatient. The HIV care relinkage team receives alerts and, when appropriate, meets with a patient in the hospital to offer them assistance re-engaging in care. The inpatient Infectious Diseases consult team and hospital case managers are key partners in this process. At the time the data

**Figure 10-1. Current King County Data to Care Approach**




*criteria are for general guidance; case-by-case assessment required

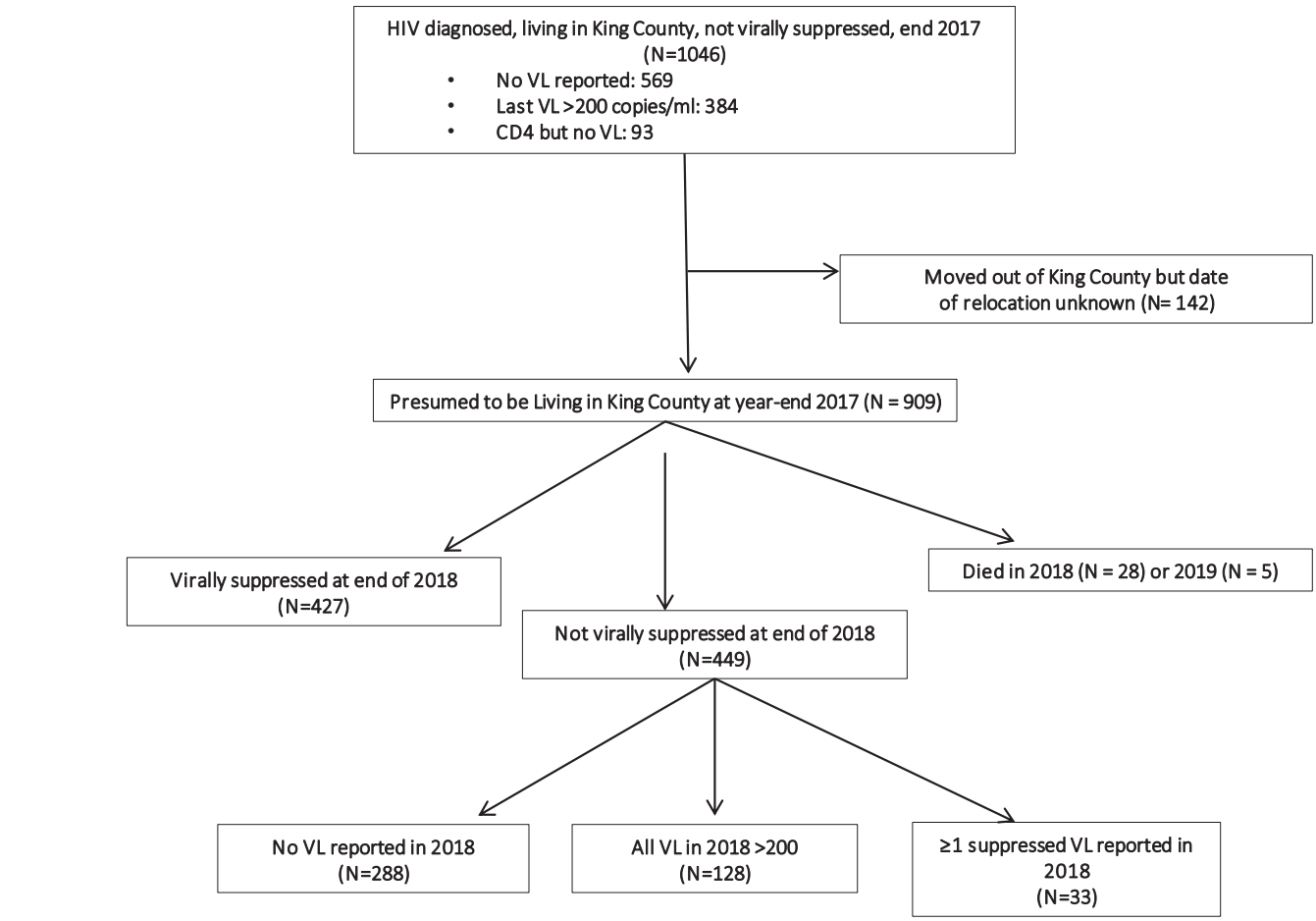
exchange began in 2015, PHSKC estimated that 1,223 PWH were out-of-care or virally unsuppressed. During the first two years of the data exchange, the system identified 242 unique patients. Although the group of PWH who are out of care or virally unsuppressed changes over time, the number of persons identified by the exchange represents about 20% of the out-of-care or virally unsuppressed PWH population in 2015.

We analyzed the impact of this program by comparing outcomes in patients who were seen in the ED or hospital after the intervention was implemented (N=1,070 visits) vs. those seen prior to implementation of the program who would have met criteria for an alert had the system been in place (N=774 visits). The relinkage team documented investigation with 60% of patients (32% of visits) during the intervention period. In the post-intervention group, 71% of patients had a VL reported within 3 months after their ED/hospital visit vs. 60% in the pre-intervention group and 56% had a suppressed viral load vs. 41% in the pre-intervention group. (Figure 10-3) However, viral suppression in the overall population of PWH in King County also increased during that time, and the difference in the group of patients seen in the ED/hospital was not significantly more than the difference seen in the county overall.

### Information Exchange and Transitional Care Coordination with King County Jails

PWH who are incarcerated have lower levels of viral suppression compared to the overall population of PWH in King County. The information exchange between two King County Jails and PHSKC facilitates identification of PWH who are poorly engaged in care at the time of jail booking. HIV surveillance and jail booking data are matched on a daily basis to identify newly booked

Figure 10-2. Status (as of mid-2019) of virally unsuppressed cases from 2017 King County HIV care continuum



persons with HIV. The HIV care relinkage team has a weekly conference with release planners in the jail and others working to improve care coordination after release from jail.

During the first 7 months of the program (4/1/2018 – 11/1/2018), the system matched data for 176 people at 251 bookings. Of these, 62 people at 80 bookings (32% of bookings) were virally unsuppressed based on a most recent VL>200 copies/mL or no labs reported in the prior year. We will assess the outcomes compared to the pre-intervention period in fall of 2019 and report the outcomes in the 2020 Epidemiology Report.

### The Pharmacy Integration into PrEP (Pre-Exposure Prophylaxis) and ART Provision and Retention (PIPAR) Project

In 2018 planning for this innovative project began. PIPAR is a partnership between Public Health and several local pharmacies to promote HIV prevention and care retention. Medication pick-up data for ART prescriptions now is being used to identify persons who fall out of care much earlier than other D2C projects. Local pharmacies are also planning additional PrEP delivery and increased PrEP retention methods.

## Successes

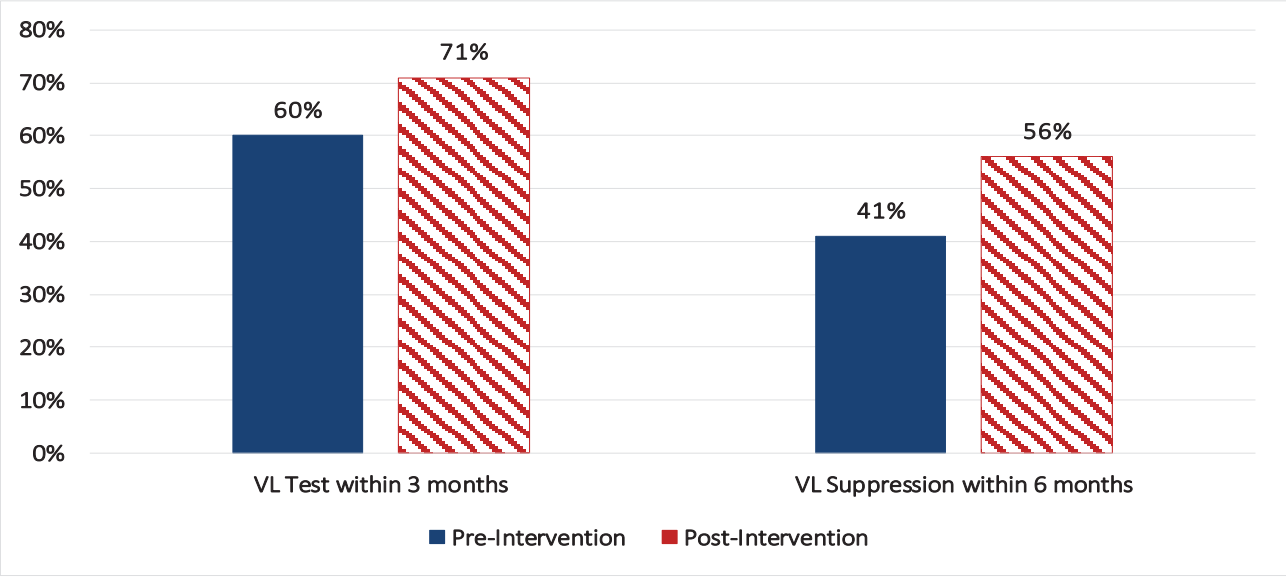
Our current venue-based D2C efforts identify a substantial number of persons who are poorly engaged in HIV care or virally unsuppressed at the time they are in the ED, hospital or jail, and we have developed a differentiated service approach to tailor re-engagement activities to the level of an individual's needs.

## Challenges

Even when Public Health can identify PWH who are not well-engaged and virally suppressed, it is difficult to successfully re-engage individuals in HIV care when they face extensive barriers to care. The Max Clinic has improved our D2C services for high-need PWH, but we need additional effective interventions to re-engage all PWH who are out of care or virally unsuppressed.

*Contributed by Julie Dombrowski, Richard Lechtenberg, and Tigran Avoundjian*

Figure 10.3. Status (as of mid-2018) of Virally Unsuppressed[A] People Living with HIV seen in an Emergency Department or whom were Inpatient from Mid-2017, King County




Abbreviation: VL = viral load.
[A] Viral suppression defined here as plasma viral load <200 copies per mL.

# Ryan White HIV/AIDS Program

SUMMARY

The Ryan White HIV/AIDS Program is the largest federal program providing HIV care and treatment services to people living with HIV and AIDS in the country.

The Seattle region has received funding from this program for 25 years to support an integrated system of care that includes medical care and support services for people living with HIV and AIDS.

Because Medicaid pays for medical care for most low-income persons with HIV, the Seattle Transitional Grant Area (TGA) has a core services waiver from HRSA that allows it to spend most Ryan White Part A money on support services for persons with HIV, rather than on HIV medical care itself.

## Background

The Ryan White HIV/AIDS Program (RWHAP or RW) is a federal program designed to provide primary medical care, medication and essential support services to low-income and uninsured persons with HIV (PWH). It is administered by the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA) and the HIV/AIDS Bureau (HAB), and includes five parts, designed A, B, C, D and F. Each part focuses on specific activities and services which provides a flexible structure under which the program addresses HIV care needs which vary by geographic area, populations affected by HIV, types of HIV-related services, and service system needs.

· Part A funds are awarded to local areas that have been hit hardest by the HIV epidemic and are intended to provide care and treatment for low-income uninsured and underinsured PWH with the goal of improving their health outcomes. These funds are used to develop and enhance access to a comprehensive system of care that provides primary health care and support services throughout the service area. Part A also supports administrative activities, including a community planning process; managing, monitoring, and evaluating programs; and clinical quality management activities. Public Health — Seattle & King County (PHSKC) is the recipient of Ryan White Part A funds in

the Seattle Transitional Grant Area (TGA), which includes King, Island, and Snohomish Counties.

· Part B provides funds to improve the quality, availability, and organization of HIV health care and support services. Part B funding is similar to Part A in that the funds are used for care and support services, however Part B funds prioritize providing medications for PWH and gives states flexibility in how they deliver these services. In Washington State, the WA State Department of Health is the recipient of Part B funding and most Part B program funds pay for health insurance coverage, copays, and deductibles. The remaining funds are allocated for care and support services delivered outside the Seattle TGA and for services not funded by the Ryan White Part A program within the TGA.

· Part C funds comprehensive primary health care and support services in outpatient settings provided by local, healthcare and community-based organizations through Early Intervention Services program grants. In the Seattle area, Harborview Medical Center, Country Doctor Community Clinic, and Community Health Center of Tacoma receive Part C funding from HRSA. Unlike Parts A and B, these funds are awarded through a competitive process and go directly to community health centers, rural clinics, health departments, and hospitals. Part C also provides capacity development grants to help public and nonprofit organizations strengthen and improve their infrastructure and capacity to provide HIV primary care services.

· Part D funding is used to provide family-centered medical care and support services to women, infants, children and youth living with HIV. Similar to Part C, these funds are awarded through a competitive grant process directly to public or private healthcare organizations -- including hospitals and public agencies. Part D grants are used for medical services, clinical quality management, and support services. Recipients of Part D funds must coordinate with HIV education and prevention programs designed to reduce the risk of HIV acquisition among youth.

· Part F funding supports research, technical assistance, and access to care programs, including some activities outside the TGA, that include:
    · Special Projects of National Significance (SPNS): Awarded competitively to entities developing innovative methods of serving PWH.
    · AIDS Education and Training Centers (AETCs): Regional and national centers that train health care providers, including clinicians and multidisciplinary HIV care team members. This part of the RWHAP funds the Mountain West AIDS Education and Training Center.
    · HIV/AIDS Dental Reimbursement and Community Based Dental Partnership Programs: Used to deliver community based dental care services for PWH and provide education and clinical training for dental care providers. Funds are awarded to dental schools as well as dental providers in community-based settings.
    · Minority AIDS Initiative (MAI): Used to improve access to health care and medical outcomes for racial and ethnic minorities.

# Local Funding Landscape

The Seattle TGA receives about $7 million in RW Part A and MAI funding annually. In addition to Part A and MAI, the Seattle TGA is able to leverage an additional $71 million for HIV related services from Ryan White Parts B, C, D, and F; Housing Opportunities for Persons with AIDS, Centers for Disease Control and Prevention (CDC), Medicaid, and Medicare; and other federal, state, and local funding. Thus, in 2019 the Seattle TGA had access to approximately $78 million to support coordination and access to core medical and other HIV-related services (**Figure 11-1**).

In accordance with guidance established by Congress and HRSA, the Seattle TGA HIV Planning Council determines how Ryan White Part A funding is allocated in our TGA. The Planning Council is comprised of HIV service providers, PWH who access Part A services, representatives from state, federal, and local health jurisdictions, and representatives from other Ryan White Parts. Through a series of priority setting and allocation meetings that include public comment from members of the community as well as a review of epidemiology and service utilization data, Planning Council members identify the highest priority needs in King, Island and Snohomish Counties and then allocate resources to service categories identified during the prioritization process. The Planning Council then meets to review and approve the proposed allocations for the upcoming grant

cycle. The approved allocation is delivered to the Ryan White Part A program staff at PHSKC who in turn award funding to community providers to deliver services to eligible PWH in the community. Because Washington State expanded Medicaid as part of the Affordable Care Act, nearly all RW Part A-eligible PWH in the Seattle TGA have health insurance coverage which pays for the majority of their medical care. Exceptions to this include oral health, treatment adherence services, and Early Intervention Services. In-person assisters and case managers help PWH obtain health insurance, including PWH whose immigration status makes them ineligible for Medicaid or insurance subsidies funded through the Affordable Care Act. All WA State residents are eligible to receive HIV care regardless of their immigration status.

Our state Part B program pays premiums, deductibles and co-pays for participants' insurance plans, and covers medical visits, labs and medications for people until they are enrolled in coverage. Additionally, state funds pay for medical case management. CDC and state dollars cover HIV testing for the highest risk populations. This means that RW Part A dollars are focused on the smaller groups of people who are not retained in care or are not virally suppressed.

In 2018, the Seattle TGA provided Ryan White funded services to 3,289 unduplicated clients. Services included transitional and emergency housing bed nights (20,547 bed nights), non-medical case management services (120,551 encounters), food and meals services (83,695 grocery bags, prepared meals and nutritional counseling sessions), oral health services (3,453 dental appointments), treatment adherence support to assist in improving ART adherence and viral suppression (21,182 encounters), early intervention services that includes outreach, HIV testing, health education, and referral and linkage to care (12,494 encounters), psychosocial support in the form of individual and group support for PWH (2,683 support encounters), and medical transportation (47,769 one-way rides).

In 2019, the Seattle TGA was awarded $7,026,271 in RW Part A funding, with $347,818 set aside for Minority AIDS Initiative (MAI) services. The breakdown of percentage of funds by service category and MAI funding are represented in **Figures 11-2** and **11-3**.

FIGURE 11-1 HIV CARE FUNDING SOURCES ($59,613,438 TOTAL), SEATTLE TRANSITIONAL GRANT AREA, 2018

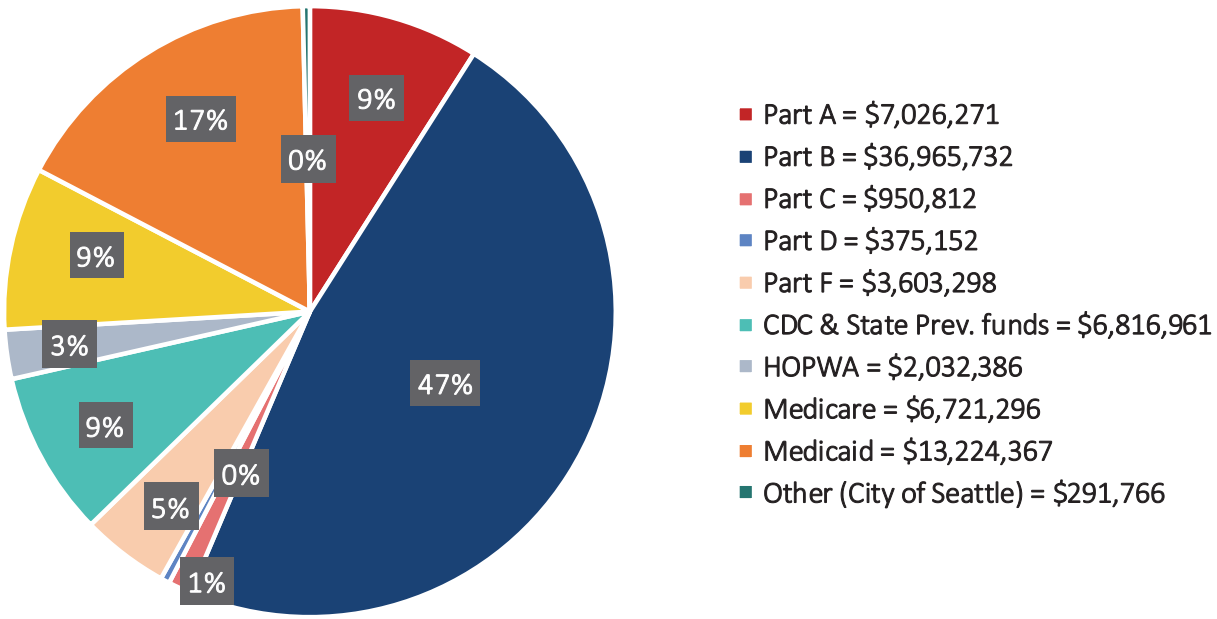


FIGURE 11-2. RYAN WHITE PART A FUNDING ALLOCATIONS OF $6,655,802, SEATTLE AREA (KING, SNOHOMISH, AND ISLAND COUNTIES), FY2018

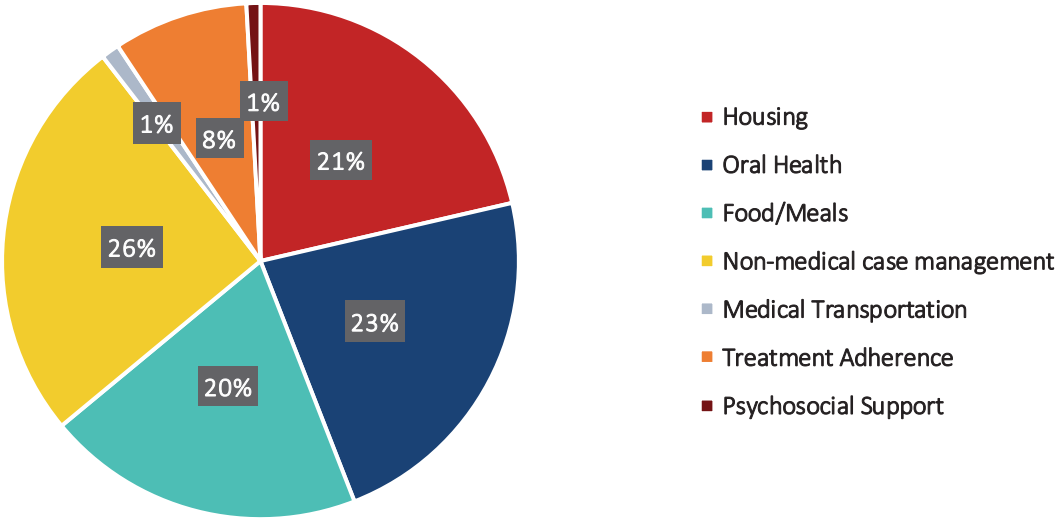
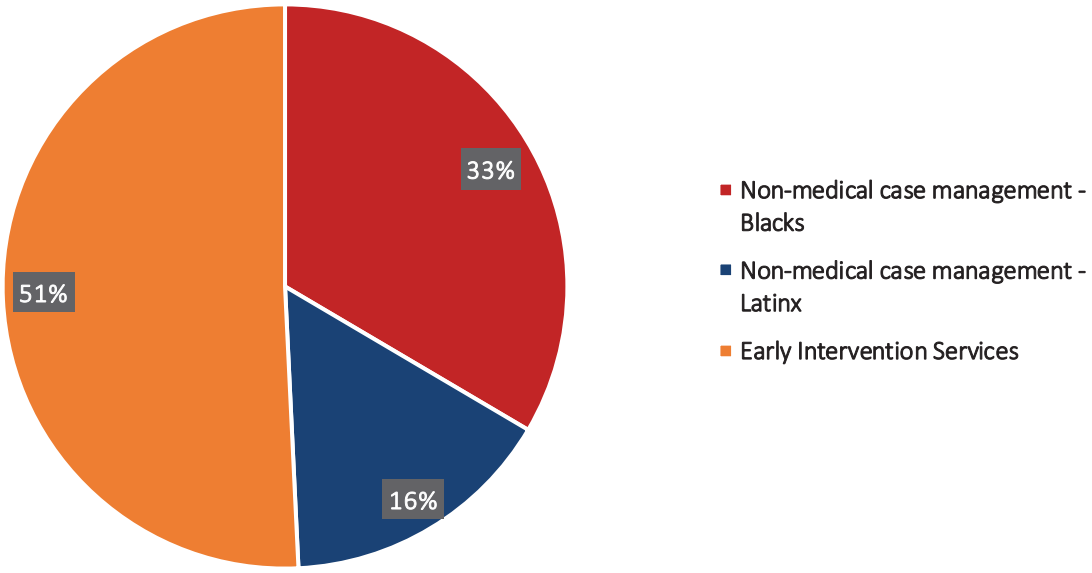



FIGURE 11-3. MINORITY AIDS INITIATIVE FUNDING ALLOCATIONS OF $340,876, SEATTLE AREA (KING, SNOHOMISH, AND ISLAND COUNTIES), FY2018




*Contributed by Marcee Kerr*

# HIV/AIDS Mortality Surveillance


## SUMMARY

In 2017 the majority of deaths among people with HIV in King County were are result of non-HIV/AIDS related causes. Non-AIDS related cancers, heart disease and self-harm were causes of death in 56% of all deaths, while causes of death more clearly associated with HIV occurred in 15% of cases.

Persons with a history of injecting drugs (PWID) had an increased risk of death and men who have sex with men (MSM) had a lower risk of death than other persons with HIV.

There was significant correlation between the level of stigma decedents had experienced (as reported by providers) and having a death the provider deemed related to HIV.


## Background

While many deaths among persons diagnosed with HIV (PWH) in King County can be directly attributed to HIV, many more are unrelated. Despite a large number of deaths from causes that are not directly associated with HIV, or not AIDS-defining (OI, or opportunistic illnesses), PWH still have a significantly shorter life span than those without HIV.[1] Through provider interviews, medical record abstraction, and analysis of the CDC's HIV/AIDS surveillance system (NHSS), we examined what King County PWH died of in 2017, what significant comorbidities they had in the year prior to their death, and what social determinants of health may have contributed to the deaths.

## Methods

### Selection criteria and sample sizes:

A total of 236 deaths occurred among 8,089 PWH residing in King County 2016-2018. In 2017, a total of 98 deaths occurred among PWH whose last residence was thought to be in King County based on laboratory surveillance. (Because of the time need to match HIV surveillance data with national death registries, 2017 is the most recent year for which Public Health has complete death ascertainment data.) We obtained death certificates for 80 (82%) of these persons, reviewed the medical records of 68 (85%) persons for whom death certificates were available and interviewed 38 medical providers about the circumstances of their patient's death.

TABLE 12-1. CAUSES OF DEATH AMONG HIV PATIENTS IN KING COUNTY, 2017

Non AIDS-OI Cancer: 18 deaths (26.5%)

Heart Disease: 12 deaths (17.6%)

Self-Harm: 8 deaths (11.8%)

AIDS Opportunistic Illnesses: 6 deaths (8.8 %)

- 2 Plasmablastic or Diffuse Large B Cell Lymphoma
- 1 Progressive Multifocal Leukoencephalopathy
- 3 with wasting syndromes associated with advanced HIV
  - 1 Chronic Intestinal Cryptosporidium (with antiretroviral refusal)
  - 1 HIV Enteropathy (possible CMV enteritis)
  - 1 Disseminated Mycobacterium Avium Complex (with influenza and esoph. candidiasis)

HIV related - Non AIDS defining Opportunistic Illnesses: 4 deaths (5.9%)

- 2 Multicentric Castleman's Disease
- 1 Angioinvasive Aspergillosis
- 1 HIV - Not Otherwise Specified

Liver Disease: 4 deaths (5.9%)

Accidental Blunt Force Injury: 4 deaths (5.9 %)

Pneumonia: 2 deaths (2.9%)

Unspecified Natural Causes: 2 deaths (2.9%)

Other and Unknown: 8 deaths (11.8%)

from

## MEDICAL RECORD ABSTRACTION

We conducted medical record abstractions for a period of one year preceding the patient's death for patients within the University of Washington medical system and from other facilities based on the location of the most recent reported laboratory result (CD4 count or viral load). Information abstracted included cause of death, mental health diagnoses and treatment, significant comorbidities, and data on social determinants of health and healthcare utilization. Medical record data related to social determinants of health included financial and employment status. Records were then classified as complete (30), mostly complete (12), partially complete (10) or containing scant data (16). Public Health investigators did not request records from skilled nursing facilities and home hospice providers and care at these types of facilities did not factor into the assessment of record completeness. When we found conflicting information in the record, we used the most recent information -- unless a specialist's note focusing on the disputed information was found. When information was ambiguous and lab or pathology reports were available, these were checked in order to ensure accurate recording. De-identified information was entered into a secure REDCap database.

## PROVIDER INTERVIEW

We identified the provider managing the patient's HIV patient medical records. We contacted the providers by email, fax or phone with a request to fill out a brief secure REDCap survey about their patient(s) cause of death, the death's relation to HIV, the patient's social determinants of health, significant comorbidities, adherence to ARV and engagement in HIV related care. In addition to financial and employment status, the survey asked providers about social isolation and stigma. To improve rate of survey completion, providers were asked to complete surveys from recollection only, without chart review. ambiguous and lab or pathology reports were available, these were checked in order to ensure accurate recording. De-identified information was entered into a secure REDCap database.

## KING COUNTY NATIONAL HIV SURVEILLANCE SYSTEM (NHSS)

From the NHSS we collected birth sex, mode of HIV transmission, last CD4 count, HIV diagnosis year and current age/age at death.

## DETERMINING CAUSE OF DEATH

For patients where more than one source listing the cause of death was available (medical record, provider interview and/or death certificate), information from the provider interview was preferred, followed by information listed in the medical record and lastly, information listed on the death certificate. We used the underlying disease or injury that caused the death from

TABLE 12-2: AIDS-OI DOCUMENTED IN LAST YEAR OF LIFE AMONG DEATHS OF PWH IN KING COUNTY, 2017

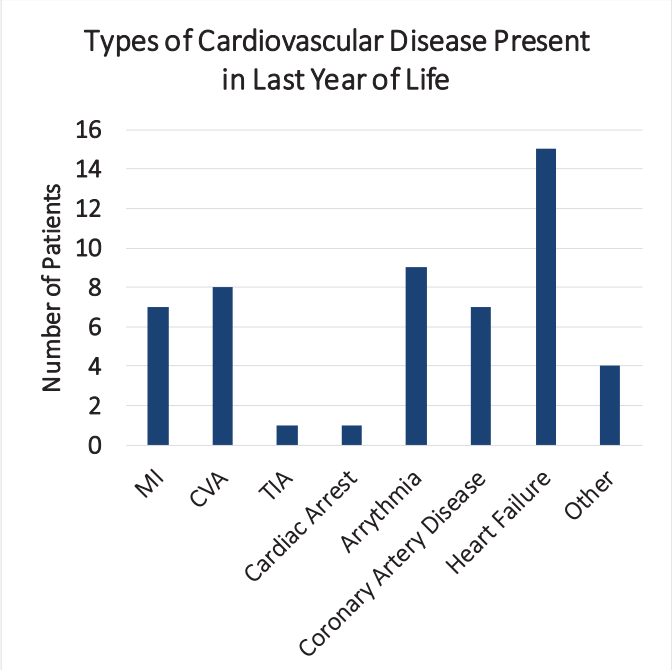
| CASES OF AIDS-OIS IN LAST YEAR OF LIFE | | | |
|---|---|---|---|
| Kaposi's Sarcoma | 2 | Candidasis - Esophageal | 3 |
| Pneumocystis Jiroveci | 1 | MAC - disseminated or extrapulmonary | 2 |
| Lymphoma - Immunoblastic | 3 | Cryptococcosis | 1 |
| Pneumonia - recurrent in 12 month period | 5 | Cryptosporidosis - chronic intestinal | 1 |
| CMV - other than liver, spleen or lymph nodes | 1 | Wasting Syndrome due to HIV | 1 |

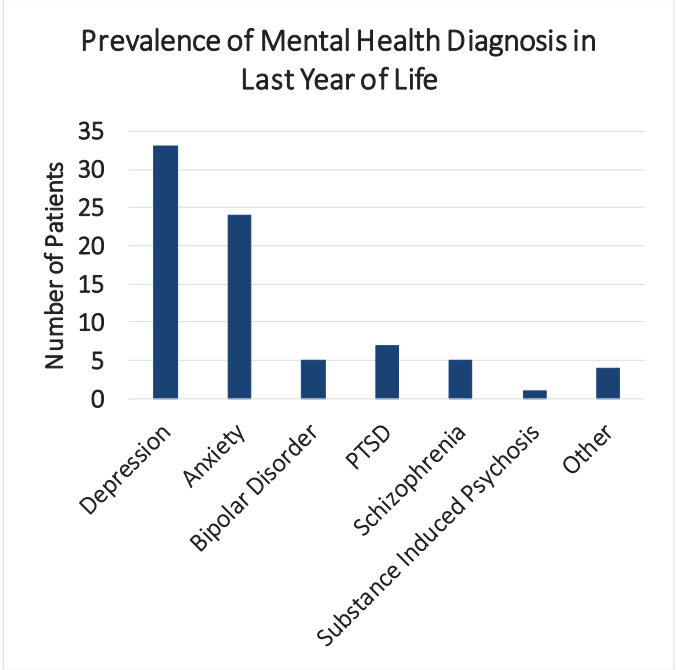
the medical record and from death certificates, we used lines A-D.

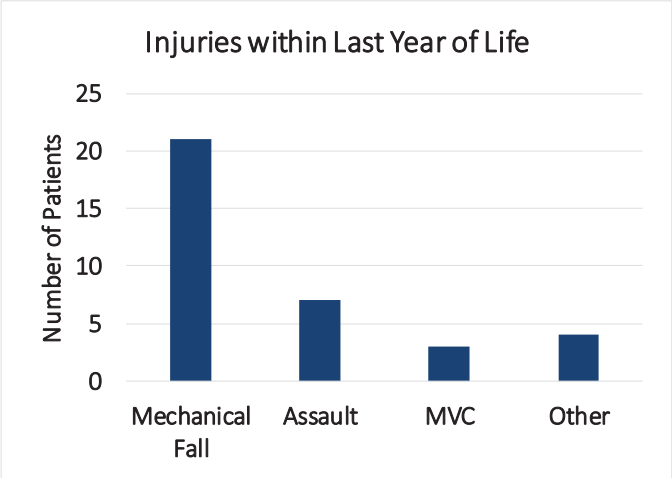
### STATISTICAL ANALYSIS

Analyses used two-tailed Fisher exact tests to assess the association of social determinants of health with death related to HIV. Demographic data for PWH and decedents were compared with $X^2$and Mantel-Haenszel $X^2$ for linear trends to determine the significance of differences between groups. A p-value of <0.05 was used to determine significance. Conditional maximum-likelihood estimate (CMLE) odds ratios were also calculated.

FIGURE 12-1: DISTRIBUTION OF HIGHLY REPRESENTED COMORBIDITIES AMONG 2017 DEATHS OF PWH IN KING COUNTY.




| PRIMARY SITE OF NON-AIDS DEFINING CANCER | |
|---|---|
| Prostate | 5 |
| Lung | 4 |
| Liver | 3 |
| Leukemia/Lymphoma | 2 |
| Kidney | 2 |
| Head and Neck | 2 |
| Pancreas | 2 |
| Anal | 1 |
| Breast | 1 |
| Other | 1 |
| Skin | 1 |

TABLE 12-3: PROVIDER INTERVIEW SOCIAL DETERMINANTS OF HEALTH CORRELATIONS WITH HIV-ASSOCIATED DEATHS, KING COUNTY, 2017.

| | | HIV PLAYED A ROLE IN DEATH N=8 | | HIV PLAYED NO OR AN UNKNOWN ROLE IN DEATH N=30 | | P-Value Fisher Exact Test |
|---|---|---|---|---|---|---|
| | | N | % | N | % | |
| Stigma Related To HIV | Moderate to Substantial | 5 | 62.50% | 4 | 13.33% | 0.011 |
| | Little to None | 2 | 25.00% | 25 | 83.33% | |
| | Unknown | 1 | 12.50% | 1 | 3.33% | |
| Engagement in HIV care | Mostly or Very Engaged | 4 | 50.00% | 23 | 76.67% | Not significant |
| | Not Engaged to Somewhat Engaged | 4 | 50.00% | 6 | 20.00% | |
| | Unknown | 0 | 0.00% | 1 | 3.33% | |
| Financial Status | Below or Near Poverty-Level | 4 | 50.00% | 22 | 73.33& | Not significant |
| | Financially Comfortable | 3 | 37.50% | 5 | 16.67% | |
| | Unknown | 1 | 12.50% | 3 | 10.00% | |
| Mental Health Diagnosis | Yes | 2 | 25.00% | 20 | 66.67% | 0.085 |
| | No/Unknown | 6 | 75.00% | 10 | 33.33% | |

# Results

### CAUSE OF DEATH AND COMORBIDITIES:

Of the 68 patients whose medical records were abstracted, 10 (15%) had an HIV-related cause of death, and 18 (26.5%) had cancer not traditionally associated with HIV, though HIV is associated with an elevated risk of cancer. Causes of death are in Table 12-1.

### MORBIDITIES WITHIN LAST YEAR OF LIFE:

There were multiple AIDS defining OIs occurring in patients' last year of life. 15 patients had at least one OI in the last year of life while five had more than one (Table 12-2).

Highly represented comorbidities within the 68 patient cohort included cardiovascular disease, non-AIDS defining cancer, mental health diagnosis, and injury. Distribution of these comorbidities are shown in Figure 12-1.

Possibly as many as eight of the patients committed suicide, although only two of these were so designated. These two decedents both were diagnosed with anxiety disorders, one of whom also had depression. Both had been in treatment for these mental health diagnoses. The other six potential suicides were a combination of overdoses without clear suicidal intent and other potential self-harm.

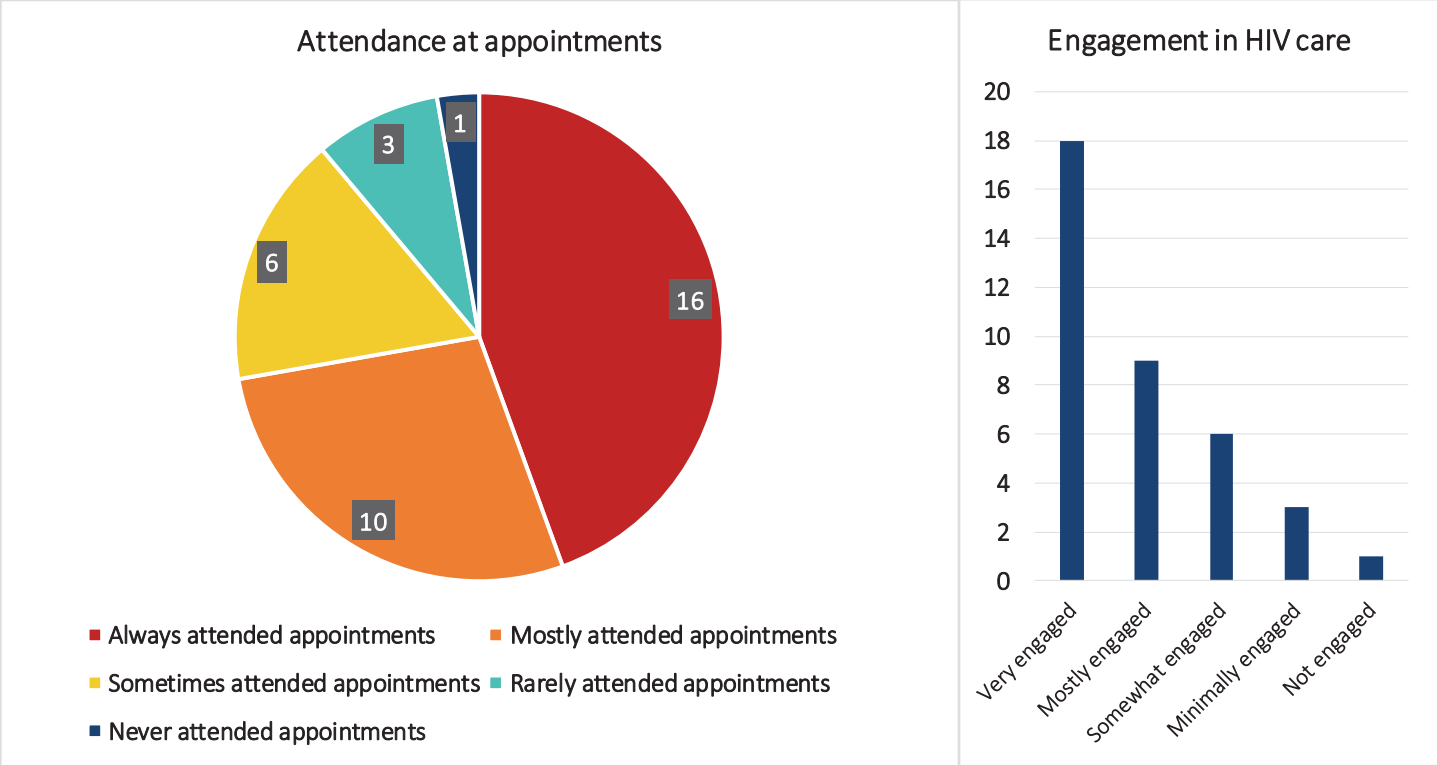
A total of 44 were documented to have had a mental health diagnoses, 36 (82%) were taking medication for mental illness, 5 (11%) were in counseling, 8 (18%) were receiving outpatient psychiatric care and 6 (14%) were not being treated

### MEDICAL RECORD ABSTRACTION:

Of the 68 patients for whom staff abstracted medical records, 39 (57%) had records indicating that the patient had a supportive family in the area or who came to be with the patient at some point within their last year of life, and 30 (44%) also mentioned local friends who served as support to patients' in their last year of life. Eleven patients were living homeless at some point in the year prior to their death, and 19 had documentation of use of at least one food assistance program. This count does not include patients who had meals provided through their place of living or through various day programs.

The most common location of death was in the hospital (38%). Thirteen (19%) patients were in outpatient hospice care at the time of their death (average duration of 33.4 days), and 16 of the 26 patients (62%) who died in the hospital were transitioned to comfort care prior to their death (average duration of 2.9 days).

FIGURE 12-2: PROVIDER ASSESSMENT OF PATIENTS' ENGAGEMENT IN CARE, N= 38, KING COUNTY DEATHS AMONG PERSONS WITH HIV IN 2017




***PROVIDER INTERVIEWS & COMPLETENESS OF INTERVIEWS:***
Sixty patients had an established PCP/Infectious Disease provider listed in their medical records who managed their HIV. Of the 40 providers taking care of these patients, 23 responded to our survey request, completing surveys for 38 (63%) of the 60 patients. Providers who completed our survey tended to know their patients well, with 20 (52%) of 38 patients having a provider who had care for them for at least 5 years.

***PROVIDER INTERVIEWS: SOCIAL DETERMINANTS OF HEALTH AND PATIENT ENGAGEMENT:***
Medical providers felt 15 (40%) of 38 patients had good to excellent social support, while 12 (32%) experienced significant social isolation. Providers also reported that stigma played little to no role in the deaths of 27 (71%) of 38 patients, but played a moderate to significant role in the deaths of 9 (24%) persons who died with HIV. Nine (24%) persons were stably or intermittently employed in the last 12 months of life, and only 8 (21%) were considered to be financially comfortable by their provider. Providers identified financial hardship as a factor influencing access to care for 8 (21%) patients.

Providers were asked to rate patient adherence to ARVs on a scale of 1-5, with 5 representing excellent adherence. They rated 24 (63%) of their patients as having excellent adherence (**Figure 12-2**.) Providers identified patient deaths as being attributable to HIV in 8 (18%) of 38 cases, and cited adherence as playing a role in the deaths of 6 (16%) of their patients.

Providers thought their patients' deaths could have been prevented in 11 (29%) of 38 cases.

**PROVIDER INTERVIEW: STATISTICAL ANALYSIS:**
Moderate to substantial stigma was significantly associated with an HIV-related death (odds ratio = 10.8 [95% CI = 1.8-64.0], P=0.01), suggesting about a 10 fold higher likelihood that the death was due to HIV when there was moderate to substantial stigma (**Table 12-3**).

**POPULATION-LEVEL COMPARISONS:**
Demographic data was pulled for PWH deaths from 2016-2018 and from those presumed still living in 2018 (**Table 12-4**). Significant differences are designated with bolded type.

TABLE 12-4: DEMOGRAPHICS OF PWH IN KING COUNTY TO PWLH WHO DIED 2016 -2018 IN KING COUNTY

| | | 2016 - 2018 DEATHS N=236 | | PRESUMED ALIVE IN 2018 N=7022 | | P-VALUE [A] |
|---|---|---|---|---|---|---|
| | | N | % | N | % | |
| Sex | Female | 22 | 9.3% | 886 | 12.6% | 0.150 |
| | Male | 211 | 89.4% | 6136 | 87.4% | |
| | Unknown | 3 | 1.3% | 0 | 0.0% | |
| Year of HIV diagnosis | < or = 2000 | 136 | 57.6% | 2301 | 32.8% | <0.001 |
| | 2001-2005 | 28 | 11.9% | 1308 | 18.6% | |
| | 2006-2010 | 25 | 10.6% | 1389 | 19.8% | |
| | 2011-2015 | 26 | 11.0% | 1308 | 18.6% | |
| | 2016-2018 | 18 | 7.6% | 716 | 10.2% | |
| | Unknown | 3 | 1.3% | 0 | 0.0% | |
| Mode of HIV transmission | **MSM** | **139** | **58.9%** | **4678** | **66.6%** | **0.004** |
| | **PWID** | **26** | **11.0%** | **277** | **3.9%** | **<0.001** |
| | MSM-PWID | 24 | 10.2% | 641 | 9.1% | NS |
| | Heterosexual | 14 | 5.9% | 491 | 7.0% | NS |
| | Other | 0 | 0.0% | 90 | 1.3% | |
| | Unknown | 33 | 14.0% | 845 | 12.0% | |
| Last CD4 (prior to death) | <200 | 78 | 33.0% | 367 | 5.2% | <0.001 |
| | 200-499 | 96 | 40.7% | 1962 | 27.9% | |
| | 500+ | 56 | 23.7% | 4628 | 65.9% | |
| | Unknown | 6 | 2.5% | 65 | 0.9% | |
| Current Age (Age at Death) | <50 years | 41 | 17.4% | 3526 | 50.2% | <0.001 |
| | 50-59 | 90 | 38.1% | 2240 | 31.9% | |
| | 60-69 | 68 | 28.8% | 1032 | 14.7% | |
| | 70-79 | 27 | 11.4% | 209 | 3.0% | |
| | 80+ | 6 | 2.5% | 11 | 0.2% | |
| | Unknown | 4 | 1.7% | 4 | 0.1% | |

[A] $X^2$ or $X^2$ linear trend ($X^2_{LT}$).

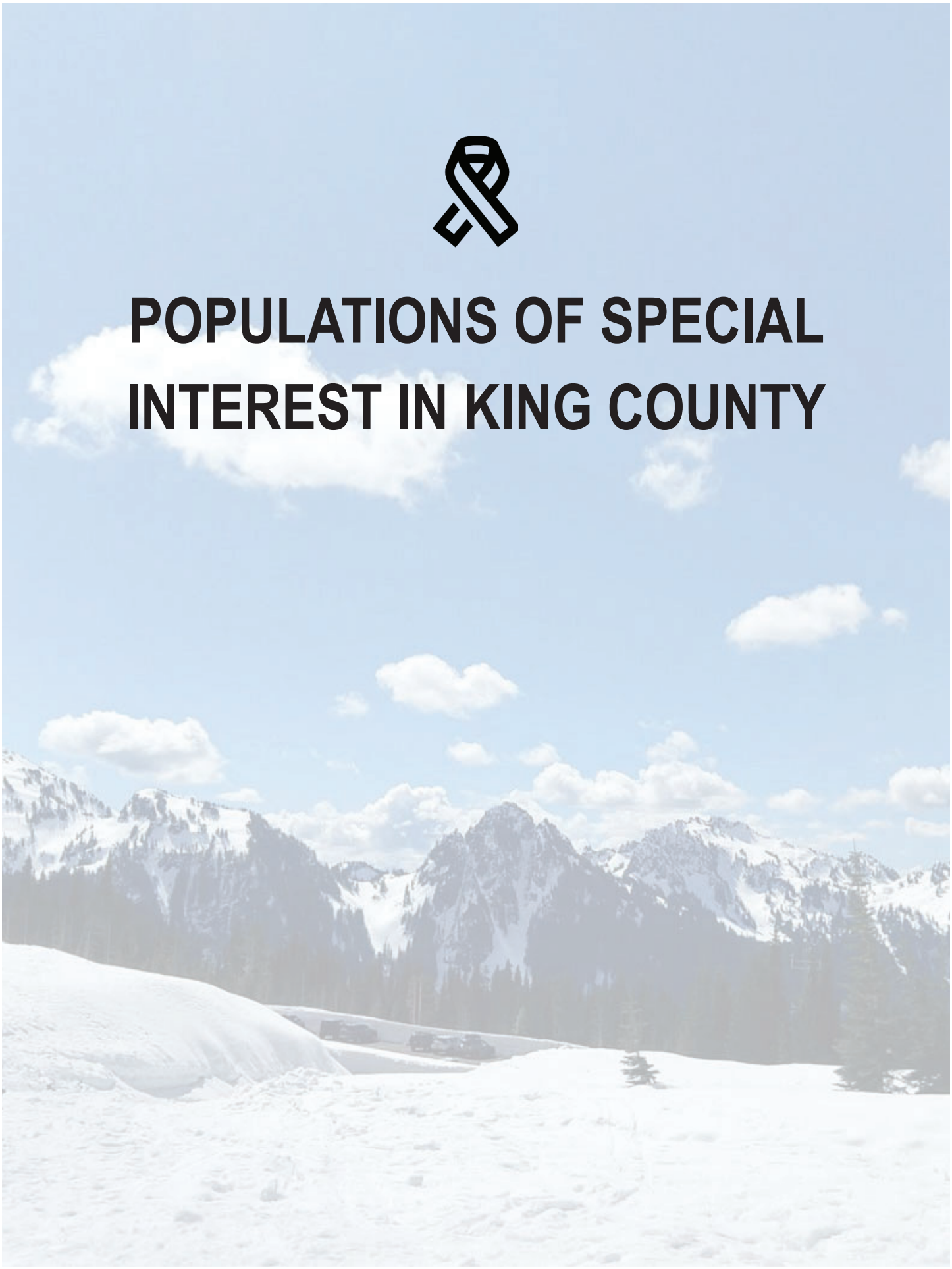
# CONCLUSION

Cancers that have not traditionally been associated with HIV were the most common causes of death among people with HIV in King County in 2017. Although only 7% of deaths were attributed to traditional opportunistic infections, over 20% of decedents had an OI in their last year of life, demonstrating that a substantial number of persons who died had advanced HIV disease. An alarming 8% of deaths were a result of self-harm, highlighting the importance of mental illness as a treatable cause of preventable death in persons with HIV. Finally, although based on small numbers, stigma was significantly associated with death related to HIV. These findings highlight how mortality in persons with HIV increasingly are related to cancers, the risk of which is elevated in people with HIV and which may be preventable with early initiation of antiretrovirals. Our results also highlight the importance of mental illness and advanced HIV infection as persistent, preventable causes of death in people with HIV.

*Contributed by Andrea Martin, Susan Buskin, and Matthew Golden*

## REFERENCE

1. Krueger AL, et al. Factors Associated with State Variation in Mortality Among Persons Living with Diagnosed HIV Infection. J Community Health. 2019 Oct;44(5):963-973.



# POPULATIONS OF SPECIAL INTEREST IN KING COUNTY

# Homelessness among Populations Most Affected by HIV


## SUMMARY

Homelessness is common in communities disproportionately affected by HIV and among individuals living with diagnosed HIV (PWDH), particularly persons who inject drugs and transgender women.

An estimated 11% (range: 6-16%) of people living with diagnosed HIV infection, 600-800 persons, experienced homelessness in 2017.

Among PWDH, homelessness is associated with lower levels of viral suppression and more frequent hospitalizations and use of emergency departments.


| Homelessness Goal | 2017* | 2020 Goal |
|---|---|---|
| Homelessness among PLWDH | 11% | <5% |

*Data from the Medical Monitoring Project. 2017 is the most recent year for which weighted data are available.

## Background

The Seattle area has a housing crisis. The local one-night count for 2018 estimated that more than 12,000 people in King County are experiencing homelessness.[1] Being homeless may increase people's risk of HIV acquisition through factors related to homelessness and poverty, including sexual assault, commercial sex work, and injection drug use. Furthermore, among persons with HIV, homeless is associated with poor engagement with care and lower levels of viral suppression; permanent, stable housing may improve HIV-related health outcomes.[2]

## Methods

### Cross Sectional Surveys of Populations at Risk of HIV

We assessed data about housing status and HIV status from five surveys conducted in communities disproportionately affected by HIV: cisgender men who have sex with men (MSM), transgender and non-binary people assigned male at birth, and people who inject drugs (PWID). Two surveys were undertaken as part of the Seattle area National HIV Behavioral Survey (NHBS), one of MSM and one of PWID. Both of these surveys included HIV screening; MSM were recruited through venue-based sampling and PWID were recruited through respondent driven (snowball) sampling. The other three surveys, the Pride Survey, Trans Survey, and Needle Exchange Survey, relied upon convenience sampling and self-report of HIV status.

### HIV Case Reports and Partner Services

We assessed housing status among people newly diagnosed with HIV (PWDH) from HIV case reports (National HIV Surveillance System, or NHSS) and assessed the association of housing status with demographic characteristics and time to viral suppression. Housing status was ascertained during partner services interviews for 73% of newly diagnosed individuals who received partner services. For those not reached through partner services, we used case report data on housing status at time of diagnosis; the case report data largely comes from medical record review. Ultimately, newly diagnosed individuals were classified according to two categories: (1) had evidence of unstable housing at time of diagnosis and (2) confirmed or presumed to have stable housing.

### Additional HIV-related Data Sources

We assessed housing status among people living with diagnosed HIV from two additional HIV data sources. The Medical Monitoring Project (MMP) provided data from 256 randomly-selected individuals with diagnosed HIV infection who were interviewed June 2015 to May 2017. The MMP data were weighted to adjust for the probability of selection and for non-response. MMP defines "homeless" as living on the streets, in a car, in a shelter, or single room occupancy hotel at any point in the 12 months prior to MMP interview. We also analyzed the housing status documented in the Ryan White Client Database ("CareWare") and matched this information against information contained in NHSS. Ryan White defines "temporary housing" as transitional housing or couch-surfing and "unstable housing" as living in a shelter or on the streets, in a car, or abandoned building.

# Key Findings and Populations

Among cisgender MSM survey participants, 8-13% reported experiencing homelessness in the prior 12 months (Table 13-1). Among transgender women who completed the 2019 Pride Survey, 24% reported homelessness in prior 12 months. Among participants in the NHBS-PWID survey, 77% reported experiencing homelessness in the prior 12 months; 72% of participants in the 2019 Needle Exchange Survey indicated that they were *currently* experiencing homelessness. The unadjusted association between housing status and HIV prevalence varied by survey. The estimated HIV prevalence was greater among cisgender MSM who had experienced homelessness in the prior 12 months compared to those with secure housing. Conversely, estimated HIV prevalence was lower among PWID who were not MSM who had recently experienced homelessness compared to PWID with secure housing.

# People Newly Diagnosed with HIV

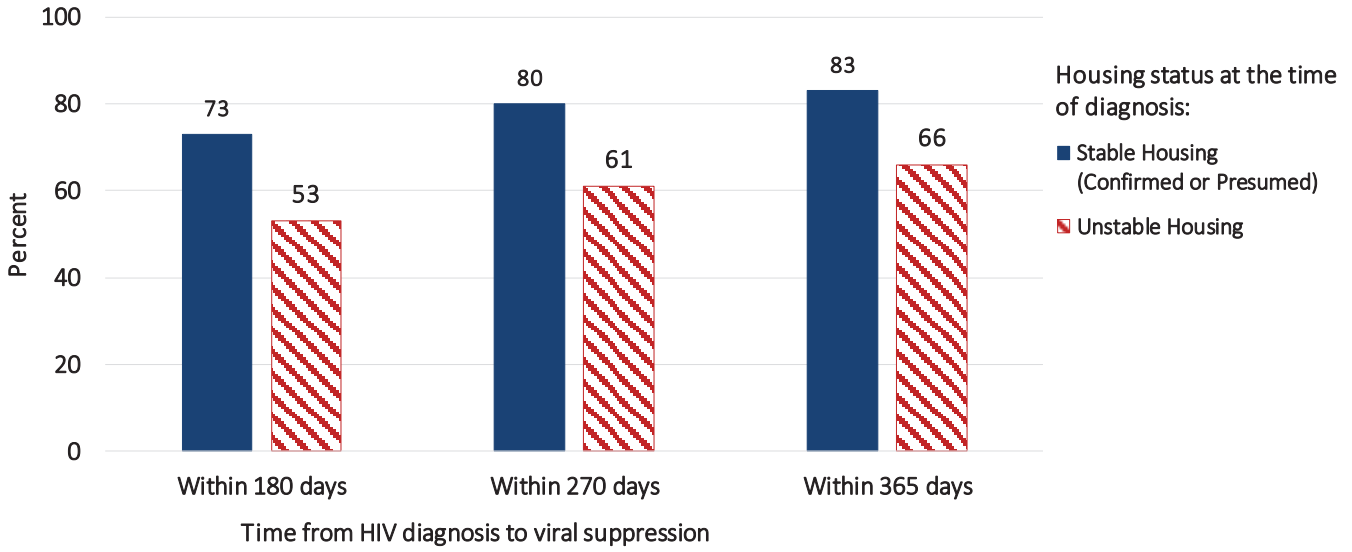
Over the past five years (2014 to 2018), 14% of newly diagnosed individuals (139/985) were homeless or unstably housed at the time of HIV diagnosis. Homelessness was not associated with age, but was more common among persons assigned female gender

**Table 13-1. Homelessness and Unstable Housing among Men Who Have Sex with Men (MSM), Transgender and Non-binary Individuals, and People Who Inject Drugs (PWID), Seattle area, 2017-2018**

| Population | Survey | N | % of Respondents who are Homeless or Unstably Housed in past 12 months | % of Homeless with HIV | % of Housed with HIV |
|---|---|---|---|---|---|
| Cisgender MSM | National HIV Behavioral Survey, 2017 | 461 | 13% | 39% | 16% |
| | Pride Parade Survey, 2019 (restricted to King Co residents) | 285 | 8% | 13% | 11% |
| Trans Women | Trans & Parade Pride Survey, 2019 (restricted to King Co residents) | 38 | 24% | 0% | 0% |
| PWID excluding MSM PWID | National HIV Behavioral Survey, 2018 | 502 | 77% | 2% | 7% |
| | Needle Exchange Survey, 2019 | 350 | 74%* | 2% | 4% |

* *Currently* homeless or unstably housed.

FIGURE 13-1. HOUSING STATUS AND TIME TO VIRAL SUPPRESSION AMONG NEWLY DIAGNOSED HIV CASES, KING COUNTY, 2013-2017




at birth (24%) versus those assigned male gender (12%) and also more common among MSM-PWID (38%) and non-MSM PWID (55%) than MSM (8%). Homeless status resulted in significantly longer time from diagnosis to viral suppression (**Figure 13-1**).

# People Living with Diagnosed HIV Infection

According to MMP data, 11% (95% CI = 6% - 16%) of PWDH have experienced homelessness in the prior 12 months and an additional 15% needed housing assistance. Homelessness was more prevalent among younger MMP participants (e.g. 18-29 years, 50%), cisgender women (32%), and Latinx participants (20%) relative to the overall population of PWDH. Relative to stably housed persons, homeless individuals were more likely to have a recent period of incarceration (18% versus 2%), to have had one or more emergency department visit in past year (63% versus 33%), to have had one or more hospitalization in the past year (30% versus 13%), and to used injection drugs in last year (32% versus 9%).

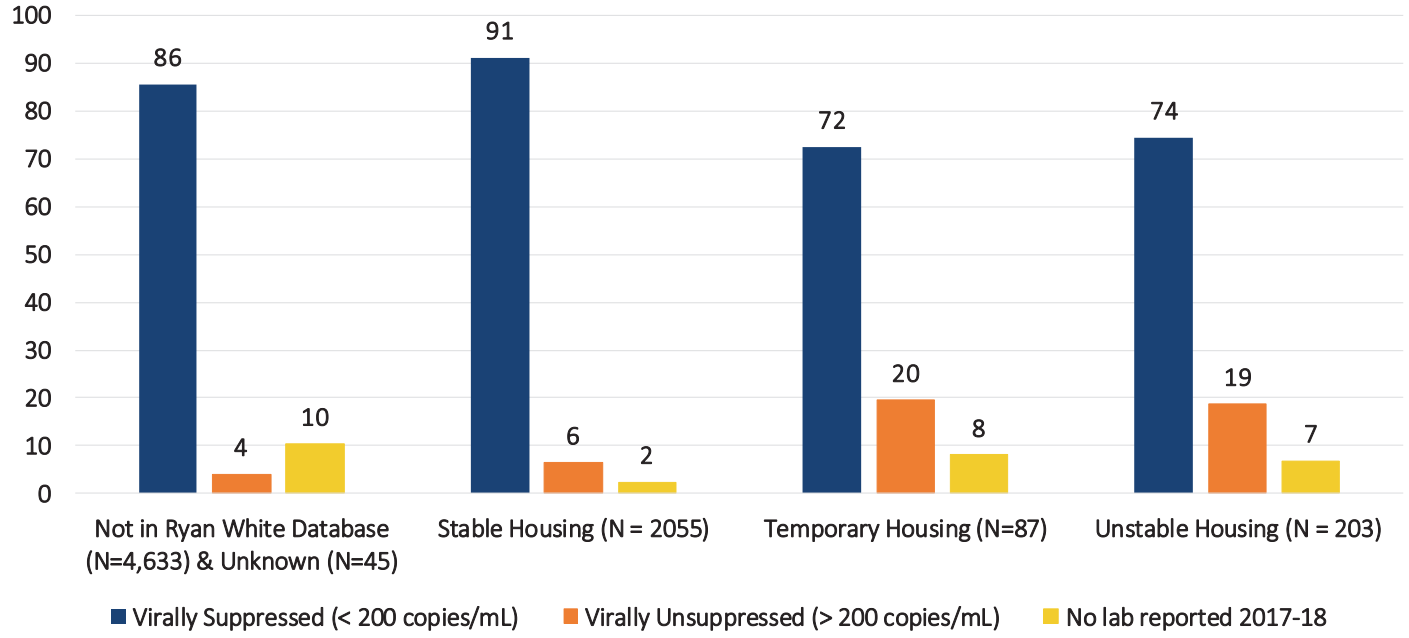
Among the 7,023 PWDH in King County in 2018, 4,633 (66%) were not known to have received Ryan White (RW) services (and thus most likely higher income and mostly stably housed), 2,055 (29%) were stably housed per RW records, 290 (4%) were homeless, temporarily, or unstably housed according to Ryan White records, and 45 (1%) did not have housing status documented in their RW records. We sought a most recent viral load in 2018 to monitor viral suppression. If there was no viral load in 2018 but a suppressed viral load in 2017 or 2019, we assumed the individual was also suppressed in 2018. Similarly if there was no viral load reported in 2018 but an unsuppressed viral load in 2017, we assumed the individual remained virally unsuppressed in 2018. The percent of RW recipients who were virally unsuppressed was greater among those experiencing homelessness/ unstable housing than those with stable housing (19% versus 6%, **Figure 13-2**). As in MMP, homelessness/ unstable/temporary housing was more prevalent among PWDH who were younger (9% for those less than 20 years versus 3% among those 50 years and greater) and PWDH with a history of injection drug use (11% versus 3% among those without a known history of injection drug use).

# Providing Housing and Other Services

The need for housing assistance is greater than the supply. If we triangulate MMP, RW, and NHSS data, then we can estimate that between 600 and 800 PWDH in King County experienced homelessness in 2018. An additional unknown number of people experiencing homelessness may be living with undiagnosed HIV infection. (See the article on the increase in HIV among PWID, elsewhere in this report.)

The largest funder of homeless services, the US Department of Housing & Urban Development (HUD), requires that HUD-funded jurisdictions prioritize

FIGURE 13-2. VIRAL SUPPRESSION STATUS AMONG PEOPLE LIVING WITH DIAGNOSED HIV, STRATIFIED BY RYAN WHITE AND HOUSING STATUS, KING COUNTY, 2018




providing housing for the most vulnerable persons and that they provide other, less intensive, resources for those who need less support. The prioritization system is called Coordinated Entry (CE). Although HIV infection does not automatically guarantee that a person is eligible to receive housing assistance, HIV infection is one of many factors that increases the likelihood that a person is prioritized to receive assistance.

Public Health – Seattle & King County's Ryan White Part A Program (RW, providing transitional and emergency housing, as well as housing support), and the City of Seattle's Housing Opportunity for Persons With AIDS (HOPWA, providing permanent housing) have coordinated efforts to better provide housing assistance. This coordination allows PWDH who are living homeless to gain access to a larger system for which they may qualify. In turn, PWDH who are living homeless but not classified as "highly vulnerable" are referred by CE to HIV housing services. RW has also funded a project with the Washington State Department of Corrections (DOC). This project pays for transitional housing services for former inmates with HIV infection, who either do not qualify for a current DOC program that provides three months of housing to selected releases, or are who unable to support themselves independently after the three months. Participants enrolled in this RW-DOC program have access to a full array of integrated services that DOC provides. As stated in the article elsewhere in this report, RW also funds transitional and emergency housing with 20,547 bed nights funded in 2018.

In November of 2018, and with funding from the City of Seattle, Bailey-Boushay House opened a 50-bed shelter for its homeless population. It is the first — and only — homeless shelter in the country that only serves people with HIV. Funding through Ryan White Part A is used to provide needed supportive services for this program.

*Contributed by Julia Hood, Marcee Kerr, and Susan Buskin*

## References

1. http://allhomekc.org/wp-content/uploads/2018/05/FINALDRAFT-COUNTUSIN2018REPORT-5.25.18.pdf
2. Kidder, D., et al. (2007). *Health status, health care use, medication use, and medication adherence in homeless and housed people living with HIV/AIDS.* Am J Public Health. 97(12): 2238- 2245

# Characteristics of People with HIV in King County: Medical Monitoring Project, 2016-2018


## SUMMARY

The Medical Monitoring Project (MMP) is an ongoing project that annually collects behavioral and clinical data on a representative sample of adults with diagnosed HIV infection.

MMP data from June 2015 to May 2017 suggests that nearly all people living with diagnosed HIV in King County (96%) were taking antiretroviral therapy and most (85%) were virally suppressed.

However, King County residents living with HIV face other challenges, including unstable housing and substance use, that may jeopardize their HIV care and overall quality of life.


The Medical Monitoring Project (MMP) collects behavioral and clinical data on a representative sample of adults with diagnosed HIV. MMP data collected between June 2016 and May 2018 suggest that nearly all people living with diagnosed HIV (PWDH) in King County were taking antiretroviral therapy. However, King County PWDH face other challenges, including unstable housing and substance use, challenges that may jeopardize PWDH's HIV care and overall quality of life.

## Background

HIV surveillance programs in the United States collect limited information about people who have received diagnoses of HIV infection and AIDS. Supplemental surveillance projects collect more detailed information about comorbidities, care-seeking behaviors, healthcare use, sexual behavior, substance use, and other behaviors among PWDH. Together, these data inform program planning, resource allocation, HIV prevention efforts, evaluation of existing clinical and social services, and development of new HIV-related interventions.

## Methods

MMP is a supplemental surveillance system that collects annual cross-sectional clinical, sociodemographic, and behavioral data on randomly selected PWDH 18 years of age and older. Data collection for MMP is conducted in 16 states

and Puerto Rico, areas where 73% of the total PWDH population in the United States reside. During face-to-face or telephone interviews, information on demographics, adherence to HIV medication regimens, behavioral risk factors, and service utilization is collected. Medical record abstractions (MRA) are conducted to collect clinical data pertaining to diagnoses, medications, laboratory results, and health service utilization. A more detailed description of the MMP methodology is available elsewhere.[1]

This article describes King County data from the MMP 2016 and 2017 cycles, collected between June 2016 and May 2018. This article is modeled after a report that was generated for the *national* MMP sample, available here: https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-special-report-number-21.pdf; results from this report are listed in Table 1 -- allowing the characteristics of King County MMP participants to be compared to MMP participants nationally.[1] The data were weighted for probability of selection and nonresponse to be representative of adult PWDH in King County. Statistical software (SAS, version 9.3, Cary, NC) was used for analysis of weighted data.

# Results

Of the 388 King County PWDH sampled for the MMP 2016-17 cycles, 190 (49%) were interviewed and contributed data to the present analysis. This MMP data suggests that the majority of PWDH in King County were male (87%), non-Latinx White (56%), 40 years or older (79%), had a high school degree or higher (94%), were born in the United States (85%), and were currently taking ART (96%) (Table 14-1). When available MMP proportions were also compared to data from the National HIV Surveillance System (NHSS; data not shown). Most age, gender, and race/ethnicity data were identical or within a couple of percentage points. Exceptions were fewer Black persons in MMP (14% versus 19% in NHSS), more multiracial persons (12% vs. 6%), fewer individuals in their 30's (14 vs. 18%, more people age 50+ years (52% vs. 48%) and fewer born out of the US (15% versus 21%).

About 11% of King County PWDH experienced unstable housing and 4% were incarcerated in the 12 months preceding their interview. The comparison of King County MMP data with national MMP data suggests that King County PWDH are significantly (based on non-overlapping confidence intervals) more likely than PWDH nationwide to be male, non-Latinx White, post-high school educated, and identified as gay.

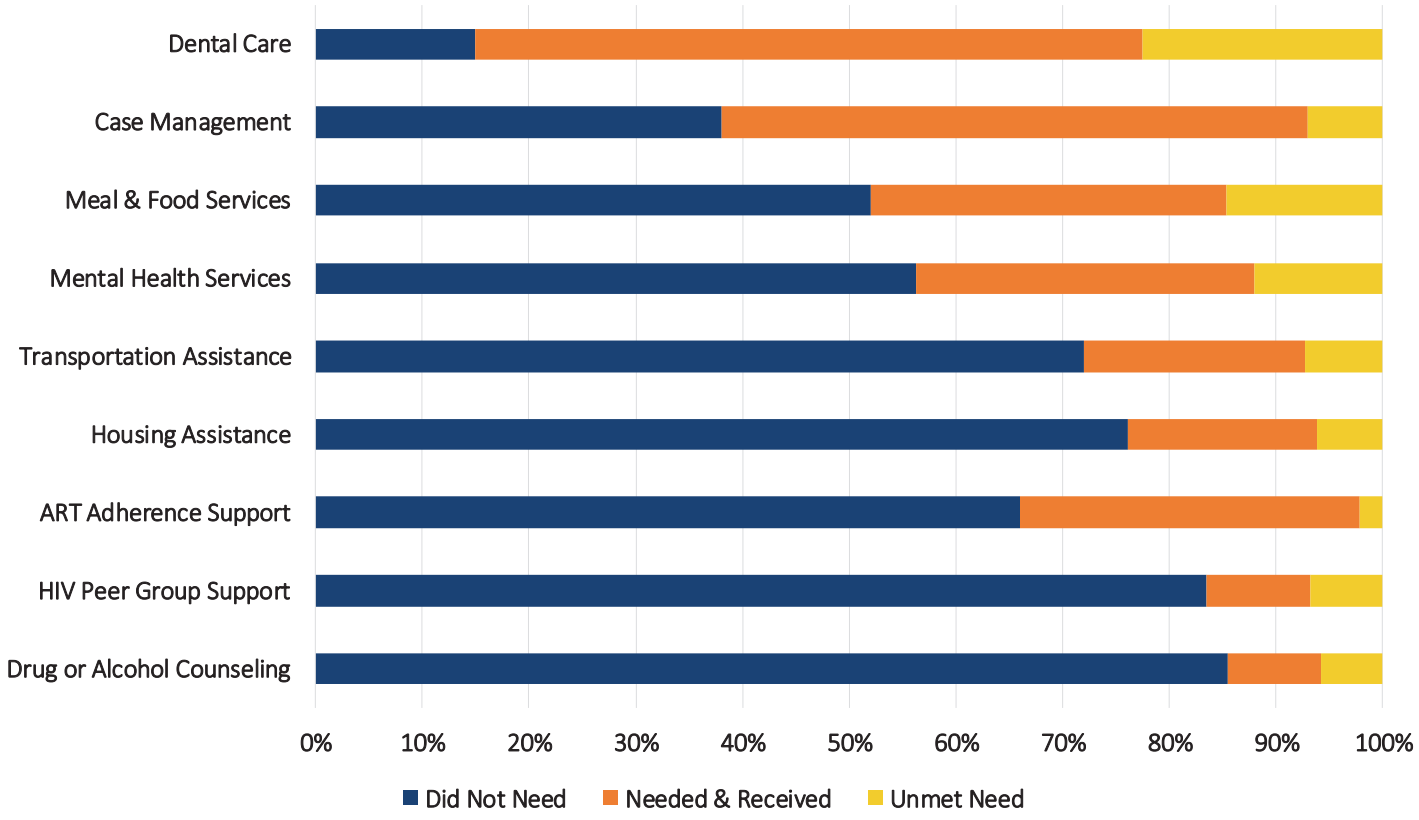
MMP participants are asked whether they needed various services funded by the Ryan White program in the prior 12 months. If they indicated that they needed the service, they are asked whether they received the service in the prior 12 months. Figure 14-1 illustrates the responses to this component of the MMP interview. The most commonly received services were dental care (63%) and case management (55%). The percent of all participants indicating that they needed, but had not received, other specific services was generally low, from 2% (ART adherence counseling) to 22% (dental care). However, among persons reporting that they needed specific services, the percentage for whom that need was unmet was often substantial: 40% for peer support, 40% for drug and alcohol counseling, 31% for meal and food services, 27% for mental health services, 26% for housing assistance, and 26% for transportation assistance. These findings suggest a need to expand access to these services.

Substance use in the last 12 months was common among PWDH in King County: 30% were current smokers, 20% were binge drinkers (in one sitting, ≥5 alcoholic drinks for men and ≥4 drinks for women), 27% used recreational non-injection drugs (excluding marijuana), and 12% used injection drugs (Table 14-2). Among PWDH in King County, roughly 45% reported condomless sex in the past year and 28% reported condomless sex with an HIV-negative or status unknown partner.

# Discussion

This article reports several indicators pertaining to the health of people living with diagnosed HIV in King County. Many HIV care patients were unstably housed and reported recreational drug use, which may jeopardize HIV care and overall quality of life, and substantial number of persons reported an unmet need for housing, transportation, and drug and alcohol treatment. These findings highlight the needs to be incorporated into future HIV prevention and care planning. For more information about MMP in King County, please visit our website: http://www.kingcounty.gov/healthservices/health/communicable/hiv/epi/MedicalMonitoring.aspx.

FIGURE 14-1: REPORTED MET AND UNMET NEED FOR RYAN WHITE FUNDED SERVICES, MEDICAL MONITORING PROJECT, KING COUNTY, 2015-16




*Contributed by: Julia Hood, Winnie Alston, and Susan Buskin*

## REFERENCE:

1. Centers for Disease Control and Prevention. Behavioral and Clinical Characteristics of Persons with Diagnosed HIV Infection—Medical Monitoring Project, United States, 2016 Cycle (June 2016–May 2017). HIV Surveillance Special Report 21. Revised edition. https://www.cdc.gov/hiv/ library/reports/hiv-surveillance.html. Published June 2019. Accessed 30AUG2019.

TABLE 14-1. CHARACTERISTICS OF PEOPLE WITH DIAGNOSED HIV IN KING COUNTY, MEDICAL MONITORING PROJECT, 2016-2017 CYCLES

| | KING COUNTY, 2016-17 CYCLES | | NATIONALLY, 2016 CYCLE | |
|---|---|---|---|---|
| | WEIGHTED PERCENT | WEIGHTED 95% CI | WEIGHTED PERCENT | WEIGHTED 95% CI |
| **GENDER** | | | | |
| Male | 87 | 82 - 92 | 75 | 72 – 77 |
| Female | 11 | 6 - 16 | 24 | 21 – 27 |
| Transgender | 2 | 0 - 3 | 1 | 1 – 2 |
| **SEXUAL ORIENTATION** | | | | |
| Gay | 75 | 68 - 81 | 43 | 39 – 47 |
| Heterosexual | 16 | 10 - 22 | 46 | 42 – 50 |
| Bisexual | 6 | 2 - 10 | 9 | 7 – 10 |
| **RACE/ETHNICITY** | | | | |
| White, non-Latinx | 56 | 49 - 64 | 30 | 24 – 36 |
| Black, non-Latinx | 14 | 10 - 20 | 41 | 32 – 50 |
| Latinx[A] | 12 | 7 - 17 | 22 | 14 – 30 |
| Asian, non-Latinx | 4 | 1 - 7 | 1 | 1 – 1 |
| Multiracial, non-Latinx | 12 | 7 - 16 | 5 | 4 - 7 |
| **AGE AT TIME OF INTERVIEW (YEARS)** | | | | |
| 18–29 | 7 | 2 - 11 | 9 | N/A |
| 30-39 | 14 | 9 - 19 | 17 | N/A |
| 40-49 | 27 | 21 - 34 | 25 | N/A |
| ≥50 | 52 | 44 - 59 | 50 | N/A |
| **EDUCATION** | | | | |
| Less than high school | 6 | 2 – 10 | 17 | 15 – 20 |
| High school diploma or GED | 22 | 15 - 28 | 26 | 24 – 27 |
| More than high school | 73 | 66 - 79 | 57 | 54 – 61 |
| **BORN IN THE UNITED STATES** | 85 | 79 - 90 | 87 | 85 - 88 |
| **HOMELESS[B] AT ANY TIME IN THE LAST 12 MONTHS** | 11 | 6 - 17 | 8 | 7 – 10 |
| **INCARCERATED >24 HOURS IN THE LAST 12 MONTHS** | 4 | 1 - 7 | 5 | 4 – 6 |
| **CURRENTLY TAKING ART** | 96 | 92 - 100 | 92 | 91 – 94 |

*Note:* "N/A", or "not available", indicates numbers that were not included in CDC's published report describing national MMP data[1].

[A]Latinxs or Latinxs might be of any race. Participants are classified in only one category.

[B]Living on the street, in a shelter, in a single-room–occupancy hotel, or in a car.

TABLE 14-2. REPORTED RISK BEHAVIORS DURING THE 12 MONTHS BEFORE INTERVIEW, MEDICAL MONITORING PROJECT, KING COUNTY, 2016-2017 CYCLES.

| | WEIGHTED PERCENT | WEIGHTED 95% CONFIDENCE INTERVAL |
|---|---|---|
| **SMOKING STATUS** | | |
| Never smoked | 39 | 32 - 47 |
| Former smoker | 31 | 24 - 38 |
| Current smoker | 30 | 23 - 37 |
| **BINGE DRINKING**[B] (during past 30 days) | 20 | 14 - 26 |
| **DRUG USE**[A] | | |
| None | 42 | 35 - 50 |
| Marijuana Only | 19 | 13 - 24 |
| Non-Injection Drugs | 27 | 20 - 33 |
| Injection Drugs (Any) | 12 | 6 - 17 |
| **SEXUAL RISK BEHAVIORS**[A] | | |
| No vaginal or anal sex | 36 | 29 - 43 |
| Vaginal or anal sex with condoms only | 13 | 8 - 18 |
| Condomless vaginal or anal sex with only HIV-positive partners | 17 | 11 - 22 |
| Condomless vaginal or anal sex with at least one HIV-negative or unknown status partner | 28 | 21 - 34 |
| **GENDER OF SEX PARTNER**[A] | | |
| Reported by Cisgender Male Respondents: | | |
| Not sexually active | 34 | 26 - 41 |
| Male partners only | 59 | 51 - 67 |
| Male and female partners | 0 | 0 - 1 |
| Female partners only | 4 | 1 - 8 |
| Male and transgender partners | 3 | 0 - 7 |
| Reported by Cisgender Female Respondents: | | |
| Not sexually active | 46 | 21 - 71 |
| Male partners only | 43 | 19 - 67 |
| Male and female partners | 4 | 0 - 11 |
| Transgender partners | 7 | 0 - 21 |

[A]In prior 12 months.
[B]Participants who drank ≥5 alcoholic beverages at one sitting (≥4 for women) during the 30 days preceding the interview.

# The Max Clinic: HIV Care for People with Complex Medical and Social Needs


SUMMARY

The Max Clinic opened in 2015 and provides intensive support and easily accessible care to people living with HIV who have been poorly engaged in traditional HIV care.

Among 197 people ever enrolled in the clinic, 64% were virally suppressed at their most recent assessment and 93% had been suppressed at least once since diagnosis.

The Max Clinic is expanding to assure that the most difficult to treat patients enjoy the health benefits of HIV medical care.

## Background

The Max Clinic ("Maximum assistance" Clinic) is designed to engage the hardest-to-reach people living with HIV (PWH): those with extensive psychosocial barriers to care who are not taking antiretroviral therapy (ART) and are not well-engaged in care despite intensive outreach. In general, the clinic only enrolls persons who are not virally suppressed and who have failed prior efforts to engage them with care. (Viral suppression refers to having an undetectable or very low [<200 copies/ml] level of virus in the blood, and is achieved when a patient consistently takes antiretroviral therapy). The clinic is a multi-component intervention that includes walk-in access to HIV/primary care visits, intensive case management, and incentives for retention in care and viral suppression. The clinic is located in the Public Health – Seattle & King County (PHSKC) STD Clinic, and is operated in collaboration with the Madison Clinic at Harborview Medical Center with partial funding from the WA State Department of Health.

## Enrollment, Expansion, and Coordination

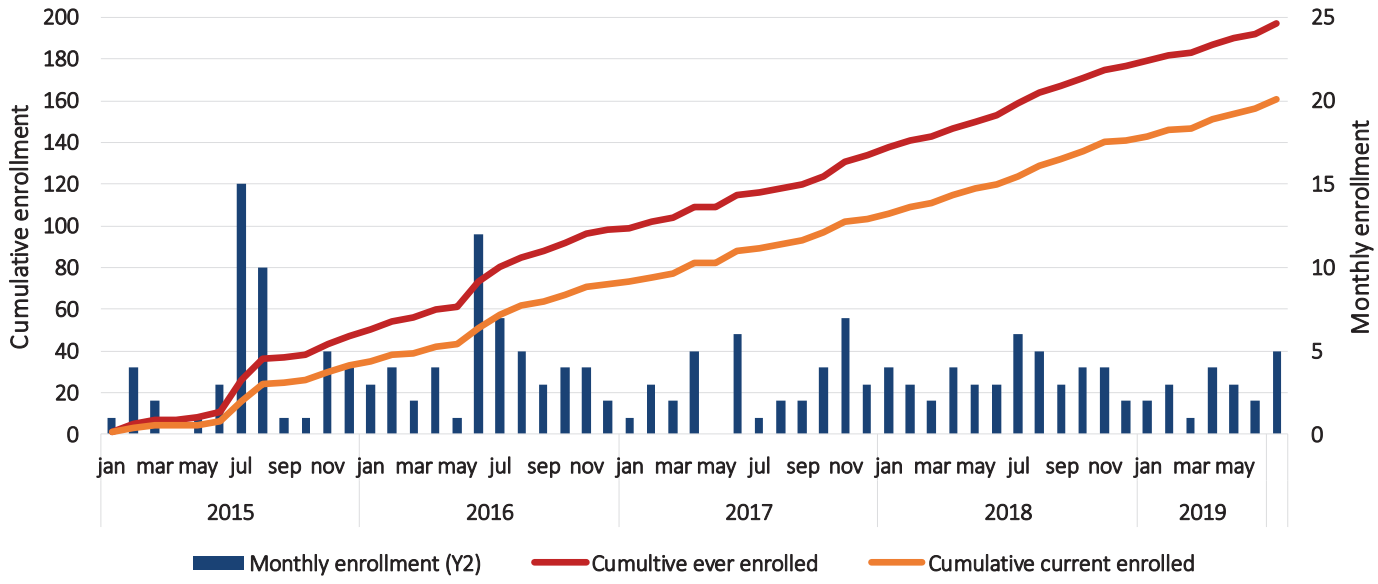
As of June 2019, 161 patients were enrolled and attending the Max Clinic (ever completed at least one visit, see **Figure 15.1**). Staffing includes 4 part-time medical providers, 4 DIS (Disease Intervention Specialists), and 3 social workers. The Max Clinic team collaborates with community organizations

to better assist patients in HIV care. Collaborators include local methadone clinics; the Bailey-Boushay House, an HIV outpatient medication management program; mental health counseling and treatment with the Madison Clinic or Seattle Counseling Services; social and other support services at Lifelong (formerly Lifelong AIDS Alliance); Ryan White Program for housing and other services; and other community partners.

The Max Clinic continues to use the resources and infrastructure of the Madison Clinic at Harborview Medical Center, including but not limited to nursing, medical assistant support, pharmacy and clinical pharmacist support, psychology and psychiatry. The clinic expanded both substance use treatment using Buprenorphine and HCV treatment in 2018.

Of the 161 currently enrolled clients, 114 (71%) are cisgender men, 39 (24%) are cisgender women and eight (5%) are transgender or non-binary individuals. The median age of Max patients as of June 2019 is 41.5 years (range = 21-65). Risk categories at the time of HIV diagnoses include 54 (34%) men who have sex with men, 35 (22%) people who injected drugs, 41 (26%) men who have sex with men who also inject drugs, 17 (11%) with heterosexual risks—including a known HIV infected partner, 5 (3%) infected perinatally, and 9 (6%) with an unknown HIV risk. Max patients tend to have relatively advanced infections; 107 (66%) current patients have had an AIDS-defining absolute CD4 count less than 200 cells/ml.

FIGURE 15.1. MAX CLINIC ENROLLMENT BY MONTH AND CUMULATIVE ENROLLEES AS OF NOVEMBER 15, 2018




# Findings

During the first nearly 5 years of operation (January 2015 -June 2019), 197 total patients have enrolled in the Max Clinic, including 36 who have transitioned their care into another more traditional care setting, died, relocated, or been discharged (**Figure 15-1** & **Table 15.1**). An additional 106 people have been referred to or considered for enrollment in the Max Clinic; as of June 2019, Max staff are currently attempting to locate 59 individuals, 27 have declined enrollment, and 20 are no longer being sought for enrollment due to relocating or re-engaging in care before being invited in to Max.

Of the 161 individuals ever enrolled in Max, 39 (24%) were designated as homeless at the time of their HIV diagnosis and many more have been found to be homeless during their Max enrollment, many of whom were linked to housing.

Rates of HIV viral suppression (HIV RNA <200 copies/mL) among enrolled patients are over >60% every month. Almost all of the current enrollees (96%) have achieved viral suppression at some point (**Table 15.1**). Nearly two thirds (63%) were virally suppressed at their most recent viral load measurement, including 68% of the 143 people who enrolled before 2019.

TABLE 15.1. SNAPSHOT OF MAX CLINIC ENROLLMENT AND PATIENT VIRAL SUPPRESSION AS OF JUNE 2019

| STATUS | N (COL %) | EVER VIRALLY SUPPRESSED (%) | VIRALLY SUPPRESSED AT MOST RECENT LAB (%) |
|---|---|---|---|
| Ever enrolled | 197 (100%) | 183 (93%) | 125 (64%) |
| Currently enrolled | 161 (82%) | 154 (96%) | 102 (63%) |
| Transitioned care [A] | 10 (5%) | 10 (100%) | 10 (100%) |
| Relocated or discharged | 15 (8%) | 9 (60%) | 6 (40%) |
| Died | 11 (6%) | 10 (91%) | 4 (36%) |

[A]The group who transitioned to standard HIV care excludes one person who subsequently re-enrolled.

# Comprehensive Patient Care

The MAX Clinic seeks to provide patients with comprehensive care and social services, including Buprenorphine treatment for opioid use disorder, HCV treatment, primary care, preventive care, and housing support. Of the 161 currently enrolled patients in the MAX clinic, 39 (24%) have or previously had chronic HCV infection, among whom 18 (46%) have been treated or are currently on treatment and 21 are waiting to start treatment. One person who was treated either failed therapy or was re-infected. Patients also receive routine primary care, including sexually transmitted infection screening and treatment, contraception counseling and gender specific healthcare. Medical care for co-morbidities such as oncologic, cardiovascular, renal, and liver disease, as well as other health needs are provided in collaboration with specialists at the Madison clinic and other Harborview Medical Center clinics. A total of 56 patients accessed housing with the help of the Max clinic team.

# Successes

The Max Clinic has successfully engaged PWH who have very complex medical and social needs and who were poorly engaged in HIV care prior to enrollment. Most of these patients are now virally suppressed. Over the first few years of its operation, the Max Clinic evolved to include medical case managers and added non-medical case managers who coordinate with community partners to provide care and social services to PWH.

# Challenges

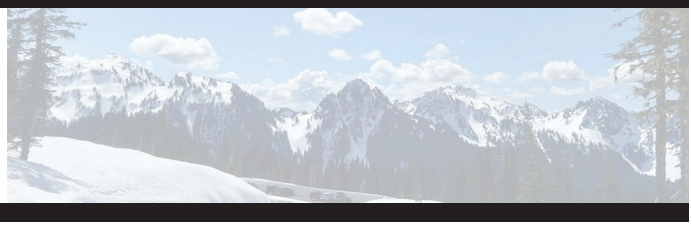
The major challenges facing the Max Clinic include expanding to meet the demand for low-barrier, high intensity services; better integrating mental health and substance use treatment into Max Clinic care; and improving patient access to stable housing. The exact number of persons with HIV who might benefit from Max Clinic care is not well-defined. However, we believe that a substantial proportion of the approximately 750 virally unsuppressed PWH in King County will require Max Clinic type care in order to become virally suppressed. At a minimum, the number of patients receiving care in clinics like Max will likely need to double over the next three years. Public Health and its partners are in the process of expanding the Max Clinic and hope to open new low-barrier clinics in other parts for King County as part of the End the HIV Epidemic initiative. This expansion of Max Clinic services is part of a broader effort to develop a county-wide system of differentiated care that better matches levels of medical and social services to patient needs. Ideally, the clinic would also improve patient access to substance use and mental health treatment. While Max currently offers patients referral for these services and in some instances provides them within the clinic, barriers to accessing mental health and substance use treatment persist. Lastly, inadequate access to stable housing continues to be a problem for many PWH, including many Max Clinic patients. Improving access to stable housing can help PWH access consistent medical care and achieve viral suppression.

***Contributed by Meena Ramchandani, Allison Moore, Amy Bennett, and Julie Dombrowski***

1. Dombrowski JC, et al. *The Max Clinic: Medical Care Designed to Engage the Hardest-to-Reach Persons Living with HIV in Seattle and King County, Washington.* AIDS Patient Care STDS. 2018 Apr;32(4):149-156.

HIV/AIDS Fact Sheet

# American Indian/Alaska Native Populations



### Key Points

Approximately 238 American Indian/Alaska Natives were living with diagnosed HIV infection in King County in 2018, and the prevalence of diagnosed HIV among AI/AN is higher than that of the overall population of King County (460 vs. 321 per 100,000).

Similarly, the HIV diagnosis rates among American Indians/Alaska Natives in 2018 were higher than the overall King County rate (13.7 vs. 10.0 per 100,000 ).

Between 2009 and 2018, the HIV diagnosis rate among American Indian/Alaska Native persons declined 22%.

In 2018, 88% of American Indian/Alaska Native living with HIV were virally suppressed.

## Overview

In 2018, there were about 51,475 American Indian/Alaska Native (AIAN) persons living in King County, of whom only 13,607 (26%) reported AIAN as a single race category and did not identify as Latinx. The majority of individuals who reported AIAN race were classified as multiracial (N=28,957, 56%) or Latinx ethnicity (N=8,911, 17%). Due to the large difference in the number of AIAN individuals depending on how those with multiple races are classified, HIV surveillance data regarding AIAN may underestimate HIV cases when AIAN status is limited to a single race category. Our annual HIV epidemiology reports are no exception to this, and we have generally not reported surveillance data on AIAN who identify as Latinx or multiracial. In this report, we will examine what we do know about AIAN diagnosed with HIV and compare the "single race method" and "a more comprehensive method" to more correctly describe AIAN with HIV.

## Methods

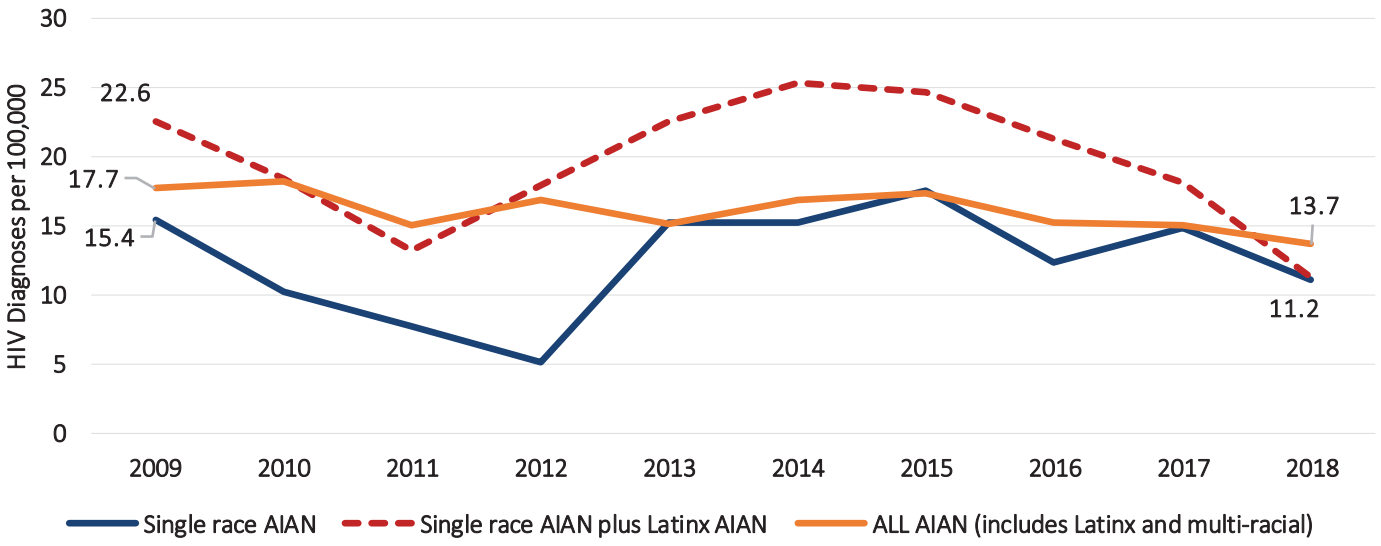
### Single race method

One single race/ethnicity category is frequently used in reporting HIV data. In this single race category, anyone with Latinx heritage is classified as Latinx regardless of their race, including AIAN, and all persons reporting more than one race are classified as having multiple races. Non-Latinx AIAN are categorized as AIAN only if they have no other known racial group in addition to AIAN. Thus someone who is AIAN and White or AIAN and Black would be in

Table 16-1: Key HIV Metrics for American Indians/Alaska Natives, 2018, King County, WA

| Key Metrics | Single race AIAN (non-Latinx) | Latinx AIAN | Multiracial AIAN (non-Latinx) | Total AIAN |
|---|---|---|---|---|
| King County population 2018 | 13,607 | 8,911 | 28,957 | 51,475 |
| HIV Prevalence in 2018 | | | | |
| Number living with HIV | 44 | 65 | 129 | 238 |
| Prevalence per 100,000 (95% CI) | 323 (238-430) | 729 (568-924) | 445 (373-530) | 462 (400-528) |
| Percent of all prevalent cases AIAN | 0.6 | 0.9 | 1.8 | 3.4 |
| HIV Incidence (new diagnoses) | | | | |
| 10-year number of new diagnoses | 16 | 25 | 33 | 74 |
| Diagnoses per 100,000 | 12.1 | 32.1 | 12.0 | 15.3 |
| 10 year trend (crude) | 4% decline | 81% decline | 12% decline | 41% decline |
| Viral suppression in 2018 | 92.5% | 84.8% | 88.9% | 88.4% |

FIGURE 16-1 RATES[A] OF HIV DIAGNOSES PER 100,000 AMERICAN INDIANS/ALASKA NATIVES (AIAN) IN KING COUNTY 2009-2018




[A] Rates are presented per 100,000 population and as three year rolling averages to minimize random changes.

the multiracial category. Using this standard method each person is in only one racial/ethnic category and this method has been preferred because then there is not any duplication across groups.

### A MORE INCLUSIVE METHOD

Due to use of the standard single race method described above, data on AIAN may be misleading. If we analyze AIAN race to include persons with more than one race and Latinx AIAN persons, the number of AIAN with HIV is roughly 4 to 5 times greater than that seen in the standard method (See Table 16-1).

# Results

Table 16-1 illustrates key metrics regarding AIAN residing in King County in 2018. Both the underlying population numbers and the numbers of people living with HIV (PWH) demonstrate the impact of excluding multiracial and Latinx AIAN from overall counts of AIAN. Single race AIAN have a lower prevalence of HIV diagnosis than multiracial AIAN and the prevalence of HIV is twice as high among Latinx AIAN relative to single race AIAN. For comparison, the overall prevalence of HIV in KC is 3.1 per 1,000 population relative to 3.4 among AIAN; the overall diagnosis incidence is 10 per 100,000 relative to 15 in AIAN.

Figure 16-1 shows rates of HIV diagnoses per 100,000 AIAN and these rates are presented as three year rolling averages due to small numbers (in comparison, the percent declines in Table 16-1 are not averages, and thus described as crude). Including all AIAN persons, the incidence of HIV diagnoses has declined 22% over the last decade, but remains higher than that observed among King County residents overall (14 vs. 10 per 100,000) in 2018. The remainder of this section uses the more inclusive AIAN definition, referencing all 238 AIAN.

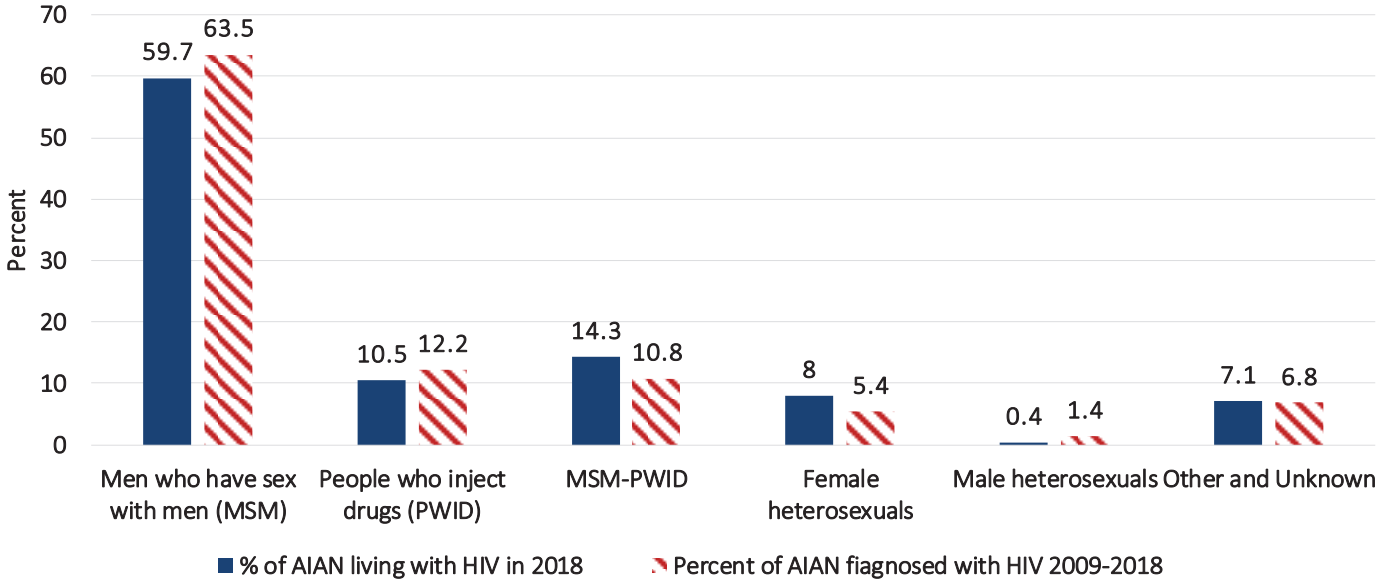
### AGE AND GENDER

Of the 238 AIAN living with HIV in King County in 2018, 84% were assigned male sex at birth and 4 of these are transgender women. Of the 39 female AIAN living with HIV in 2018 in the county, none were known to be transgender men. Of the 74 AIAN diagnosed with HIV in the past 10 years, 82% were assigned male at birth, including one transgender woman. None of the 13 female AIAN diagnosed with HIV in the past 10 years were known to be transgender men.

### HIV RISK CATEGORY

In Figure 16-2 both AIAN living with HIV in 2018 (prevalent cases) and AIAN diagnosed with HIV from 2009 through 2018 (incident diagnoses) are shown by HIV risk categories. As for all PWH, most AIAN with HIV are men who have sex with men (MSM). Heterosexuals are broken down by gender assigned at birth, partly because the criteria for heterosexuals is less restrictive for women. Women who have had sex with men and deny any history of injection drug use may be assigned presumed heterosexual risk, but that category does not

FIGURE 16-2 PERCENT OF AMERICAN INDIAN/ALASKA NATIVE (AIAN) PERSONS IN KING COUNTY BY HIV RISK CATEGORIES 2009-2018 (TOTAL AIAN LIVING WITH HIV IN 2018 = 238; TOTAL AIAN DIAGNOSED WITH HIV 2009-2018 = 74)




exist for men.

Additional information about AIAN MSM were available from two cycles of a Washington State Internet-based survey conducted 2017 to 2019 with 62 AIAN respondents not known to be HIV positive.[1] Of the 62, 82% were aware of pre-exposure prophylaxis (PrEP), and 14 were currently using PrEP (23%), including 47% of the 17 MSM AIAN for whom PrEP would be recommended based on current Washington State PrEP recommendations.[2]

### VIRAL SUPPRESSION

The percent of AIAN with viral suppression in 2018 (88% Table 16-1) is similar to that for King County in general (83 -84%). There were no large differences in the percent of AIAN virally suppressed by HIV risk or sex. (People who injected drugs, or PWID, generally have lower rates of viral suppression, but 85% were virally suppressed). Although based on small numbers, compared to all AIAN, viral suppression was lower among AIAN in their 20's (9 of 16, or 56%), and among AIAN who had used meth around the time of diagnosis (15 of 20, 75%).

### TIMING OF HIV DIAGNOSES AND CARE LINKAGE

Of the 74 AIAN diagnosed with HIV in the past 10 years (2009-2018), 15 (20%) had an AIDS diagnosis within one year of HIV diagnosis, which is often used to classify persons as having a late diagnosis of HIV. However, 5 of these 15 persons had a negative HIV test within one year of their initial positive diagnosis. Most (81%) of the 74 AIAN diagnosed with HIV linked to care within 30 days of their HIV diagnosis and 85% linked to care within 90 days.

### HIV PREVENTION AND CARE INTERVENTIONS

Under existing prevention initiatives, including the new Ending the AIDS Epidemic, all persons with any HIV risk -- including AIAN -- should be screened for HIV; and individuals with higher HIV risks should be offered PrEP. Despite good levels of viral suppression relative to other PWH, AIAN who are not virally suppressed, especially Latinx AIAN, may need additional and culturally appropriate support to achieve viral suppression.

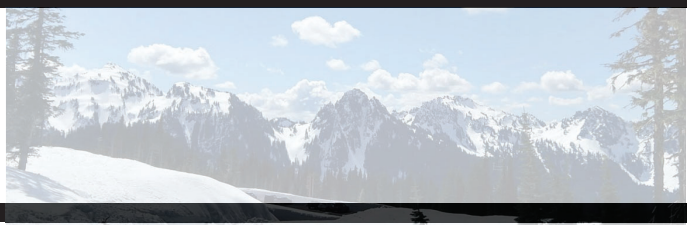
*Contributed by Susan Buskin, Bill Hall, and Julie Dombrowski*

### REFERENCES

1. Rao DW et al. Monitoring HIV Preexposure Prophylaxis Use Among Men Who Have Sex With Men in Washington State: Findings From an Internet-Based Survey. Sex Transm Dis. 2019 Apr;46(4):221-228.
2. In Washington State, PrEP (pre exposure prophylaxis) is recommended for MSM (men who have sex with men) who, in the past year, had a bacterial STI, used meth or poppers, exchanged sex for money or other things, or were in a sexual relationship with person with HIV who was not stably virally suppressed.

HIV/AIDS Fact Sheet

# Black and African-American Populations



### Key Points

HIV diagnosis rates are high among Black and African American persons in King County relative to overall King County rates (35 versus 10 per 100,000).

The HIV diagnosis rate for foreign-born Black persons is about double that of U.S.-born Black persons (51 versus 22 per 100,000).

In 2018, 84% of foreign-born and 77% of U.S.-born Black persons living with HIV were virally suppressed.

## Overview

In 2018, there were 49 new diagnoses of HIV among Black and African American persons living in King County, or 35.1 cases per 100,000 (**Table 17-1**). The diagnosis incidence rate was more than twice as high for foreign-born compared to U.S.-born Black persons in 2018 (50.9 vs. 21.5 per 100,000). (The diagnosis incidence for foreign-born Black persons is given as three year rolling averages —unless otherwise specified—due to large annual fluctuations.) This compares to an overall diagnosis incidence of 10.0 per 100,000 residents of all races/ethnicities in King County in 2018. **Figure 17-1** shows changes in diagnosis rate by nativity for Black persons, including decreases of 18% for foreign-born and 24% for U.S.-born Black persons over the decade from 2009 - 2018. This compares to an overall reduction of 29% of the rate of new diagnoses among all King County residents in the same period.

### Population Size

In 2018, U.S. Census and American Community Survey data estimate that there were 141,079 non-Latinx Black persons living in King County, of which

Table 17-1: Key HIV Metrics for Black Persons, King County, WA

| Key Metrics | U.S.-born [A] | Foreign-born | Total |
|---|---|---|---|
| Estimated Number of Black Persons in King County (2018) | 102,988 | 38,091 | 141,079 |
| **HIV Prevalence in 2018** | | | |
| Number of Black persons living with HIV | 795 | 619 | 1414 |
| Prevalence (%) | 0.8% | 1.6% | 1.0% |
| Percent of all prevalent HIV cases who are Black among U.S. born, foreign-born, or overall HIV cases | 15% | 40% | 20% |
| **HIV Incidence (New Diagnoses) [B]** | | | |
| 2018 number new diagnoses | 22 | 27 | 49 |
| 2018 incidence rate per 100,000 | 21.5 | 50.9[D] | 35.1 |
| 10-year trend (2009-2018) | 24% decrease | 18% decrease | No change[E] |
| Viral Suppression among HIV+ Black Persons [C] | 77% | 84% | 80% |

[A] U.S.-Born includes those of unknown nativity (2% of both incident diagnoses and prevalent cases).

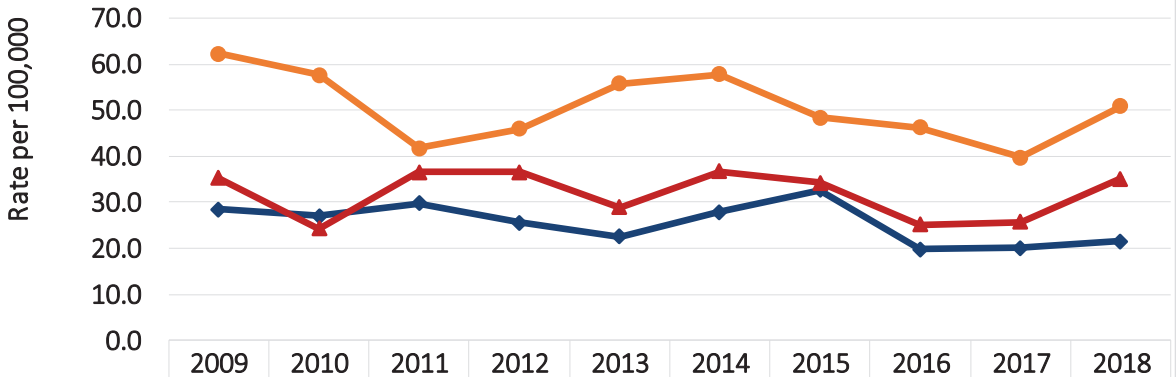
[B] New HIV diagnoses among individuals reporting a prior diagnosis in another country or state are excluded.

[C] Among all Black persons with diagnosed HIV infection. Viral suppression defined as plasma HIV RNA < 200 copies/mL. Among those with ≥1 viral load reported in 2018, 87%, 95%, and 91% of U.S.-born, foreign-born, and all Black persons, respectively, were suppressed.

[D] 50.9 diagnoses per 100,000 is the rolling average given in Figure 1 for 2018. The crude number is 72.1 diagnoses per 100,000.

[E] The overall lack of a decrease appears paradoxical, with both U.S.-born and foreign-born rates decreasing. However in the crude trend for foreign-born Blacks there was a 30% increase between 2009 and 2018 which resulted in no overall trend.

FIGURE 17-1: RATES OF HIV DIAGNOSES AMONG BLACK PERSONS IN KING COUNTY BY NATIVITY, 2009 - 2018




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| Foreign-born (3 yr averages) | 62.3 | 57.7 | 41.8 | 46.0 | 55.9 | 57.7 | 48.5 | 46.3 | 39.7 | 50.9 |
| U.S.-born | 28.5 | 27.0 | 29.8 | 25.6 | 22.6 | 27.9 | 32.7 | 19.8 | 20.1 | 21.5 |
| Total | 35.3 | 24.2 | 36.5 | 36.5 | 28.9 | 36.7 | 34.2 | 25.1 | 25.7 | 35.1 |

NOTE: The foreign-born rate is given as a rolling average due to large fluctuations year-to-year. Note that the overall rate (Total) was not given as a rolling average, and a substantially lower "unadjusted" diagnosis rate for foreign-born Black persons in 2010 (14 per 100,000, not shown) pulled down the total rate (24 per 100,000) lower than either of the shown components (U.S.-born at 27 per 100,000 and the smoothed rolling average for foreign-born of 58 per 100,000).

about 102,988 (73%) were U.S.-born (**Table 17-1**). For this fact sheet, we excluded Black persons reporting multiple races and those of Latinx ancestry.

### HIV Risk Category

**Figure 17-2** shows the distribution of risk categories among U.S.-born and foreign-born Black persons living in King County in 2018. Individuals with an unknown risk factor comprised 41% of foreign-born Black and 10% of U.S.-born Black persons and are excluded from the figure. The high proportion of foreign-born Black persons with an unknown HIV risk is mostly due to limitations in the definition of the heterosexual risk category. To meet the definition of heterosexual risk, the positive serostatus or risk factors (such as injection drug use) of an opposite sex partner must be known. There is a presumptive heterosexual category included with heterosexuals, but limited to women who have: (1) been asked and deny injection drug use, and (2) have had sex with men. Often these questions have not been asked, and thus the presumptive heterosexual category cannot be used; further there is no equivalent presumptive category for men, even if they come from a geographic area where heterosexual transmission is common. Of note, heterosexual risk is the predominant risk factor for foreign-born Black persons (79%) and men who have sex with men (MSM) is the predominant risk group for U.S.-born Black persons (72%, including 10% whom are MSM who also have a history of injection drug use).

### Age and Gender

Overall 31% of Black persons with HIV infection were assigned female sex at birth, including 15% of U.S.-born Blacks and 55% of foreign-born Black persons. Among persons diagnosed 2014-18, U.S.-born Black persons were younger than foreign-born Black persons at the time of HIV diagnosis, with 25% and 7%, respectively, age 29 years or younger when they first tested HIV positive.

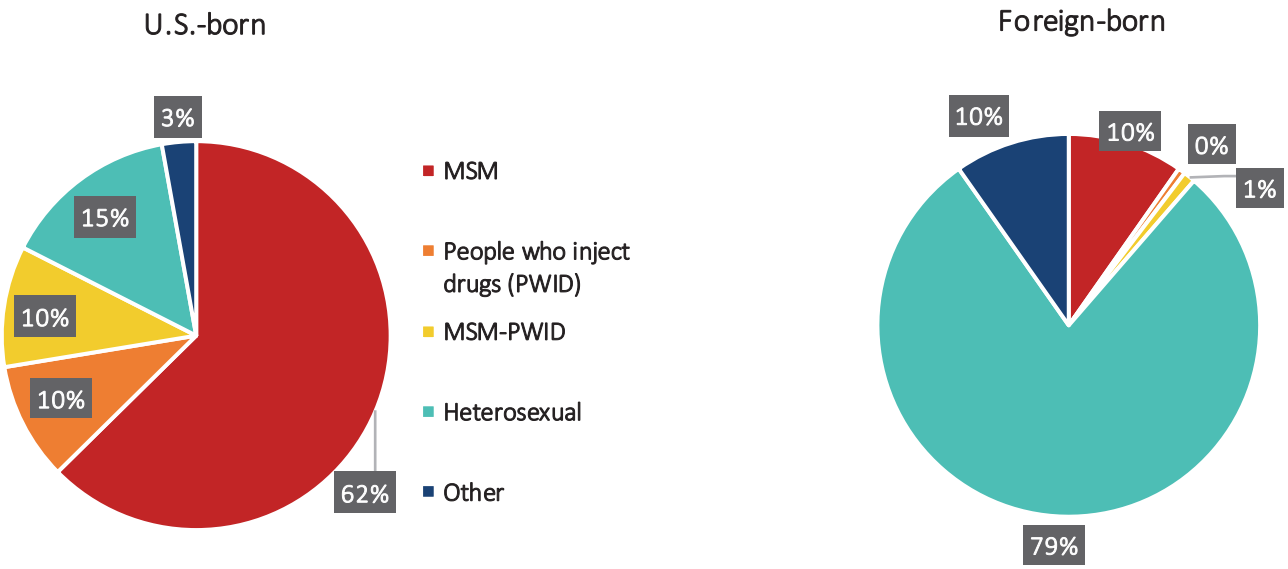
### Birth Country

Of 1,414 Black persons living with HIV (PWH) in King County in 2018, 619 (44%) were foreign-born. Of the foreign-born Black persons, birth countries include Ethiopia (38%), Kenya (20%), Eritrea (5%), Zambia (4%), Somalia (3%) and 29 other African countries. Five percent were born in other areas of the world, including 16 PWH (3% of foreign-born Blacks) from the Caribbean.

### Viral Suppression

Among Black PWH, the proportion with documented viral suppression increased substantially over the past decade, from 58% in 2009 to 80% in 2018. **(Figure 17-3**). U.S.-born Black persons consistently had lower levels of viral suppression relative to their foreign-born counterparts, but the gap has narrowed somewhat (from a 17% absolute difference to a 7% absolute difference).

FIGURE 17-2. HIV RISK CATEGORIES AMONG BLACK PERSONS LIVING WITH HIV IN KING COUNTY BY NATIVITY, 2018




### TIMING OF HIV DIAGNOSES

Among 205 Black King County residents diagnosed with HIV in the past five years (2014 - 2018), 54 (26%) had a last negative HIV test documented within the prior year. This interval, from a last negative to a first positive test, is a measure of how well HIV testing is reaching the population at risk for HIV infection. Among Black persons diagnosed with HIV 2014-2018, 10% of those who were foreign-born Black persons and 38% of those who were U.S. born Black persons had tested in the prior year. Among U.S. born Black persons, 48% of 81 MSM and 17% of 36 non-MSM had tested HIV negative in the year prior to their HIV diagnoses.

Late HIV diagnosis is sometimes defined as an AIDS diagnosis within one year of an HIV diagnosis. By this definition, 37% of Black persons diagnosed with HIV between 2014 and 2018 were diagnosed late, including 57% of foreign-born and 22% of U.S.-born Black persons. Among U.S. born Blacks, 19% of 81 MSM and 31% of 36 non-MSM had an AIDS diagnosis within one year of their HIV diagnoses.

### HIV PREVENTION AND CARE INTERVENTIONS

*Pre Exposure Prophylaxis (PrEP) Use:* In light of the racial/ethnic disparities in HIV diagnosis incidence and prevalence highlighted above, the Public Health—Seattle & King County (PHSKC) STD clinic offers prescriptions of pre-exposure prophylaxis (PrEP) to all interested Black MSM with the goal of improving health equity.[1] PrEP has been shown to be highly effective at preventing HIV, cutting the chances of infection among MSM by >95% when taken as directed.[2]

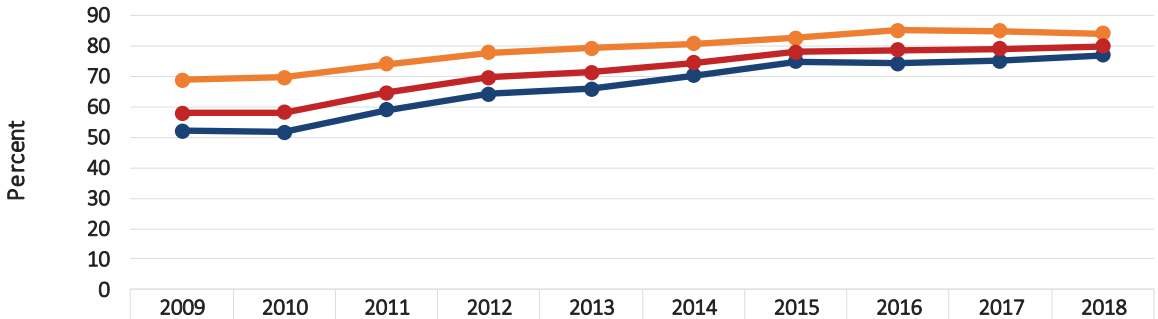
### BLACK MSM & PREP INTERNET SURVEY

In 2018, 93 Black MSM, mainly from King, Pierce, and Snohomish Counties in WA State participated in an Internet survey collecting formative data about their knowledge, use, barriers, and facilitators for PrEP. Of the 93, 84% had heard of PrEP, and 30% were currently using PrEP. Of 65 who were not on PrEP, about half stated they felt they were at low risk of HIV as a reason they were not using PrEP, the next most common reasons were not knowing enough about PrEP and concern about side effects.

### OTHER INTERVENTIONS

The PHSKC STD Clinic and other PHSKC clinics (Auburn, Eastgate, Federal Way, and Kent) provide HIV testing to substantial numbers of Black patients. People of Color Against AIDS Network (POCAAN) and Center for MultiCultural Health (CMCH) provide services specifically aimed at preventing and otherwise mitigating the impact of HIV on communities of color in Seattle and greater King County. POCAAN operates a number of programs for those living with HIV as well as those at risk for infection, including medical case management, support in transitioning into stable housing, and reentry assistance upon release from prison or jail.[3] CMCH provides free, same-day HIV testing and counseling and

FIGURE 17-3: VIRAL SUPPRESSION AMONG BLACK PERSONS LIVING WITH HIV IN KING COUNTY BY NATIVITY, 2009-2018




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| Foreign-born | 69 | 70 | 74 | 78 | 79 | 81 | 83 | 85 | 85 | 84 |
| U.S.-born | 52 | 52 | 59 | 64 | 66 | 70 | 75 | 74 | 75 | 77 |
| Total | 58 | 58 | 65 | 70 | 71 | 75 | 78 | 79 | 79 | 80 |

puts on events to build community among queer Black men, including quarterly educational forums and its annual Emerald City Black Pride event.[4]

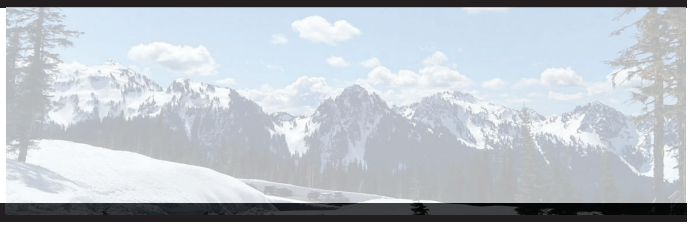
*Contributed by Roxanne Kerani, Richard Lechtenberg, and Susan Buskin*

## References

1. Public Health STD Clinic at Harborview. Available at http://www.kingcounty.gov/depts/health/communicable-diseases/hiv-std/patients/clinic.aspx Accessed 8/20/2017.
2. Grant RM et al. Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. New Engl Jour Med 363(27): 2587-2599, 2010.
3. POCAAN. Available at http://pocaan.org/POCAAN/ Accessed 8/30/2017.
4. Center for MultiCultural Health. HIV/STD Prevention and Education for African-American Men. Available at http://multi-culturalhealth.org/programs_svcs/aatpbrotherslink.htm Accessed 8/30/2017

HIV/AIDS Fact Sheet

# Gender Identity and HIV



### Key Points

**Gender identity is complex and includes cisgender, transgender, and several other categories of nonbinary identity.**

**Trans Pride Survey results suggest that transgender persons in King County are testing for HIV frequently, with 69% of higher risk persons having tested for HIV two or more times in the past two years.**

**PrEP use was relatively low (20%) among transgender and non-binary/ genderqueer persons at higher risk of HIV.**

## Overview

In 2018, there were 64 people living with HIV (PWH) in King County (KC) who were known to be transgender, representing 1% of the 7,023 KC PWH population. It's possible there are many more transgender PWH individuals whose transgender status was not correctly ascertained in the first decades of the HIV epidemic. The percent of KC PWH with a suppressed viral load was similar among transgender PWH compared to the entire KC PWH population (81% vs. 83%, respectively).

Public Heath — Seattle & KC (PHSKC) monitors health issues in the KC transgender community through an annual Pride Survey conducted at Seattle Trans* Pride and Seattle Pride Parade and intake forms completed by transgender and gender non-conforming STD Clinic patients. The Pride Survey can be interviewer- or self-administered. Respondents are given a $5 Starbucks card for completing the survey. Pride Survey respondents at either the Trans* Pride event in Capitol Hill or at the Parade in downtown Seattle who indicated that they were transgender, non-binary, or genderqueer residents of Washington were included in this analysis.

## Findings

### Demographic and Health Characteristics

**Table 18-1** stratifies the non-cisgender Pride Survey sample by assigned male at birth (AMAB) and assigned female at birth (AFAB) and then stratifies these categories by transgender and non-binary/genderqueer (NB/GQ) identity. The majority of respondents were non-Latinx White and under thirty years old. Compared to NB/GQ respondents, respondents who identified as transgender were more likely to report that their regular medical provider was aware of their gender. They were also more likely to indicate that they would prefer to receive medical care from a clinic that specializes in transgender health issues, though the preference to receive care from a medical provider specializing in the care of gender and sexual minorities was very common among NB/GQ, with the majority of respondents indicating such a preference. NB/GQ AMAB respondents were more likely to report drug use, a sexually transmitted infection (STI) diagnosis, an HIV diagnosis, and higher-risk sex than transgender women or AFAB respondents.

### Utilization of HIV and STD Services

**Table 18-2** is limited to non-cisgender Pride Survey participants who reported a negative or unknown HIV status and describes their utilization of HIV and STD services. This table is stratified by HIV risk level, which is based upon the Washington Department of Health and PHSKC PrEP Guidelines.[1] Participants were considered high risk if (in the past 12 months) they reported a sex partner who was assigned male at birth *and* reported one or more of the following: ≥10 sex partners; methamphetamine or popper use; condomless sex with a partner who had HIV or did not know their status; or a bacterial STI diagnosis (chlamydia, gonorrhea, or syphilis). Among respondents who did not report a positive HIV status, 5% of trans women, 29% of NB/GQ AMAB, 10% of trans men, and 10% of NB/GQ AFAB met the high risk definition (**Table 18-1**). In the subset of respondents at high risk (n=30), 86% reported STI testing in the past year and 69% reported at least two HIV tests in the prior two years. The majority of respondents (80% of low risk and 93% of high risk) had reported that they

had heard of PrEP (Table 18-2). Among respondents at high risk, 21% reported currently taking PrEP and 17% reported that they had previously taken PrEP. Among high-risk respondents not currently taking PrEP, the most common reasons for not taking PrEP were cost concerns and perception of being at "low risk".

### STD Clinic Utilization

Table 18-3 contains data from STD Clinic intake forms about visits completed by transgender and NB/GQ patients for July 2018 through June 2019. The data presented are for visits and may include multiple visits made by the same patient. During this period, transgender and NB/GQ patients comprised 2% of all STD Clinic visits. The percentages in the table are based on patient self-report, except the STI diagnosis data, which was based on testing completed at the visit. A majority of patients reported ever testing for HIV with NB/GQ AMAB reporting the highest percentage (97%).

# Conclusion

Considerable differences in demographic and HIV risk factors exist across gender categories. The large number of participants who identified as non-binary or genderqueer underscores the importance of ensuring that medical and social service providers use language that is inclusive of people of all genders when conducting service delivery or outreach programs. Whereas roughly the same percentage of cisgender MSM (see MSM fact sheet) and NB/GQ AMAB Pride Survey respondents met high-risk criteria, a smaller percentage of trans women Pride Survey respondents met high-risk criteria (e.g. 29% of cis-MSM and NB/GQ AMAB versus 5% of trans women). Among Pride Survey participants, current PrEP use was slightly lower among high-risk AMAB participants (42% among transgender/NB/GQ participants AMAB vs. 49% of cisgender MSM). Compared to STD Clinic patients, a smaller percentage of Pride Survey participants reported an HIV diagnosis (trans women: 6% vs. 0%; NB/GQ AMAB: 11% vs. 3%). Aside from HIV, there are a number of health and social issues affecting the transgender and NB/GQ communities, including substance use, homelessness, violence, and stigma. Addressing these issues would improve gender equity in King County.

*Contributed by Julia Hood and Anna Berzkalns*

### Reference

1. www.kingcounty.gov/hiv/prep-guide

TABLE 18-1: DESCRIPTION OF TRANSGENDER, NON-BINARY, GENDERQUEER 2019 PRIDE SURVEY RESPONDENTS, STRATIFIED BY SEX & GENDER

| | ASSIGNED MALE AT BIRTH | | ASSIGNED FEMALE AT BIRTH | |
|---|---|---|---|---|
| | TRANS WOMEN | NON-BINARY/ GENDERQUEER | TRANS MEN | NON-BINARY/ GENDERQUEER |
| TOTAL N (ROW %) | 62 (24%) | 32 (12%) | 80 (30%) | 88 (33%) |
| **DEMOGRAPHICS** | | | | |
| UNDER 30 YEARS OLD | 51% | 63% | 75% | 65% |
| WHITE, NON-LATINX | 79% | 80% | 66% | 77% |
| HOMELESS, LAST 12 MONTHS | 19% | 13% | 8% | 8% |
| **PERCEPTION OF HEALTH SERVICES & EXPERIENCES WITH DISCRIMINATION & VIOLENCE** | | | | |
| REGULAR MEDICAL PROVIDER KNOWS RESPONDENT IS TRANSGENDER, NB, OR GQ[B] | 96% | 67% | 90% | 61% |
| "AGREE OR STRONGLY AGREE" WITH FOLLOWING: | | | | |
| "I have felt disrespected at health facilities due to my gender identity"[C] | 49% | 50% | 63% | 54% |
| "I would prefer to receive care at a clinic that specializes in transgender health issues"[C] | 86% | 80% | 91% | 82% |
| **HIV PREVALENCE & RISK FACTORS** | | | | |
| HIV DIAGNOSED (EVER) | 0% | 3% | 0% | 1% |
| SEXUALLY TRANSMITTED INFECTION DIAGNOSED (PAST YEAR) | 3% | 16% | 3% | 1% |
| DRUG USE (PAST YEAR) | | | | |
| Injection drug use | 0% | 0% | 0% | 1% |
| Methamphetamine | 5% | 9% | 3% | 0% |
| Poppers | 7% | 23% | 6% | 5% |
| Cocaine or crack | 14% | 18% | 9% | 8% |
| Heroin | 2% | 3% | 0% | 0% |
| Prescription Painkillers (recreationally) | 5% | 0% | 8% | 2% |
| SEXUALLY ACTIVE (VAGINAL OR ANAL SEX IN PAST YEAR) | 73% | 78% | 70% | 84% |
| HAD VAGINAL OR ANAL SEX WITH... (PAST YEAR) | | | | |
| Cisgender male | 33% | 47% | 28% | 41% |
| Trans woman | 33% | 19% | 9% | 16% |
| TRANSACTIONAL SEX (PAST YEAR) | 14% | 10% | 6% | 5% |
| MET HIV "HIGH-RISK" CRITERIA [A] | 5% | 29% | 10% | 10% |

[A] Restricted to respondents who did not report a positive HIV status. "High risk" was defined as having sex with someone assigned male at birth AND ≥1 of the following: ≥10 sex partners; methamphetamine or popper use; condomless anal sex with a partner who had HIV or did not know their status; or a bacterial sexually transmitted infection diagnosis (chlamydia, gonorrhea, or syphilis).

[B] Restricted to respondents who reported having a regular medical provider.

[C] Restricted to respondents who completed the survey at the Trans* Pride Event.

Table 18-2: Utilization of HIV and STD Services among Transgender, Non-Binary, Genderqueer 2019 Pride Survey Respondents who Reported a Negative or Unknown HIV Status, Stratified by HIV Risk Level

| | Lower Risk (n=233) | High Risk[A] (n=30) |
|---|---|---|
| Sexually Transmitted Infection Testing (past year) | 49% | 86% |
| Tested for HIV (ever) | 68% | 86% |
| ≥2 HIV Tests in Prior 2 Years | 30% | 69% |
| Heard of PrEP | 80% | 93% |
| Taken PrEP | | |
| Currently | 2% | 21% |
| In the past, but not currently | 2% | 17% |
| Barriers to PrEP (reported by non-users) | | |
| Perceived self as low risk | 61% | 26% |
| Cost concerns | 4% | 30% |
| Don't know where to get it | 8% | 9% |
| Don't know enough about it | 18% | 17% |
| Concerns about side-effects | 7% | 17% |
| Taking a daily medication would be challenging | 7% | 9% |
| Would require too many doctors' appointments | 4% | 9% |
| Concern that PrEP may interact with hormones | 5% | 19% |

[A] "High risk" was defined as having sex with someone assigned male at birth AND ≥1 of the following: ≥10 sex partners; methamphetamine or popper use; condomless anal sex with a partner who had HIV or did not know their status; or a bacterial sexually transmitted infection diagnosis (chlamydia, gonorrhea, or syphilis).

Table 18-3: Harborview STD Clinic Visits by Transgender, Non-Binary, and Genderqueer Patients, July 2018-June 2019[A,B]

| | Assigned Male at Birth | | Assigned Female at Birth | |
|---|---|---|---|---|
| | Trans Women (n=50) | Non-Binary/ Genderqueer (n=115) | Trans Men (n=14) | Non-Binary/ Genderqueer (n=41) |
| HIV diagnosed (ever) | 6% | 11% | 7% | 0% |
| Tested for HIV (ever) | 90% | 97% | 86% | 90% |
| Unstable Housing (past year) | 4% | 13% | 14% | 2% |
| Transactional Sex (past year) | 4% | 3% | 14% | 15% |
| Injection Drug Use (past year) | 8% | 12% | 7% | 2% |
| Any Drug Use[C] (past year) | 28% | 69% | 43% | 27% |
| Taken PrEP (ever) | 50% | 50% | 21% | 20% |
| Taken PrEP[D] (Currently) | 34% | 24% | 7% | 7% |
| STI Diagnosis[E] (at visit) | 8% | 24% | 2% | 2% |

[A] Data presented are for visits and may contain multiple visits by the same individual.

[B] Data are based on self-report except sexually transmitted infection diagnosis data which was assessed using testing at time of visit.

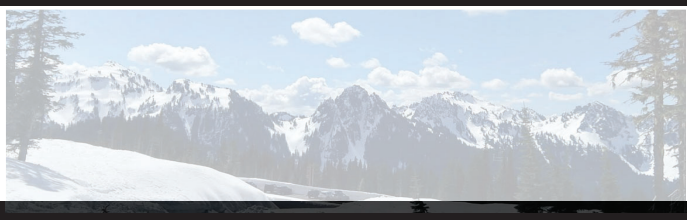
[C] Includes methamphetamine, poppers, cocaine, crack.

[D] Current PrEP use was added to the intake form in 2019.

[E] STI, sexually transmitted infection; Includes diagnoses of chlamydia, gonorrhea, or syphilis.

HIV/AIDS Fact Sheet

# Latinx Populations



### Key Points

HIV diagnosis rates are higher among Latinx persons (Latinxs) relative to overall King County rates.

HIV diagnosis rates declined in 2009-2018 among both U.S.-born and foreign-born Latinxs, by about 10% and 50% respectively.

In 2018, over 80% of Latinxs living with HIV—both U.S.-born and foreign-born—were virally suppressed.

## Overview

In 2018, there were nearly 225,000 Latinxs living in King County, of whom nearly 140,000 (62%) were U.S.-born (**Table 19-1**). At the end of that year, there were 983 Latinxs living with diagnosed HIV infection (PWH) for a prevalence of 0.4%. The prevalence of HIV was more than 1.5 times higher in foreign-born Latinx compared to Latinxs born in the U.S. (0.58% vs. 0.35%). Among the 491 foreign-born PWH residing in King County, nearly two thirds were born in Mexico, 17% were born in Central America, another 16% in South America, and the remaining 5% were born elsewhere (**Figure 19-1**).

In 2018, there were 39 new diagnoses of HIV among Latinxs in King County (17.5 per 100,000). The diagnosis incidence among foreign-born and U.S. born Latinxs did not differ statistically (17.9 vs. 17.3 per 100,000), but was higher than the overall diagnosis incidence among King County residents of all races/ethnicities in 2018 (10.0 per 100,000). The rate of new HIV diagnoses among Latinxs declined 29% between 2009 and 2018, with a larger decline observed among foreign-born compared to U.S. born Latinxs (**Figure 19-2**). For comparison, the diagnosis rate in King County overall decreased by 40% over this same time period.

### Age and Gender

Overall 9% of Latinxs living with HIV in King County were assigned female sex

Table 19-1: Key HIV Metrics for Latinxs, King County, WA

| Key Metrics | U.S.-born Latinxs [A] | Foreign-born Latinxs | Total Latinxs |
|---|---|---|---|
| Estimated Number of Latinxs in King County (2018) [B] | 139,549 | 84,200 | 223,749 |
| HIV Prevalence in 2018 | | | |
| Number of Latinxs Living with HIV | 492 | 491 | 983 |
| Prevalence (%) | 0.4% | 0.6% | 0.4% |
| Percent of all Prevalent Cases who are Latinx | 9% | 32% | 14% |
| HIV Incidence (New Diagnoses) [C] | | | |
| 2018 Number of New Diagnoses | 24 | 15 | 39 |
| 2018 Incidence Rate per 100,000 [D] | 17.3 | 17.9 | 17.5 |
| 10-year Trend (2009-2018) | 8% decrease | 48% decrease | 32% decrease |
| Viral suppression among HIV+ Latinxs [E] | 80% | 83% | 82% |

[A] U.S.-born includes those of unknown nativity (4% of Latinx PWH at year-end 2018 and 5% of those newly diagnosed in 2018).

[B] Population estimates derived from the U.S. Census Bureau's American Community Survey data.

[C] New HIV diagnoses among individuals reporting a prior diagnosis in another country or an unverified diagnosis from another state are excluded.

[D] The numbers shown for 2018 in **Figure 19-2** differ from the ones here because they are 3-year rolling averages.

[E] Among all Latinx people with diagnosed HIV infection. Viral suppression defined as plasma HIV RNA < 200 copies/mL. Among those with ≥1 viral load reported in 2018, 93% of U.S.-born, 94% of foreign-born, and 93% of all Latinx people were suppressed.

at birth, including 5% of U.S.-born Latinxs and 13% of foreign-born Latinxs. U.S.-born Latinxs were younger than foreign-born Latinxs at the time of diagnosis with 49% age 29 years and below for the former and 34% for the latter.

### HIV Risk Category

Figure 19-3 shows the distribution of risk categories among U.S.-born and foreign-born Latinxs living in King County in 2018. Individuals with an unknown risk factor comprised 11% of foreign-born Latinxs and 3% of U.S.-born Latinxs and are excluded from the figure. Men who have sex with men (MSM) comprise the majority of new HIV infections among both U.S.-born and foreign-born Latinxs. Heterosexual risk is over four times as common among foreign-born Latinxs (16%) as among those born in the U.S. (4%), and being an MSM-PWID was more than twice as common as an HIV risk among U.S.-born compared to foreign-born PWH (12% vs. 5%).

### Viral Suppression

Among Latinx PWH, the proportion with documented viral suppression increased substantially over the past decade, from 56% in 2009 to 82% in 2018.

### Timing of HIV Diagnoses

Among 175 Latinxs King County residents diagnosed with HIV in the past five years (2014-2018), 145 (83%) had a known HIV testing history. Of the 145, 76 (52%) had a negative HIV test within the prior year. This interval, from a last negative to a first positive test, provides information on the extent to which HIV testing is reaching the population in need of testing, as well as data on the potential time from HIV Infection to HIV diagnosis. U.S.-born Latinxs were more likely than foreign-born Latinxs to have a negative HIV test within a year of diagnosis (61% vs. 44%). Late HIV diagnosis is sometimes defined as an AIDS diagnosis within one year of an HIV diagnosis. By this definition, 23% of 168 Latinxs diagnosed with HIV between 2013 and 2017 were diagnosed late, including 29% of foreign-born Latinxs and 14% of U.S.-born Latinxs.

Figure 19-1: Country of Birth among Foreign-born Latinxs Living with HIV in King County, 2018

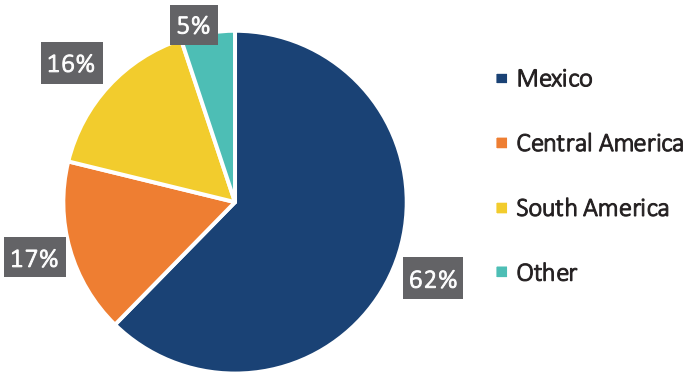
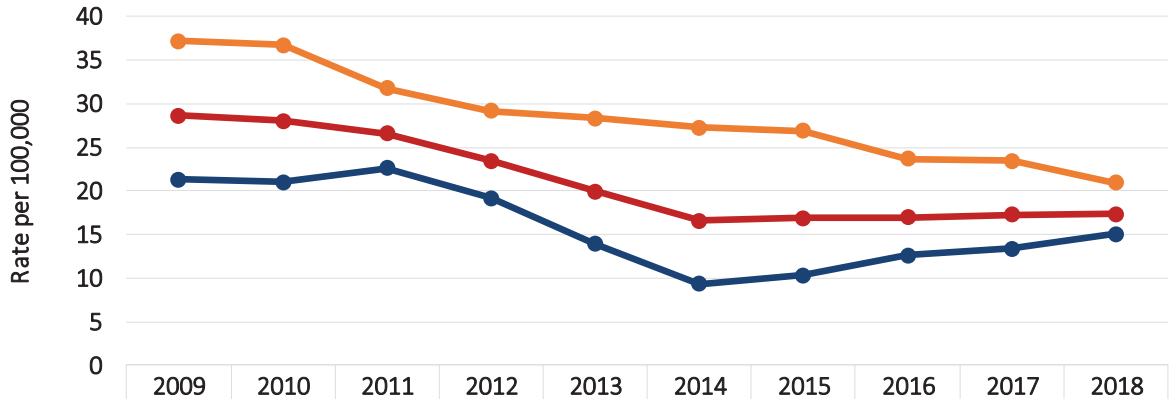


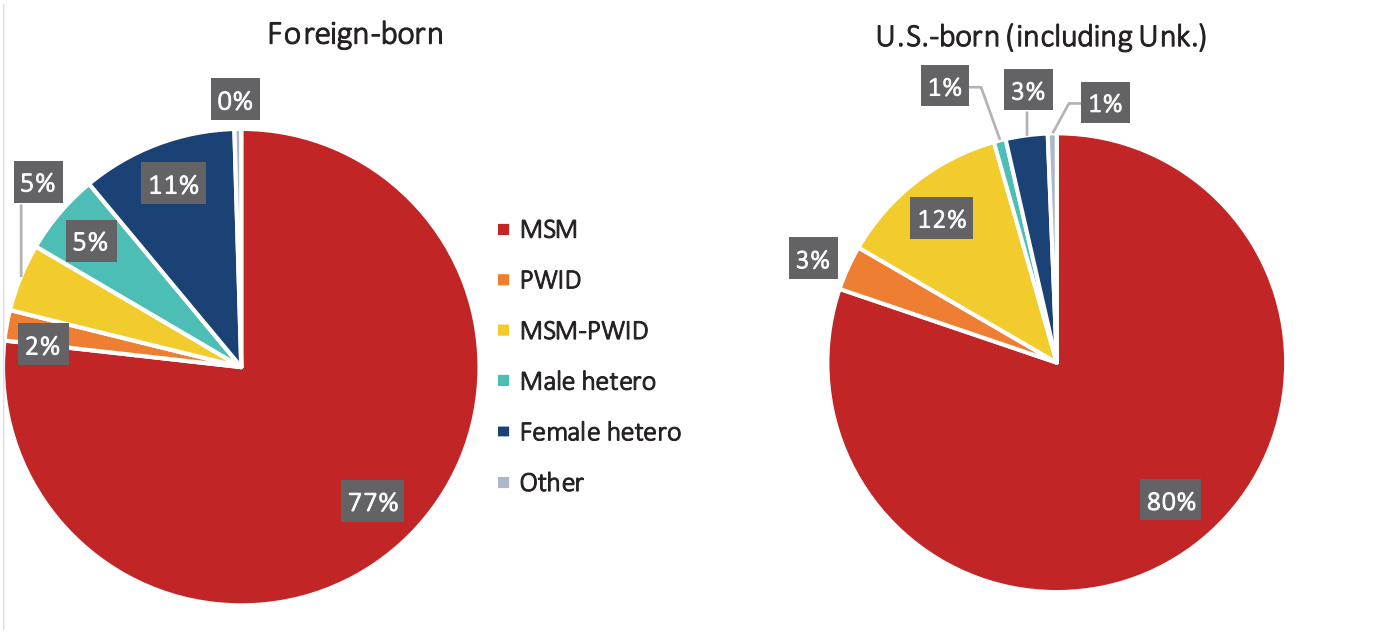

Figure 19-2: Rates of HIV Diagnoses[A] among Latinxs in King County by Nativity, 2008-2017




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| All Latinxs | 29 | 28 | 27 | 23 | 20 | 17 | 17 | 17 | 17 | 17 |
| U.S.-born Latinxs | 21 | 21 | 23 | 19 | 14 | 9 | 10 | 13 | 13 | 15 |
| Foreign-born Latinxs | 37 | 37 | 32 | 29 | 28 | 27 | 27 | 24 | 23 | 21 |

[A]Rates are all given as rolling averages due to large fluctuations year-to-year.

FIGURE 19-3. HIV RISK CATEGORIES AMONG LATINXS LIVING WITH HIV IN KING COUNTY BY NATIVITY, 2017




# HIV Prevention and Care Interventions

## PRE EXPOSURE PROPHYLAXIS (PREP) USE

In light of the racial/ethnic disparities in HIV incidence and prevalence highlighted above, the Public Health—Seattle & King County (PHSKC) STD clinic offers prescription of pre-exposure prophylaxis (PrEP) to all interested Latinx MSM and people who inject drugs (PWID)—among other groups—with the goal of improving health equity.[1] PrEP has been shown to be highly effective at preventing HIV, cutting the chances of infection among MSM by >95% when taken as directed.[2] Among King County residents identifying as cisgender MSM and considered at high-risk for HIV acquisition that were surveyed at Seattle's Pride Festival in 2018 or 2019, Latinxs were about as likely as Whites to have ever taken PrEP--60% and 54%, respectively—although the number of Latinxs surveyed was small (Personal communication, J Hood, August 2019). In a November 2018 - January 2019 Internet survey of men who reported ever having had sex with a man, about 40% of HIV-negative cisgender Latinxs living in King County reported ever having used PrEP. Although this estimate is somewhat lower than from the 2018-2019 Pride surveys, the Internet survey likely included more persons at relatively lower risk for HIV acquisition (Personal communication D Rao, August 2019).

## OTHER INTERVENTIONS

HIV testing is available at the STD Clinic and other Public Health clinics (Auburn, Eastgate, Federal Way, and Kent) and through community-based organizations. Entre Hermanos offers free HIV testing by bilingual staff, including a cash incentive for Latinx MSM, and distributes home test kits. They also conduct culturally-tailored workshops, forums, and other outreach.[3] Gay City also provides Spanish language HIV testing and healthcare navigation services. Additionally, People of Color Against AIDS Network (POCAAN) provides services specifically aimed at preventing and otherwise mitigating the impact of HIV on communities of color in Seattle and greater King County. POCAAN operates a number of programs for those living with HIV as well as those at risk for infection, including medical case management, support in transitioning into stable housing, and reentry assistance upon release from prison or jail.[4] A list of HIV/STD testing facilities, including hours of operation, are available on the PHSKC web site (www.kingcounty.gov/stdtesting).

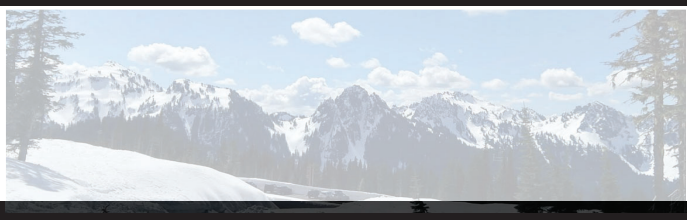
*Contributed by Richard Lechtenberg, Roxanne Kerani, and Susan Buskin*

## References

1. Public Health STD Clinic at Harborview. Available at http://www.kingcounty.gov/depts/health/communicable-diseases/hiv-std/patients/clinic.aspx Accessed 8/20/2017.
2. Grant RM et al. Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. New Engl Jour Med 363(27): 2587-2599, 2010.
3. Entre Hermanos. HIV Prevention. Available at http://entrehermanos.org/hiv-prevention/ Accessed 11/21/2017.
4. POCAAN. Available at http://pocaan.org/POCAAN/ Accessed 8/30/2017.

HIV/AIDS Fact Sheet

# Men Who Have Sex with Men (MSM)



### Key Points

**MSM account for 59% of all new HIV diagnoses in King County and 86% of diagnoses among persons with known HIV risk factors.**

**Since 2009, the rate of new diagnoses among MSM has declined 55%.**

**HIV among MSM in King County is characterized by profound racial and ethnic disparities. In 2018 Latinx MSM account for 10% of the estimated King County MSM population but account for 21% of all new diagnoses among MSM.**

**84% of HIV-infected MSM are virally suppressed.**

**Approximately 1 in 4 HIV-uninfected MSM in King County is currently using PrEP.**

## Overview

In King County, men who have sex with men (MSM) have been, and continue to be, the most heavily impacted risk group in the HIV epidemic. In 2018, MSM, including MSM who inject drugs, accounted for 59% of all new HIV diagnoses in King County and 86% of all diagnoses where an exposure category was identified. There were 128 new HIV diagnoses among MSM in 2018. This corresponds to an estimated rate of new diagnosis among MSM of 233 per 100,000 MSM, which is a 55% reduction in the rate of new diagnoses since 2009 (**Figure 20-1**) but represents a 9% increase in the rate of new diagnoses among MSM since 2017. This recent increase in the number and rate of new HIV diagnoses among MSM is likely attributable to an increase in the number of HIV diagnoses among MSM who inject drugs. In 2018, MSM who inject drugs accounted for 16% of all new HIV diagnoses among MSM, which is the highest proportion in the past 10 years (**Figure 20-2**).

Approximately one in 10 MSM in King County is living with HIV and an estimated 84% of HIV-infected MSM are virally suppressed. (Among MSM with a viral load reported to Public Health in 2018, 94% were virally suppressed.) In 2018, 58% of new HIV diagnoses among MSM occurred in individuals who were between 20 and 34 years old, who account for only 31% of the estimated population of King County MSM (**Figure 20-3**). Over half of all new HIV diagnoses among MSM occurred among White MSM, who comprise 63% of the estimated MSM population in King County. Latinx MSM and Black MSM account for 21% and 14% of all new HIV diagnoses, respectively, but are

**Table 20-1: Key HIV Metrics for Men Who Have Sex with Men, King County, WA**

| Key Metrics | Total MSM | White MSM | Black MSM | Latinx MSM |
|---|---|---|---|---|
| **HIV Prevalence in 2018** | | | | |
| Number of MSM Prevalent Cases | 5,321 | 3,378 | 566 | 793 |
| Prevalence (%) | 8.8% | 8.9% | 14.7% | 13.7% |
| Percent of All Cases of Each Race/Ethnicity Occurring in MSM (Among Cases with Known Risk) | 86% | 92% | 59% | 89% |
| **HIV Incidence (New Diagnosis)** | | | | |
| 2018 Number of New Diagnoses | 128 | 69 | 18 | 27 |
| 2018 Diagnosis Incidence Rate per 100K | 233 | 199 | 548 | 542 |
| 10-year Trend (% Decline 2009-2018) | 55% | 63% | 3% | 46% |
| **Estimated Number of MSM [A] in King County (2018)** | 60,328 | 37,992 | 3,852 | 5,771 |
| **Viral Suppression among HIV+ MSM [B]** | 84% | 86% | 79% | 82% |

[A] MSM population are estimated as 6.7% of males age 15+ years.

[B] Among all MSM with diagnosed HIV-infection. Viral suppression defined as plasma HIV RNA < 200 copies/mL. Among those with ≥1 viral load reported in 2018, 94% were virally suppressed.

only 10% and 6% of the estimated King County MSM population, respectively (Figure 20-3).

### Population Size

We used King County data from Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System Survey (BRFSS) to estimate the percentage of all men who are MSM. The estimate from BRFSS is based on sexual orientation, and thus only approximates MSM behavior. For the years 2009 through 2013, we estimate that 5.7% of men aged 15 years or older in King County were MSM, using BRFSS data from 2013 and 2014. For 2014 through 2018, we used two-year averages of BRFSS data to estimate the proportion of King County men aged 15 years or older who were MSM. These percentages are: 6.2% (2014), 6.3% (2015), 6.4% (2016), 6.6% (2017), and 6.7% (2018). (Personal Communication Lin Song, Assessment, Policy Development and Evaluation, Public Health—Seattle & King Co.). For all years, we assume that the percentage of men who are MSM is consistent across age and race/ethnicity. Some of the observed decline in HIV diagnosis rates among MSM may be due to this methodologic change--which resulted in an increase in our estimate of the size of the population of MSM. However, had we not made this change and kept our estimate at 5.7 of male population, the observed change in the rates would only be modestly different (9.7% increase from 2017 to 2018 instead of 9.2%, and 47% decrease from 2009-2018 instead of 55%).

# HIV Prevention Interventions

### HIV testing

Public Health – Seattle & King County (PHSKC) and Washington State Department of Health (WA DOH) fund HIV testing, primarily for persons at higher risk of HIV infection. Since 2009, the number of HIV tests performed among MSM increased by 63%, and in 2018 there were 8,122 publicly-funded HIV tests performed for MSM in King County. In 2018, the median time since last HIV negative test among newly diagnosed MSM was 9.5 months. Public health investigators obtained HIV testing histories for 59% of MSM diagnosed with HIV in King County in 2018 and, of these, 9% had never had a prior negative test. Of MSM with a negative HIV test prior to an HIV diagnosis in 2018, 48% had tested negative within two years of their HIV diagnosis. PHSKC publishes HIV testing locations on the PHSKC website. The largest single source of new HIV diagnoses in King County is the PHSKC STD clinic at Harborview Medical Center, which provides walk-in services five days per week. The STD clinic provides care on a sliding fee scale.

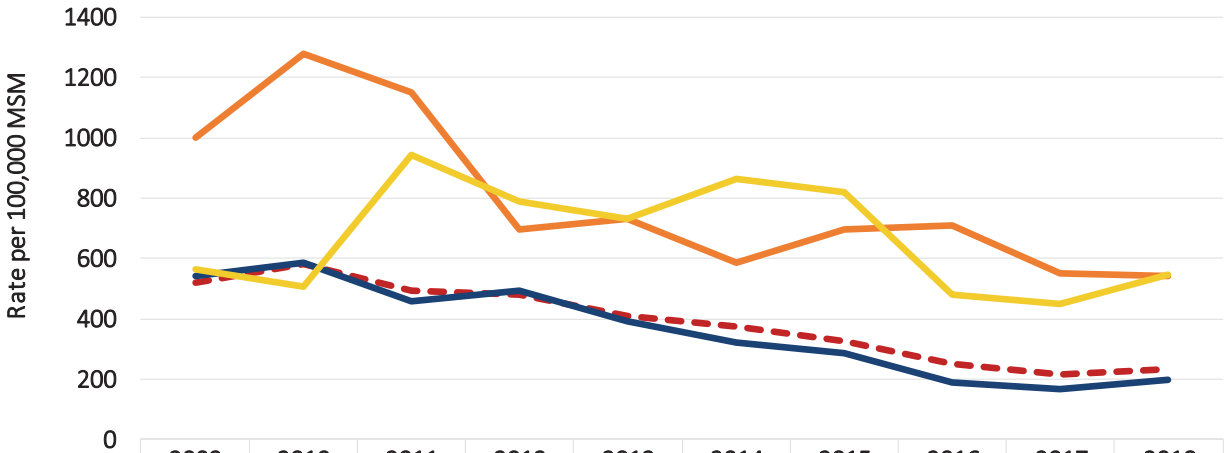
*PrEP*: Approximately 27% of all HIV-uninfected King County MSM and 49% of higher risk MSM used PrEP in 2018 (see article on PrEP for details). PHSKC promotes PrEP for MSM in several ways, including providing PrEP referrals via STD partner services, providing PrEP at the PHSKC STD clinic, and maintaining (on the PHSKC website) a publicly available list of PrEP providers and a map of PrEP provider locations. In 2018, 187 MSM diagnosed with a bacterial STI (who did not report already being on PrEP) accepted a referral to PrEP by the PHSKC partner services program. The PHSKC STD clinic initiated 366 MSM patients on PrEP in 2018, and had 552 patients actively on PrEP as of December 2018.

### Condom distribution

In 2018, PHSKC distributed 177,270 condoms and 64,050 packets of lubricant. WA DOH provided an additional 245,797 condoms to agencies and organizations in King County. The 2018 Seattle Pride survey asked MSM participants where they usually obtained condoms. Fifty-three percent of respondents reported that they had received free condoms in the past 3 months, and 46% of condom-users reported that they paid for the last condom that they used. To increase condom distribution, the PHSKC HIV/STD Program is piloting new condom access and distribution projects. One project is the distribution of condom and lubricant variety packs (known as "The Tool Kit" – which includes 17 varieties of condoms and 3 types of lube) in the PHSKC STD Clinic. To date, the STD Clinic has distributed 603 Tool Kits, including 10,251 condoms and 1,809 packets of lubricant. Other projects include increased delivery and promotion of free condoms through a map and a new community distribution program (see Condom article elsewhere in this report).

*Contributed by Christine Khosropour*

FIGURE 20-1. RATE OF NEW HIV DIAGNOSIS AMONG MSM OVERALL AND BY SELECTED RACE/ETHNICITY, KING COUNTY, 2009-2018




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| Overall | 520 | 581 | 492 | 482 | 410 | 374 | 327 | 252 | 213 | 233 |
| Latinx | 1000 | 1278 | 1152 | 697 | 732 | 585 | 697 | 708 | 550 | 542 |
| White, Non-Latinx | 540 | 586 | 460 | 495 | 390 | 321 | 284 | 189 | 165 | 199 |
| Black, Non-Latinx | 566 | 508 | 943 | 790 | 732 | 863 | 820 | 478 | 447 | 548 |

FIGURE 20-2 NUMBER OF NEW HIV DIAGNOSIS AMONG ALL MEN WHO HAVE SEX WITH MEN (MSM, INCLUDING MSM WHO INJECT DRUGS [PWID]) AND CORRESPONDING PERCENTAGE OF NEW HIV DIAGNOSES AMONG MSM THAT OCCURRED AMONG MSM-PWID, KING COUNTY, 2009-2018

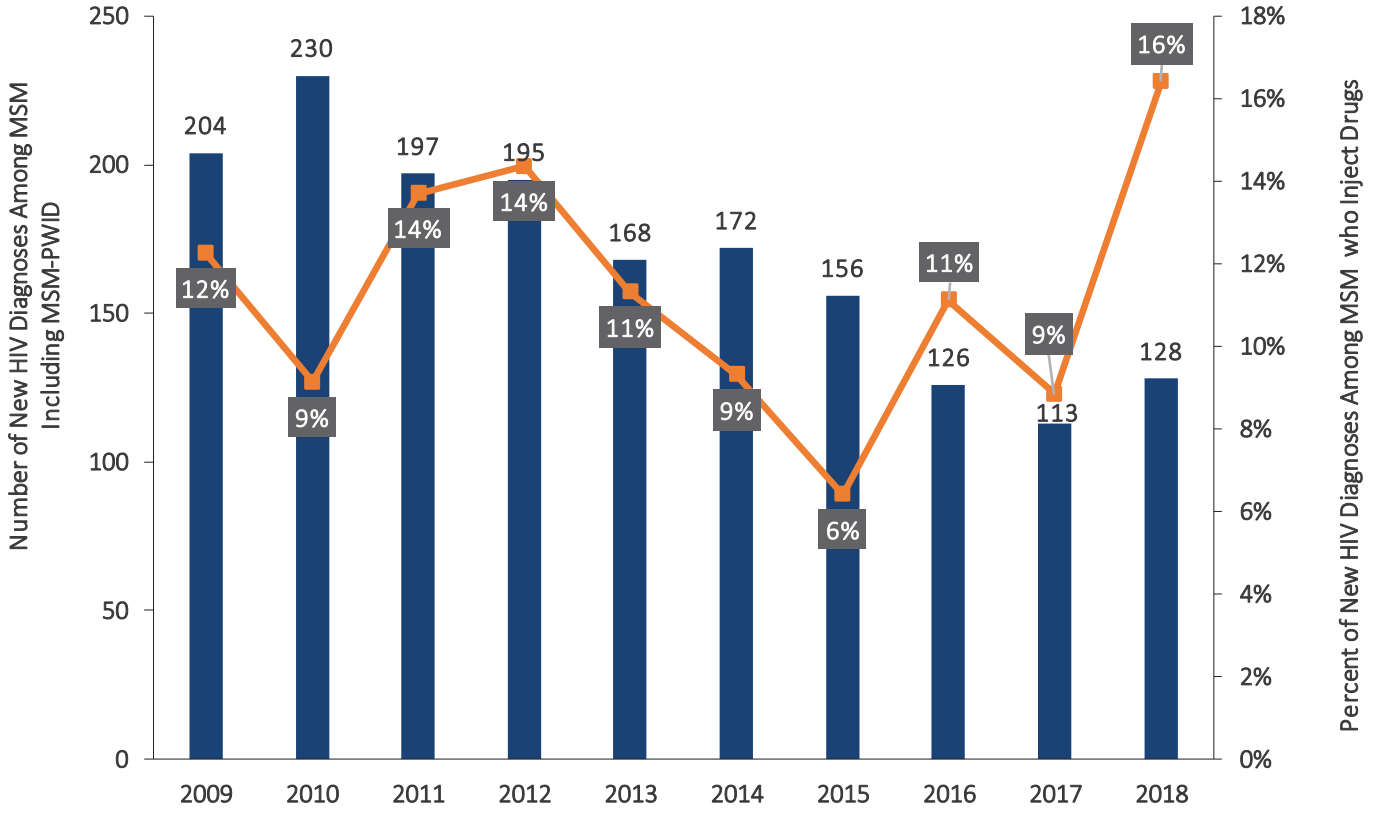
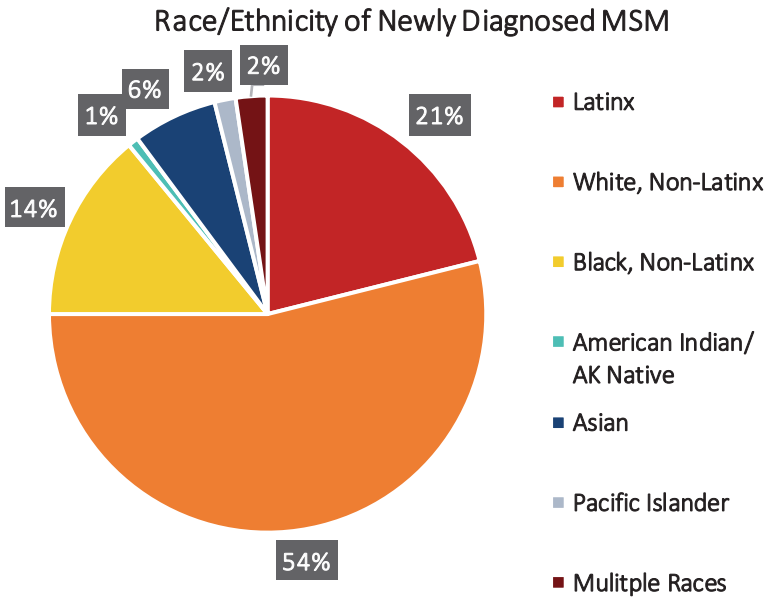
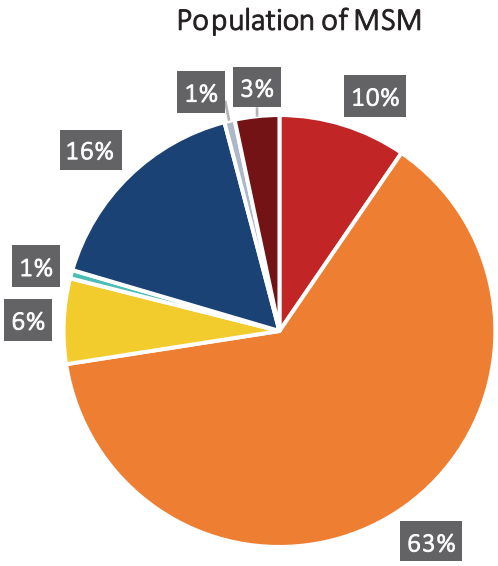
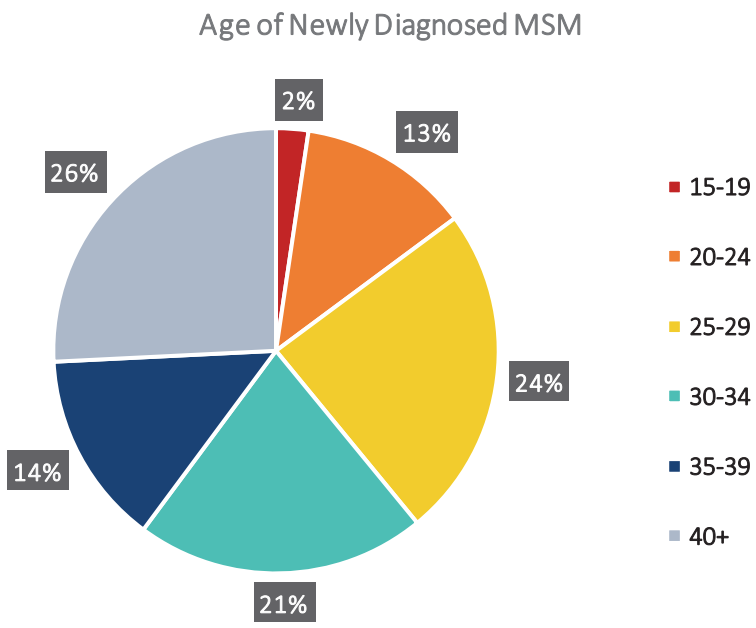
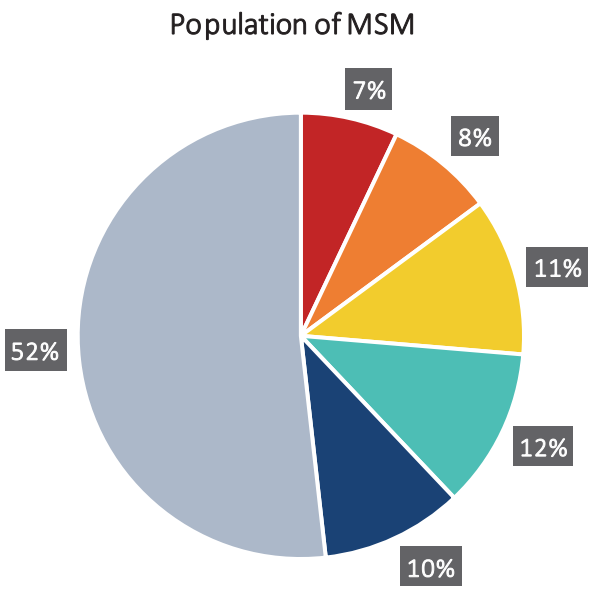


FIGURE 20-3 AGE AND RACE/ETHNICITY DISTRIBUTION OF NEW HIV DIAGNOSIS AMONG MEN WHO HAVE SEX WITH MEN (MSM) AGE 15+ COMPARED TO ALL MSM AGE 15+, KING COUNTY, 2018



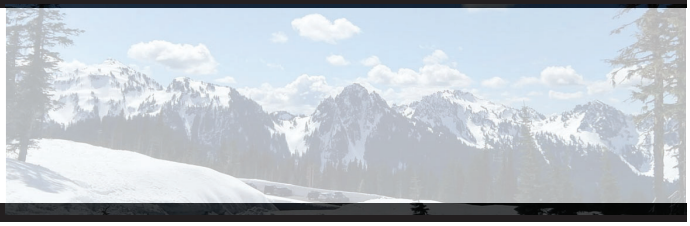



HIV/AIDS Fact Sheet

# People Who Inject Drugs (PWID)



### Key Points

In 2018, there was an increase in HIV diagnoses among people who inject drugs (PWID), including several clusters of linked cases. In 2017, 10% of all HIV diagnoses were among PWID, and in 2018, nearly 25% were among PWID.

The increase in HIV among PWID occurred among both men who have sex with men (MSM) PWID (10 to 21 cases) and non-MSM PWID (7 to 31 cases).

HIV prevalence is high (40-45%) among PWID who are MSM and inject methamphetamine.

The majority (≥75%) of HIV-infected PWID are virally suppressed.

In 2018, the Public Health – Seattle & King County Needle Exchange exchanged nearly 8 million syringes.

A 2019 survey of syringe services program clients found continued high levels of homelessness and methamphetamine use among PWID.

## Overview

Prior to 2018, HIV diagnoses among people who inject drugs (PWID) and who do not report other risk factors were relatively rare in King County. In 2018, there was a marked increase in HIV diagnoses among PWID, including clusters of linked cases and evidence of recent HIV acquisition. The 52 new HIV diagnoses among PWID in 2018 included 31 among PWID who did not also report being a man who had sex with men (MSM) and 21 among PWID-MSM. In comparison, in 2017, there were 17 total new HIV diagnoses among PWID, with 7 reported among non-MSM PWID and 10 among PWID-MSM. (PWID-MSM are typically classified as a separate category due to dual possible HIV transmission routes.) This reflects a >400% increase in cases among non-MSM PWID and >200% increase among PWID-MSM. These increases also resulted in a substantial shift in the role of PWID in King County's overall HIV epidemic. Between 2017 and 2018, the percentage of all new diagnoses occurring in non-MSM PWID rose from 4% to 14%, while the percentage occurring among MSM-PWID increased from 6% to 10%.

Based on data from routine HIV surveillance, including the 2018 National HIV Behavioral Surveillance IDU survey, we estimate that the HIV prevalence among non-MSM PWID is approximately 1-4% and 12-19% among PWID-MSM. The subset of PWID-MSM who inject methamphetamine have historically had the highest HIV prevalence (20-45%). The prevalence of hepatitis C antibodies among all PWID is also high, at approximately 70-75%.

The 2019 survey of Public Health – Seattle & King County (PHSKC) syringe services program clients found that the average age of PWID was 38 years, 34% were women (cis or trans), and 33% were people of color. The majority were homeless (47%) or unstably housed (24%), estimates that were similar in the 2017 survey. About one-half (52%) reported that their primary drug was heroin, a large decline from 2017 (65%). However, the proportion of PWID reporting that goofballs (i.e., co-injection of heroin and methamphetamine) were their primary drug increased from 10% in 2017 to 20% in 2019. Polydrug use remained very common with continued high levels of methamphetamine use (see **Figure 21-1**). Fifteen percent of PWID reported sharing a syringe in the past 3 months, which was a significant decline since 2017 (22%).

### Population Size

In 2014, the PHSKC HIV/STD Program estimated that there were approximately 23,000 people in King County who had injected drugs in the past year based on the 2012 King County population (**Table 21-1**). This increased to 26,000 in the 2017 update. When applied to 2018 population estimates, including a higher number of MSM, the number of PWID increased to approximately 26,500. We estimate that 5,000 of these PWID are MSM and 21,500 are non-MSM.

## HIV Prevention and Care Interventions

### Syringe Services Program (SSP)

SSPs are effective interventions for decreasing the risk of HIV transmission among PWID. The PHSKC SSP is the second-

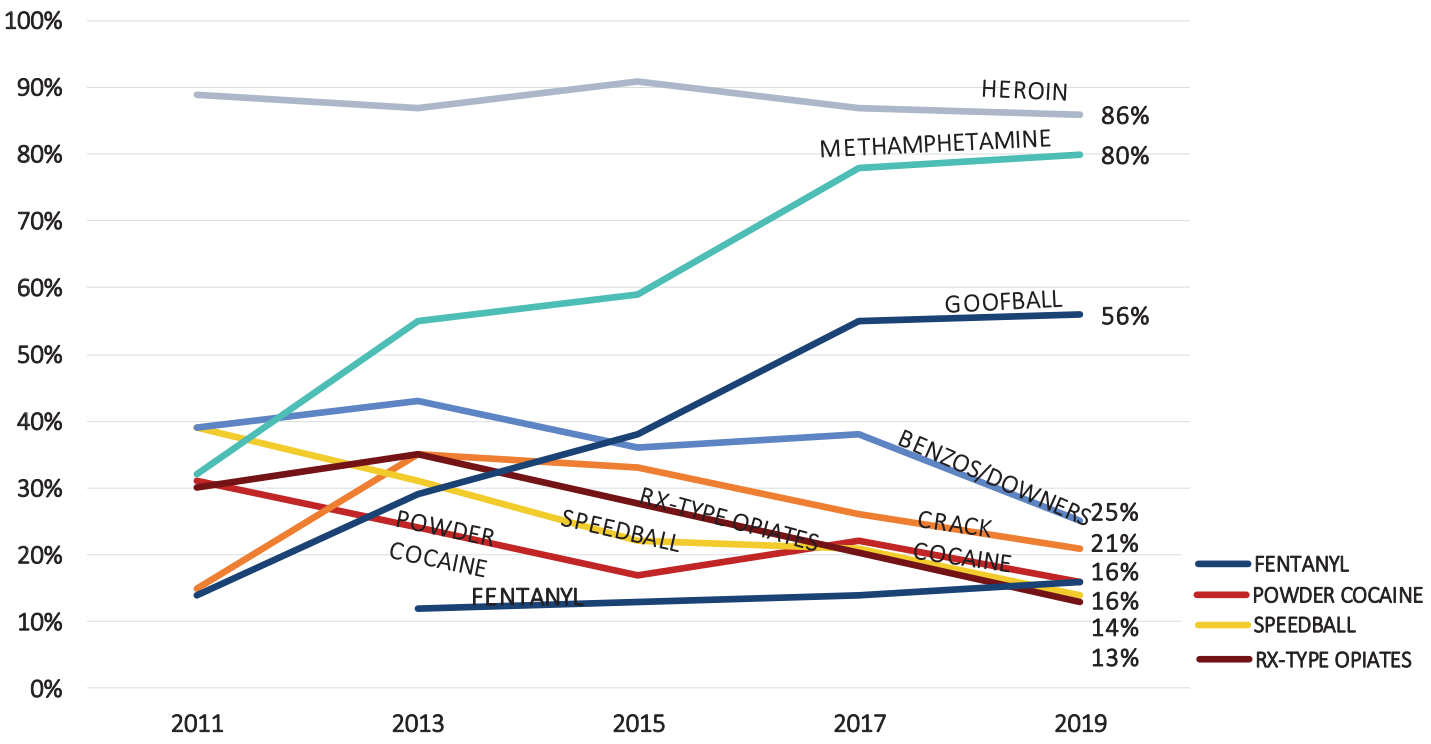
TABLE 21-1: KEY HIV METRICS FOR PEOPLE WHO INJECT DRUGS (PWID), KING COUNTY, WA

| KEY METRICS | PWID (NON-MSM) | PWID-MSM |
|---|---|---|
| ESTIMATED NUMBER OF PWID IN KING COUNTY (2018) | ~21,500 | ~5,000 |
| HIV PREVALENCE IN 2018 | | |
| Number of PWID Living with HIV | 277 | 641 |
| Prevalence (%) | 1-4% | 12-19% |
| Percent of all HIV Cases who are PWID or MSM-PWID among those with known risks | 4% | 10% |
| HIV INCIDENCE (NEW DIAGNOSES) | | |
| 2018 Number of New Diagnoses) | 31 | 21 |
| 2018 Diagnosis Incidence Rate | 144 per 100,000 | 420 per 100,000 |
| 10-year Trend (2009-2018) | Steady low rate with significant increase in 2018 | ~50% decrease 2009 -2017 with significant increase in 2018 |
| VIRAL SUPPRESSION AMONG HIV+ PWID [A] | 73% | 76% |

Abbreviations: PWID, people who inject drugs; MSM, men who have sex with men.

[A] Among all PWID with diagnosed HIV-infection. Viral suppression defined as plasma HIV RNA < 200 copies/mL. Among those with ≥1 viral load reported in 2018, 85% of PWID (non-MSM) and 86% of PWID-MSM were virally suppressed.

FIGURE 21-1. TRENDS IN REPORTED DRUG USE AMONG PUBLIC HEALTH – SEATTLE & KING COUNTY SYRINGE SERVICES PROGRAM (SSP) CLIENTS, 2011-2019




Note: Goofballs refer to injecting heroin and methamphetamine at the same time. Speedballs refer to .

longest running exchange program in the United States, and exchanged nearly 8 million syringes in 2018. The PHSKC SSP includes two fixed locations (downtown and Capitol Hill) and two mobile services (North Seattle and South King County). The SSP provides services in addition to needle exchange, including naloxone distribution and education, linkage to treatment for substance use disorders, wound care, reproductive health care, social work services, and assistance with obtaining health insurance. Please see the article on the Syringe Services Program for more information on these services.

### HIV Testing and Viral Suppression

HIV testing among PWID in the Seattle area declined over the past decade: in 2004, 64% of PWID reported having an HIV test in the past year compared with 47% in 2015.[2] This decline reflected decreasing levels of HIV testing among non-MSM PWID. New data from PWID surveys are encouraging and show a potential rebound in the proportion of PWID with an HIV test in the past year. In the 2018 National HIV Behavioral Surveillance survey of PWID, 52% of PWID had tested in the past year. Additional data from the PHSKC SSP showed an increase from 56% in 2017 to 66% in 2019. The boost in 2019 is likely a result of increased HIV testing outreach conducted as a result of the outbreak among PWID. Fortunately, most HIV-infected PWID link to care and achieve viral suppression. In 2018, 73% of non-MSM PWID and 76% of PWID-MSM were virally suppressed. Non-MSM PWID newly diagnosed with HIV take significantly longer to reach virally suppression, highlighting the importance of ensuring early linkage to care.

### PrEP

PrEP knowledge and use remain low among PWID. In recent surveys of PWID, PrEP awareness ranges from 27 to 51%, and only 1-2% of PWID report recent or current PrEP use. In 2015, PHSKC and WA DOH issued implementation guidelines for HIV pre-exposure prophylaxis (PrEP).[3] With respect to PWID, these guidelines state that health care providers should *recommend* PrEP initiation to patients who are MSM or transgender persons who have sex with men and who have used methamphetamine in the past year (including injection), and persons who have condomless sex with HIV serodiscordant partners who are not virally suppressed. In response to the increase in HIV cases among PWID in 2018, the guidelines changed to also *recommend* PrEP to PWID who report exchange sex. The guidelines recommend that health care providers discuss initiating PrEP with other PWID.

### Medication for Opioid Use Disorder (MOUD)

Two opioid agonist therapies, methadone and buprenorphine, have been shown to decrease HIV risk behaviors among PWID. Staff at the PHSKC SSP maintain the waiting list for methadone treatment, and in 2018 provided MOUD referrals to 328 SSP clients. (There is currently no waitlist for methadone treatment.) In 2017, King County launched the Bupe Pathways program, which aims to provide very low barrier buprenorphine treatment co-located with the PHSKC SSP and pharmacy. In a recently published evaluation, retention in the program was associated with reduction in opioid use.[4] Given high levels of demand, the program expanded in late 2018 and is now located in a separate space above the SSP. Bupe Pathways served 191 unique patients in 2018 and 457 patients since the program launched in January 2017.

### Max Clinic

The Max Clinic is a walk-in HIV care clinic located within the PHSKC STD clinic at Harborview Medical Center. To be eligible for the Max Clinic, patients must have had evidence of an inability to remain in traditional HIV care and/or have a detectable viral load at enrollment. The majority of patients are homeless or unstably housed and have a substance use disorder, with most reporting methamphetamine use. As of June 2019, there are 161 patients currently enrolled in the Max Clinic; approximately half are PWID. Sixty-four percent of current patients were virally suppressed at their most recent lab, highlighting the effectiveness of this model for this population.

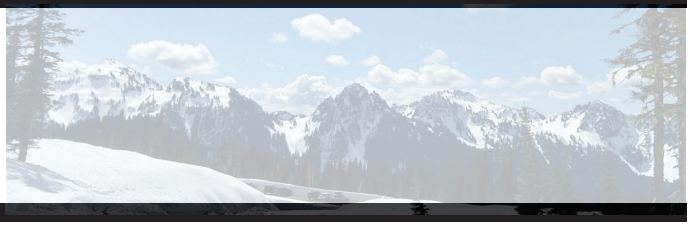
*Contributed by Sara Glick*

## References

1. Burt RD and Thiede H. Reduction in needle sharing among Seattle area injection drug users across 4 surveys, 1994-2013. *Am J Public Health* 2016;106:301-7.
2. Burt RD and Glick SN. A decline in HIV testing among persons who inject drugs in the Seattle area, 2004-2015. *JAIDS* 2017;75 Suppl 3:S346-S351.
3. Public Health – Seattle & King County and Washington State Department of Health. Pre-exposure prophylaxis (PrEP) Implementation Guidelines 2015. www.kingcounty.gov/hiv/prep-guide.
4. Hood JE et al. Engaging an unstably housed population with low-barrier buprenorphine treatment at a syringe services program: Lessons learned from Seattle, Washington. *Subst Abus* 2019; Aug 12:1-9. doi: 10.1080/08897077.2019.1635557. [Epub ahead of print]

HIV/AIDS Fact Sheet

# Women



### Key Points

**Approximately 886 (12.6%) of 7,023 persons living with diagnosed HIV in King County are women, and 46 women were newly diagnosed with HIV infection in 2018, a 77% increase since 2017.**

**HIV disproportionately affects Black, Latina, American Indian/Alaska Native and foreign-born Black women. About 22% of women residing in King County are foreign-born, while over half (55%) of women living with HIV in King County are foreign-born and 41% are foreign-born Black women.**

**U.S.-born Black women and American Indian/Alaska Native women in King County are disproportionately affected by HIV, with estimated prevalences of diagnosed HIV Infection that are more than 7 times those observed in White women.**

## Overview

Approximately 886 (12.6%) of the 7,023 people living with HIV (PWH) in King County are cisgender women. In 2018, there were 46 new diagnoses of HIV among women living in King County, or 4.2 cases per 100,000 (**Table 22-1**). This compares to an overall diagnosis incidence of 10.0 per 100,000 residents in King County in 2018. The diagnosis rate among women was relatively stable from 2009 to 2017, but then abruptly increased in 2018, primarily as a consequence of an outbreak of HIV affecting women, most of whom were living homeless and using injection drugs (**Figure 22-1).**

### Population Size and Characteristics

In 2018, U.S. Census and American Community Survey data estimate that there were 1,095,269 women living in King County, of which about 245,259 (22%) were foreign-born (**Tables 22-1** and **22-2**). Among the 886 women living with diagnosed HIV in King County in 2018, more than half (55%) were foreign-born, including 53% of those diagnosed 2013 – 2018. Relative to the overall King County population of women, those living with HIV infection were far more likely to be foreign-born and Black. Among Black women living with HIV in King County in 2018, 73% were foreign-born, and of foreign-born women with HIV, 74% were Black. Women recently diagnosed with HIV were more likely to be ages 20 through 49 years relative to the underlying population distribution.

Table 22-1: Key HIV Metrics for Women [A], King County, WA

| Key Metrics | Total | Foreign-born | U.S.-born |
|---|---|---|---|
| Est. No. Women in King County (2018) | 1,095,269 | 245,259 (22%) | 850,010 (78%) |
| HIV Prevalence in 2018 | | | |
| Number of women living with HIV | 886 | 484 (55%) | 402 (45%) |
| Prevalence (%) | 0.08% | 0.20% | 0.05% |
| Percent of all HIV cases who are women | 11% | 31% | 7% |
| HIV Incidence (New Diagnoses) [B] | | | |
| 2018 number of new diagnoses | 46 | 23 | 23 |
| 2018 diagnosis incidence rate per 100,000 | 4.2 | 9.4 | 2.7 |
| 10-year trend (increase 2009-2018) | 40% | 41% | 34% |
| Viral Suppression among HIV+ Women [C] | 81% | 85% | 77% |

[A] For the purposes of this fact sheet, "women" indicates people assigned female sex at birth. Of 886 prevalent cases in 2018 among individuals assigned female at birth, six (<1%) were known to be transgender men. There were two transgender men King County residents diagnosed with HIV in the past 5 years and reported to surveillance. Please see the Gender Identity and HIV fact sheet for additional details.

[B] New HIV diagnoses among individuals reporting a prior diagnosis in another country or state are excluded.

[C] Among all women with diagnosed HIV infection. Viral suppression defined as plasma HIV RNA < 200 copies/mL. Among those with ≥1 viral load reported in 2018, 93% were suppressed (93% of U.S.-born women and 94% of foreign-born women).

FIGURE 22-1: RATES OF HIV DIAGNOSES AMONG WOMEN IN KING COUNTY, 2009-2018

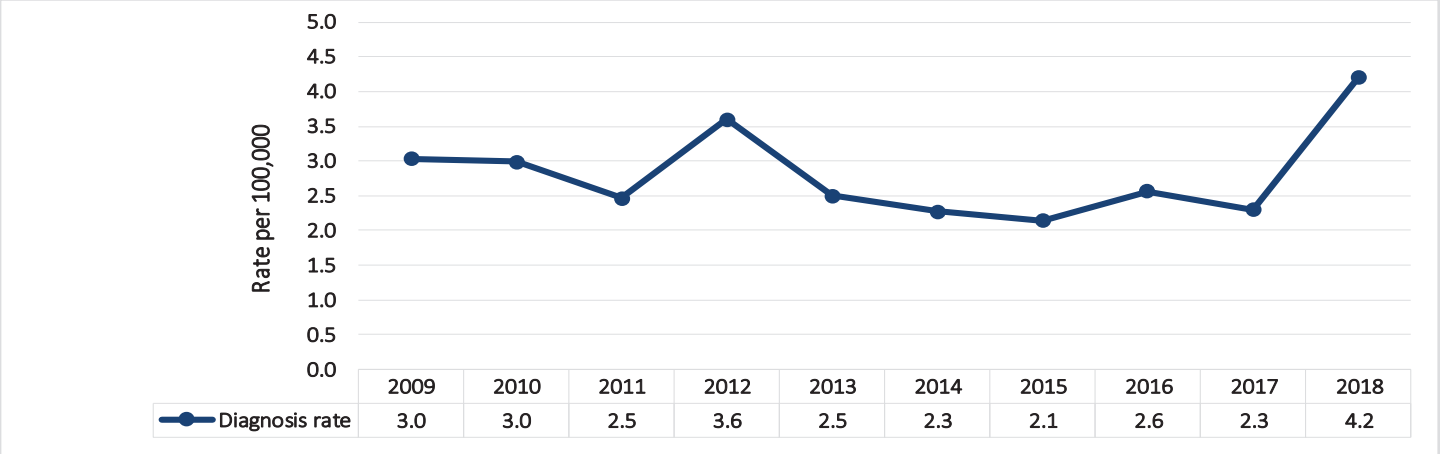



TABLE 22-2: CHARACTERISTICS OF WOMEN RECENTLY DIAGNOSED WITH HIV 2014-2018, LIVING WITH HIV IN 2018, AND OVERALL POPULATION OF WOMEN IN KING COUNTY, 2018

| CHARACTERISTIC | | DIAGNOSES IN THE PAST 5 YEARS (2014-2018) [B] | WOMEN LIVING WITH HIV 2018 | PREVALENCE DIAGNOSED HIV INFECTION (PER 100,000) | FEMALE KING COUNTY RESIDENTS, 2018 |
|---|---|---|---|---|---|
| | | No. (Col %) | No. (Col %) | | No. (Col %) |
| TOTAL | | 144 (100%) | 886 (100%) | 80.9 | 1,095,269 (100%) |
| NATIVITY | Foreign-born | 76 (53%) | 484 (55%) | 197.3 | 245,259 (22%) |
| | U.S.-born | 54 (47%) | 402 (45%) | 47.3 | 850,010 (78%) |
| RACE/ETHNICITY | White | 47 (33%) | 208 (24%) | 31.8 | 654,953 (60%) |
| | Black | 63 (44%) | 496 (56%) | 728.2 | 68,108 (6%) |
| | *Foreign-born Black* | *50 (35%)* | *360 (41%)* | 1911.0 | *18,839 (2%)* |
| | *U.S.-born Black* | *13 (9%)* | *136 (15%)* | 273.5 | *49,719 (4%)* |
| | Asian | 10 (7%) | 36 (4%) | 18.2 | 198,344 (18%) |
| | Latina | 16(11%) | 89 (10%) | 84.7 | 105,034 (10%) |
| | *Foreign-born Latina* | *11 (8%)* | *62 (7%)* | 147.6 | *42,013 (4%)* |
| | *U.S.-born Latina* | *5 (3%)* | *27 (3%)* | 42.8 | *63,020 (6%)* |
| | Native American | 3 (2%) | 16 (2%) | 234.8 | 6,814 (1%) |
| | Pacific Islanders | 0 -- | 2 (<1%) | Undefined | 9,427 (1%) |
| | Multiracial | 5 (4%) | 39 (4%) | 74.2 | 52,579 (5%) |
| HIV RISK CATEGORY | Injection drug use | 29(20%) | 103 (12%) | Undefined | Unk |
| | Heterosexual | 77 (53%) | 533 (60%) | Undefined | Unk |
| | Other including pediatric | 2 (1%) | 50 (6%) | Undefined | Unk |
| | Unknown | 36 (25%) | 200 (23%) | Undefined | Unk |
| AGE [A] | < 20 | 0 — | 20 (2%) | 8.1 | 248,012 (23%) |
| | 20-29 | 34 (24%) | 55 (6%) | 32.3 | 170,512 (16%) |
| | 30-39 | 39 (27%) | 170 (19%) | 92.7 | 183,425 (17%) |
| | 40-49 | 31 (22%) | 254 (29%) | 176.4 | 144,029 (13%) |
| | 50-59 | 24(17%) | 250 (28%) | 185.7 | 134,610 (12%) |
| | 60+ | 16 (11%) | 137 (15%) | 63.8 | 214,681(20%) |

Note 14 women had nativity unknown.

[A] Age is age at diagnosis for women diagnosed with HIV 2014-2018 and current age for women living with HIV.

[B] Recent diagnoses exclude women reporting prior diagnoses in another state or country.

### HIV Risk Category

Figure 22-2 shows the distribution of HIV risk categories among U.S.-born and foreign-born women living in King County in 2018. Individuals with an unknown risk factor comprised 32% of foreign-born women and 11% of U.S.-born women. Heterosexual risk is the predominant risk factor for both foreign-born (61%) and U.S.-born women (59%). Injection drug use was frequently reported by U.S.-born women (25%) and rarely by foreign-born women (1%).

### Viral Suppression

Among women living with diagnosed HIV infection, the proportion with documented viral suppression increased substantially over the past decade, from 58% to 81% 2009 - 2018. (Figure 22-3). Relative to HIV-infected women overall, women who were foreign-born consistently had higher levels of viral suppression, and women who reported injection drug use had lower levels.

### Timing of HIV Diagnoses

Among 144 female King County residents diagnosed with HIV in the past five years (2014 to 2018), 25 (17%) had a last negative HIV test documented within the prior year. This interval, from a last negative to a first positive test provides information on the extent to which HIV testing is reaching the population in need of testing, as well as

Figure 22-2. HIV Risk Categories among Women Living with HIV in King County by Nativity, 2018

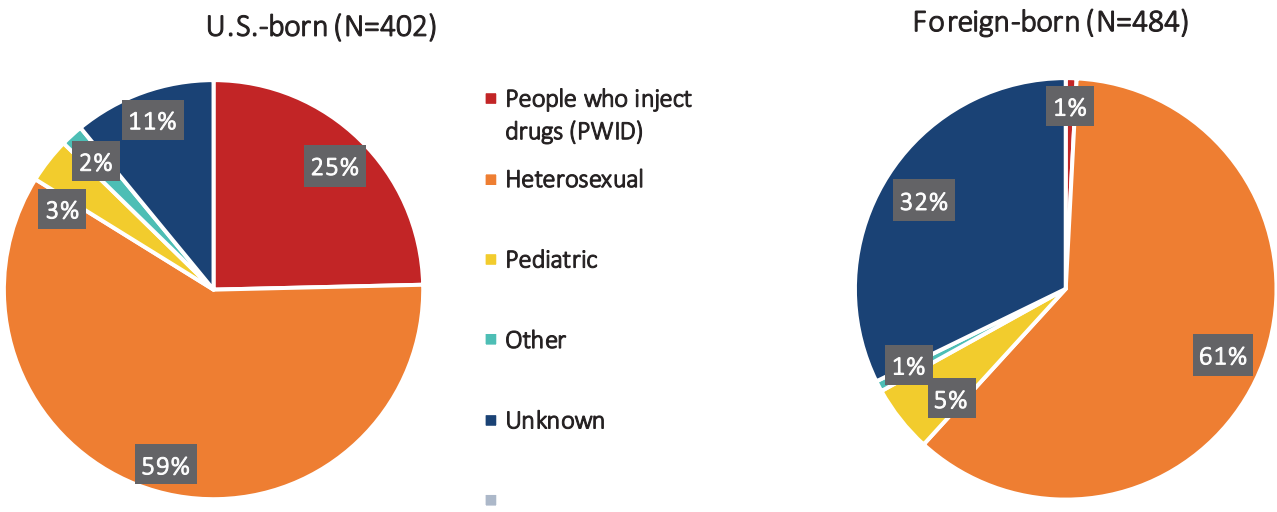
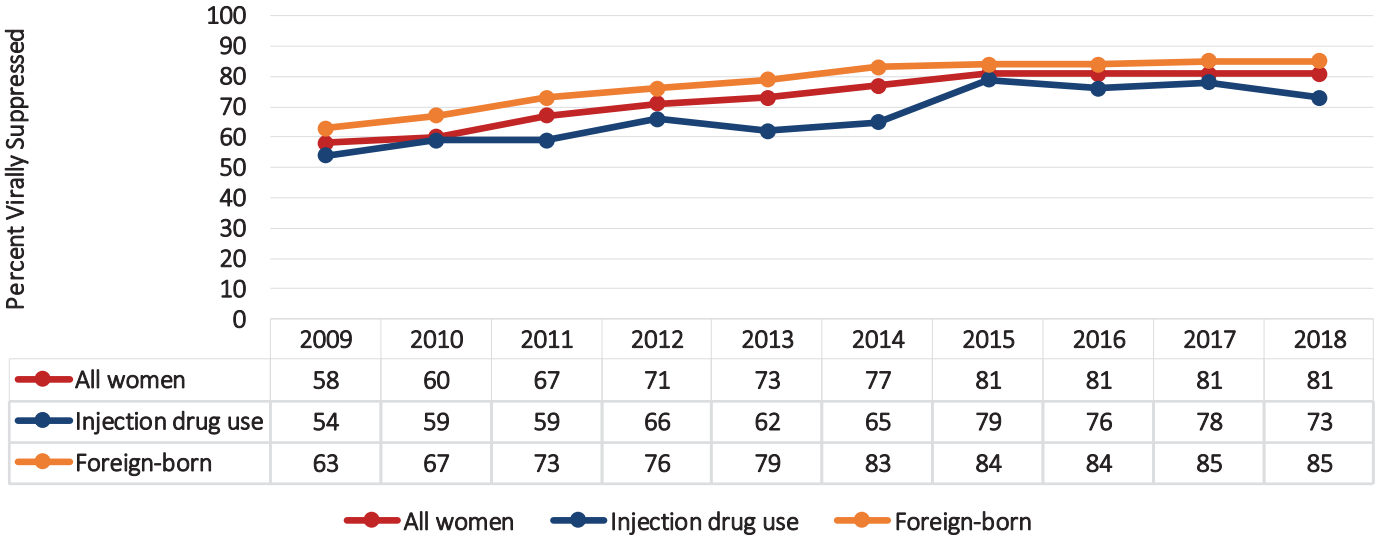



Figure 22-3: Viral Suppression among Women Living with HIV in King County, 2009-2018




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| All women | 58 | 60 | 67 | 71 | 73 | 77 | 81 | 81 | 81 | 81 |
| Injection drug use | 54 | 59 | 59 | 66 | 62 | 65 | 79 | 76 | 78 | 73 |
| Foreign-born | 63 | 67 | 73 | 76 | 79 | 83 | 84 | 84 | 85 | 85 |

data on the potential time from HIV Infection to HIV diagnosis.

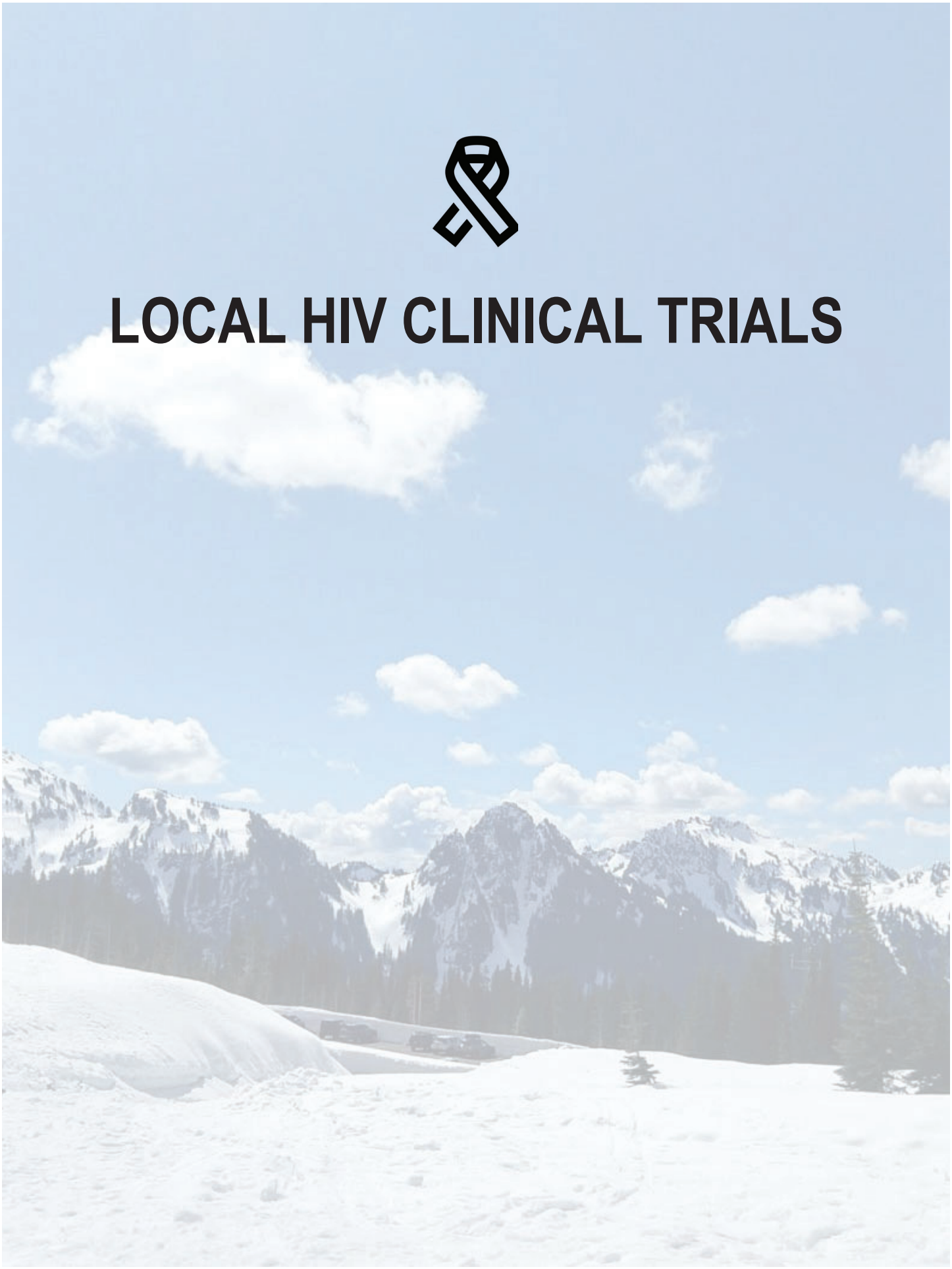
U.S.-born women were far more likely to have a negative HIV test within a year of diagnosis (35%) relative to foreign-born women (8%). Late HIV diagnosis is sometimes defined as an AIDS diagnosis within one year of an HIV diagnosis. By this definition, 33% of women diagnosed with HIV between 2014 and 2018 were diagnosed late, including 50% of foreign-born women and 15% of U.S.-born women. Note the foreign-born women described here exclude those who were known to have been diagnosed with HIV prior to entering the U.S.

Overall, among foreign-born women, we estimate that approximately 70% acquired HIV before arrival in the U.S. In this 70%, late diagnosis is very common (~67%), and most women were diagnosed within 1.3 years of immigrating to the U.S. Among the roughly 30% of foreign-born women who likely acquired HIV in the U.S., 27% had a late diagnosis, more similar to U.S.-born women, and in contrast, these women had been in the U.S. for a median of 4.2 years at time of HIV diagnosis.

### Pre Exposure Prophylaxis (PrEP) Use

Public Health – Seattle and King County PrEP guidelines recommend that anyone who is in a sexual relationship with a person who is living with HIV discuss PrEP with their medical provider, and that persons initiate PrEP if they are in an ongoing sexual relationship with a partner who is HIV positive and not taking antiretroviral therapy (ART), recently started ART, or is unsuppressed. This is especially important for women trying to conceive. (Please see PrEP article elsewhere in this report or PrEP guidelines at http://www.kingcounty.gov/depts/health/communicable-diseases/hiv-std/patients/~/media/depts/health/communicable-diseases/documents/hivstd/PrEP-implementation-guidelines.ashx.)

*Contributed by Roxanne Kerani, Richard Lechtenberg, and Susan Buskin*



# LOCAL HIV CLINICAL TRIALS

# What's New at the UW ACTU? Treating Acute Hepatitis C Virus Infection and a New Vaccine for Hepatitis B Virus Infection

### Acute hepatitis C treatment:

The direct-acting antivirals for hepatitis C virus (HCV) have revolutionized management of hepatitis C infection, with current guidelines recommending HCV testing for the majority of adult Americans and high rates of cure with modern HCV therapy for those with chronic HCV infection. The modern regimens are better tolerated and of shorter duration than prior HCV treatments. In addition, regimens that are effective at treating all HCV genotypes now exist, called "pan-genotype" treatment. Unfortunately, the cost of HCV treatment is straining health care budgets, due to the high cost of the effective modern regimens.

Current management guidelines recommend that treatment of acute HCV can be delayed for at least 12 weeks. The reasons for delay in treating acute HCV include 1) low frequency of fulminant infection with acute HCV, 2) the potential for spontaneous clearance of HCV, especially in women and those with jaundice, and 3) the existence of safe and effective treatment during chronic infection. On average, 5-15% of persons with HIV who develop acute HCV will spontaneously clear HCV infection. As part of increased interest in HCV elimination, there has been increased interest in a public health "test and treat" approach to HCV, similar to the approach being used with HIV. It is hoped that this approach will avoid the immune dysregulation that can occur with HCV infection and improve cost-effectiveness if shorter course therapy is shown to be effective.

**The UW ACTU is participating in an open-label, multicenter phase 2 study investigating the safety and efficacy of a short (4 week) pan-genotypic HCV regimen for acute HCV infection and seeking adults with acute HCV infection willing to be treated.** The regimen to be used in this study is glecaprevir and pibrentasvir (Mavyret), which is given as a fixed dose combination of 3 pills daily. This regimen has been FDA-approved for treatment of chronic HCV infection but is experimental for treatment of acute HCV. This study will enroll **persons with and without HIV**. Drug-drug interaction studies support the use of glecaprevir/pibrentsavir with multiple common antiretrovirals. Many common antiretroviral regimens can be used by participants in this study. The following medications can be used in this study: dolutegravir, both formulations of tenofovir, emtricitabine, lamivudine and abacavir, bictegravir, elvitegravir and cobicistat, darunavir boosted by either cobicistat or ritonavir, and rilpivirine. This study also includes a re-treatment phase in the event that participants have a recurrence or virologic failure.

### New hepatitis B Vaccine for Persons Living with HIV:

Vaccination has been the basis of hepatitis B virus (HBV) prevention although responses to a standard vaccine course are often suboptimal for persons with HIV. Older age, obesity, and other conditions including chronic renal disease and diabetes have also been associated with poor responses to standard HBV vaccines. Multiple strategies have been tried to improve response rates, including increased doses, repeat doses, and the addition of adjuvants. A new vaccine for prevention of HBV was recently approved by the US Food and Drug Administration. This vaccine, called HEPLISAV-B vaccine, is a mixture of HBV surface antigen and the TLR9 agonist 1018, and is given as two doses three months apart. Studies that compared HEPLISAV-B to a commonly used HBV vaccine called Engerix-B, showed that it had a superior vaccine response and a similar overall safety profile. Current HBV vaccination guidelines suggest continuing to use one of the existing HBV vaccines for

TABLE 23-1:UW ACTU CURRENT STUDIES SEEKING PARTICIPANTS (FALL 2019)

| STUDY TOPIC | KEY PARTICIPANT CHARACTERISTICS | COMMENTS |
|---|---|---|
| Long-acting ART for non-adherent persons | Non-adherence in the past 18 mos, VL>200, no *severe* active alcohol or *severe* substance abuse | Must be referred by their provider or case manager |
| Acute HCV Treatment | Acute HCV with OR without HIV | 4 weeks of open-label Mavy-ret |
| Phase 1 of Tri-specific BNAb SAR44236 | No prior HIV meds; CD4>350, VL 5K-100K, willing to start HIV in 28 days, believable plan to avoid transmitting HIV | Not appropriate for persons with newly diagnosed HIV |
| Novel HBV Vaccine | HIV PLUS EITHER:<br>No protective antibody after standard HBV vaccine series<br>OR<br>Never received HBV vaccine | Open-label |
| Impact of ART Timing for Acute HIV | Acute HIV (Fiebig 1 or 2) | Same day ART; no current PrEP (can also contact Janine Maenza at pager 206 663 7276 or Janine@uw.edu) |

the general population, given their excellent efficacy in this setting and large amount of safety data. However, there is high interest in developing strategies for persons living with HIV who have not developed protective responses to the existing HBV vaccines.

The UW ACTU will be participating in an open-label study of HEPLISAV-B in persons with HIV and is seeking individuals who:
1) do not have protective levels of HBV antibodies despite vaccination with a standard HBV vaccine series
OR
2) have never been vaccinated for HBV who are willing to complete a HBV vaccine series via this study. The people (#1 above) who have been vaccinated previously will be randomized to 2 or 3 doses of the HEPLISAV-B vaccine or 3 doses of the Engerix-B vaccine. People who have not received a prior HBV vaccine (#2 above) will receive 3 doses of HEPLISAV-B. In addition to safety and vaccine antibody responses and titers, the study will also investigate host characteristics associated with vaccine responses and HBV surface antigen-specific B and T cell responses.

See Table 23-1 and the following pages for more information about all of the research studies at the UW ACTU that are seeking participants. Screening, lab tests and clinical monitoring that are part of a study are provided free of charge. Reimbursement is provided to participants. Enrollment in a study at the UW ACTU does not replace the role of a primary care provider. The UW ACTU coordinates our efforts with each participant's primary care provider. Providers and potential enrollees can contact the ACTU via phone or text at (206)-733-7129.

*Contributed by Ann Collier*

# CURRENT STUDIES – UW ACTU

## The TRIPLE ANTIBODY Study

The UW AIDS Clinical Trials Unit is looking for people living with HIV: who have never taken ARVs and have a CD4 count above 350 and HIV viral load between 5,000 and 100,000, and are willing to start ARVs by day 28 of entering the study.

Over the past decade, scientists have studied the effects of several broadly neutralizing antibodies (bnAbs) against HIV. By binding to specific HIV sites, these molecules are able to neutralize infection. Combining multiple bnAbs into a single molecule has the potential for making treatment and prevention regimens more simple and increasing their effectiveness. This is the first study in humans of one of these molecules called SAR441236. This study will evaluate the safety and effectiveness of SAR441236 an investigational monoclonal antibody given by infusion. The study will also see if SAR441236 can reduce HIV in a person's blood and measure the antibody in blood over time. All participants will receive SAR441236 and begin ARVs by day 28. The length of study is ~ 6 to 18 months. Participants will receive $20 starting at Entry and $100 for long visits at entry and week 36

ELIGIBILITY TO ENTER THIS STUDY

· People living with HIV between 18 & 70 years old
· No active Hepatitis B nor C
· Not pregnant nor breastfeeding
· No other monoclonal antibodies within 6 months
· Never have taken ART
· CD4 count over 350
· HIV viral load between 5,000 and 100,000
· Willing to start ART on Day 28 of the study

**Contact: ACTU Screening Nurse at 206-744-8883 (phone) or 206-773-7129 (text) WEBSITE: www.uwactu.com**

## The ACUTE HEP C Study

More than 4 million people have Hepatitis C (HCV) infections. People who are recently infected with a new case of HCV have a good chance of being cured when they are treated within the first 6 months of being diagnosed.

This study is being done to see if 4 weeks, (instead of 8 to 12 weeks) of an HCV drug glecaprevir/pibrentasvir (brand name Mavyret®) cures HCV when given during acute infection. This study will include up to two parts:

Part 1: People orally take glecaprevir/pibrentasvir for 4 weeks and are followed for 6 months.

Part 2: People who fail, relapse, or are re-infected with HCV within 3 months of taking glecaprevir/pibrentasvir in part 1 may enroll in Part 2 and receive glecaprevir/pibrentasvir with or without ribavirin (another medication used in HCV treatment) for up to 16 weeks.

The length of the study is ~6 months for part 1 and up to 10 months for part 2.

ELIGIBILITY TO ENTER THIS STUDY

Part 1:

· Everybody diagnosed with acute HCV infection within past 6 months.
· With or without HIV infection. If living with HIV, your viral load must be undetectable and CD4 (T cell) count must be above 100.
· Not pregnant, breastfeeding, nor have a pregnant partner. Must be willing to use birth control while on study.
· Not treated with other HCV drugs for current HCV infection.
· May not have other known liver disease, including active hepatitis A or B infections.
· Not taking high dose proton pump inhibitors (omeprazole, etc.) within 5 days of entry.

Part 2

· Failure, relapse, or re-infection with HCV before week 16 of the study, after completing the Part 1 treatment.

**Contact: ACTU Screening Nurse at 206-744-8883 (phone) or 206-773-7129 (text) WEBSITE: www.uwactu.com**

## The EARLIER Study

The study is trying to find out if starting antiretroviral therapy very early in HIV infection will:

· Prevent or decrease the amount of virus getting into hidden areas in the body (reservoirs)
· Change how the immune system reacts to the virus (tries to control it)

"Very early" means before or just as antibodies to HIV are detectable in the blood. For this study, we're looking for men and women who have been infected with HIV within the past 1-2 months who are willing to take drugs to treat HIV right away to volunteer for an investigational study to see if starting HIV meds very early in infection limits the HIV reservoir or changes how the immune

system helps to control the virus. Determining the impact of antiretroviral therapy (ART) during acute infection on the HIV reservoir and residual viremia has been limited by the number of people studied, as well as by the tests used to detect HIV. A study is needed to define the impact of early ART on virologic and immunologic outcomes that are relevant to achieving HIV cure. The goal of the study is to see if starting HIV meds very early in infection limits HIV reservoirs or changes how the immune system helps to control the virus. The length of study is ~ 72 weeks. The schedule of study visits: screening, entry, and weeks 1, 2, 4, 8, 12, 24, 36, 48, 49, 60 and 72. The study will provide Genvoya® (elvitegravir/cobicistat/tenofovir [TAF]/emtricitabine). Other antiretrovirals can be used instead if this is not the ideal regimen for a participant. Procedures include clinical assessments, blood draws, questionnaires, and some phone calls. *Some people may be asked to have one or more optional procedures per year into the study to check out the reservoirs where the virus might hide. These procedures are not required for participation in the study and will involve additional compensation.*
Participants will receive $20 per visit starting at Entry (additional for procedures.)
ELIGIBILITY TO ENTER THIS STUDY
· At least 18 years old and Willing to take drugs to treat HIV right away.
· Have certain lab tests done that confirm very early infection.
· Willing to sign the consent after discussion with the research staff

**Contact: Janine Maenza, MD at 206-667-5743 or ACTU Screening Nurse at 206-773-7129 WEBSITE: www.uwactu.com**

# THE INJECTABLES Study (The LATITUDE Study)

Working with Harborview's MAX Clinic, the UW AIDS Clinical Trials Unit is looking for men and women living with HIV who have had challenges taking their HIV medication to participate in an investigational study to see if long-acting (LA) injectable ART will be more successful for them than current standard oral regimens. During the initial 24 week oral induction period, participants will receive financial incentives if they meet specific milestones. Overview:

Step 1: oral ART with a standard of care drug regimen with at least 3 drugs including an integrase inhibitor or PI (provided by the study, chosen by PCP, participant & the local study team)

Step 2: randomization (1:1) to continue oral standard of care ART versus CAB plus RPV (4 week oral lead-in, then 48 weeks of injectable LA ART given IM every 4 weeks)

Step 3: ALL PARTICIPANTS GET injectable LA CAB plus RPV given IM every 4 weeks (after oral lead-in for those who were on oral ART in Step 2)

Step 4: Follow-up after participants transition back to oral ART not provided by the study

Participants must have HIV RNA<50 to enter Step 2 and Step 3. Procedures include medical histories, questionnaires, blood draws, physical exams, urine collection. Reimbursement is $20 per visit with incentives for achieving and maintaining undetectable viral load ($675 maximum incentive over the 1st 20 weeks)
ELIGIBILITY TO ENTER THIS STUDY
· People living with HIV age 18 years or older and prescribed ART for at least 6 months with evidence of non-adherence to ART in the last 18 months (poor HIV RNA response or lost to follow-up with lapse in ART of at least 7 or more days)
· HIV RNA greater than 200
· For women of reproductive potential: not planning pregnancy for next 4 years or pregnant
· No previous use of rilpivirine (RPV) or cabotegravir (CAB)
· No active hepatitis B, no plans for anti-HCV therapy , no uncontrolled seizures, no cirrhosis or advanced liver disease
· No extensive tattoos on buttocks and no severe active alcohol or substance use

**Talk to your provider, and then have them contact our ACTU Staff at either 206-744-8883 (phone) or 206-773-7129 (text or call) WEBSITE: www.uwactu.com**

# TribalMed Study Recruitment

The following studies are recruiting to start mid-December 2019

**GS-US-200-4334 A Phase 2 Randomized, Open Label, Active Controlled Study Evaluating the Safety and Efficacy of Long-acting Capsid Inhibitor GS-6207 in Combination with Other Antiretroviral Agents in Antiretroviral Treatment Naïve People Living with HIV**
Recruiting: Antiretroviral naive people living with HIV. Especially seeking women and people of color
Sponsor: Gilead

**MK8591A-018 A Phase 3, Randomized, Active-Controlled, Double-Blind Clinical Study to Evaluate a Switch to Doravirine/Islatravir (DOR/ISL) Once-Daily in Participants With HIV-1 Virologically Suppressed on Bictegravir/Emtricitabine/Tenofovir Alafenamide (BIC/FTC/TAF)**
Recruiting: People living with HIV, with undetectable HIV RNA on Bictegravir/Emtricitabine/Tenofovir Alafenamide. Especially seeking women and people of color
Sponsor: Merck

**MK8591A-019: A Phase 3, Randomized, Clinical Study in HIV-1-Infected Heavily Treatment-Experienced Participants Evaluating the Antiretroviral Activity of Blinded Islatravir (ISL), Doravirine (DOR), and Doravirine/Islatravir (DOR/ISL)**
Recruiting: People living with HIV, experiencing virologic failure with multi-class resistant virus and limited treatment options
Sponsor: Merck

All studies provide study drug, clinical monitoring, and a stipend per visit.

For further information or to refer a study volunteer, please contact our Study Coordinator, Mark McClarty, 206-624-1441 or mark@tribalmed.com.

# CURRENT AIDS MALIGNANCY TRIALS OPEN MID 2019

| STUDY | SYNOPSIS | SELECT ENROLLMENT CRITERIA | INTERVENTION(S) | ENROLLED LOCALLY |
|---|---|---|---|---|
| ANCHOR<br>AMC-A01<br>ANAL CANCER/HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESIONS (HSIL) OUTCOMES RESEARCH STUDY | Eligible participants will be randomized to treatment or active monitoring at baseline. Participants will be followed every six months for HSIL outcomes for up to five years after the last participant's date of randomization. Throughout the study, the incidence of invasive cancer in both arms will be monitored, and biospecimens and associated participant data will be collected for correlative science studies. | ≥ 35 years old living with HIV infection<br>No HPV vaccination<br>No history of ano-genital cancer<br>No history of HSIL treatment | Ablation<br>Cream:<br>5-fluorouracil or imiquimod<br>Surgery<br>Monitoring | 116 |
| AMC-087<br>A PHASE I TRIAL OF CABOZANTINIB (XL184) FOR ADVANCED SOLID TUMORS IN PERSONS WITH HIV INFECTION | To determine the safety and tolerability of cabozantinib (XL184) as a single agent in solid tumor participants with HIV infection and to determine the maximal tolerated dose (MTD) in this participant population. | ≥ 18 years old living with HIV infection and on antiretroviral medication(s)<br>Diagnosis of a solid tumor (including Kaposi sarcoma, non-Hodgkin's Lymphoma, ano-genital cancers) | Cabozantinib | 8 |
| AMC-088<br>A RANDOMIZED, PHASE III STUDY OF INTRA-ANAL IMIQUIMOD 2.5% VS. TOPICAL 5-FLUOROURACIL 5% VS. OBSERVATION FOR THE TREATMENT OF HIGH-GRADE ANAL SQUAMOUS INTRAEPITHELIAL LESIONS IN HIV-INFECTED MEN AND WOMEN | Prospective, randomized, three-arm, open-label study to evaluate the complete response rate of intra-anal high grade squamous intraepithelial lesions (HSIL) treated with imiquimod 2.5% or topical 5-fluorouracil 5% as compared to spontaneous regression in HIV-infected participants. | ≥ 25 years old living with HIV<br>No history of anal cancer<br>No previous use of the intervention for treatment of HSIL (listed to the right), previous ablation is okay | 5-fluorouracil cream or imiquimod cream | 2 |
| AMC-092<br>A MULTICENTER OBSERVATIONAL AND FEASIBILITY STUDY OF EXCISION OF SUPERFICIALLY INVASIVE SQUAMOUS CELL CARCINOMA (SISCCA) OF THE ANAL CANAL AND PERIANUS IN HIV-POSITIVE PERSONS | A multicenter observational and feasibility study of excision of superficially invasive squamous cell carcinoma (SISCCA) of the anal canal and perianus in HIV-positive persons | ≥ 18 years old, living with HIV Biopsy-proven anal canal or perianal SISCCA CD4+ cell count > 200 or if not receiving combination antiretroviral therapy (cART), agree to begin cART immediately unless CD4+ count is ≥ 350. Life expectancy of greater than 2 years. | Excision of SISCCA, followed by eradication of remaining anal high-grade dysplasia | 0 |

CONTINUED, AIDS MALIGNANCY TRIALS OPEN STUDIES AS OF MID 2019

| STUDY | SYNOPSIS | SELECT ENROLLMENT CRITERIA | INTERVENTION(S) | ENROLLED LOCALLY |
|---|---|---|---|---|
| AMC-095<br>A PHASE I STUDY OF IPILIMUMAB AND NIVOLUMAB IN ADVANCED HIV-ASSOCIATED SOLID TUMORS, WITH EXPANSION COHORTS IN HIV-ASSOCIATED SOLID TUMORS AND A COHORT OF HIV-ASSOCIATED CLASSICAL HODGKIN LYMPHOMA | To demonstrate safety and feasibility of ipilimumab and nivolumab at the standard doses of drug in solid tumor and relapsed refractory HIV-cHL participants with human immunodeficiency virus (HIV) infection given the possibility of increased toxicity based on immune activation, comorbidity, or interference with HAART therapy. The purpose for this would be to provide appropriate experience and guidelines, if necessary, to allow participants with HIV infections to participate in ongoing trials. | > 18 years old living with HIV infection<br>Diagnosis of a metastatic or non-resectable solid tumor (trial excludes brain/spinal cord primary tumor or metastases)<br>No autoimmune disease requiring immune-suppressive treatment<br>relapsed refractory HIV-associated classical Hodgkin lymphoma (HIV-cHL) as a separate cohort | Nivolumab alone or Ipilumumab and Nivolumab | 1 |
| AMC-096<br>A PHASE II STUDY OF SEPHB4-HSA IN KAPOSI SARCOMA | To evaluate the clinical response and toxicity of sEphB4-HSA (at initial dosing of 15 mg/kg every 2 weeks) in participants with Kaposi sarcoma. | > 18 years old<br>Known HIV status<br>Biopsy-proven KS<br>Treatment naïve, refractory to, or intolerant of one or more prior therapies, or treated with prior systemic treatment | sEphB4-HSA | 0 |
| AMC-098<br>A PILOT STUDY OF NELFINAVIR FOR THE TREATMENT OF KAPOSI SARCOMA | To determine the efficacy of a therapeutic escalation strategy consisting of standard dose nelfinavir, followed by high dose nelfinavir, for the treatment of KS tumor lesions. | > 18 years old<br>Known HIV status<br>Biopsy-proven KS | Nelfinavir | 4 |
| AMC-101<br>A PILOT STUDY OF IBRUTINIB AND R-DA-EPOCH FOR FRONT LINE TREATMENT OF AIDS-RELATED LYMPHOMAS | To assess the safety and tolerability of ibrutinib and R-da-EPOCH in participants with ARL. This will define the recommended phase II dose (RP2D) of ibrutinib in combination with R-da-EPOCH in participants with ARL.<br>Dose finding and dose expansion cohorts | > 18 years old living with HIV infection<br>histologically documented CD20 positive or negative diffuse large B-cell lymphoma (DLBCL)<br>Stage II-IV disease, measurable by CT or PET scans if enrolled in the dose-expansion cohort | Ibrutinib | 0 |
| AMC-S004<br>CLINICAL AND GENOMIC FACTORS FOR PROGNOSIS OF AIDS PRIMARY EFFUSION LYMPHOMA | Retrospective case study of participants diagnosed with primary effusion lymphoma (HIV seropositive or negative) on or after January 1, 1998 and on whom survival status at 2 years post diagnosis is available. Record review and data collection. | Diagnosis of primary effusion lymphoma (PEL); known survival status | None; Retrospective | 4 |